bridging the gap
Research Informing Policies & Practices for Healthy Youth

Research Brief
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Income Disparities in Street Features that Encourage Walking

Walking, whether purely for recreation or as a method of transportation, improves health. When streets have lights, sidewalks, crosswalks and bike lanes, it is easier and more appealing for people to walk in their local communities.

This brief examines some key components of walkability, the ability of pedestrians to safely navigate community streets. Using an instrument designed specifically to collect markers of walkability, field staff observed 10,777 streets located in a nationally representative sample of 154 communities across the United States. The observations were conducted in spring and summer of 2010 in neighborhoods where students attending public middle and high schools lived.

This study shows that people living in low-income communities are less likely to encounter sidewalks, street/sidewalk lighting, marked crosswalks and traffic calming measures such as pedestrian-friendly medians, traffic islands, curb extensions and traffic circles. State and local governments can make it easier and safer for residents to walk in their communities by adopting best practices for street design, implementing comprehensive zoning and community plans, and linking funding for capital improvements to these initiatives.

Introduction

Rates of obesity and physical inactivity in the United States have increased since the 1980s and remain high across all ages.[1, 2, 3] Studies have shown the basic elements of street design can encourage walking for recreation and transportation, which, in turn, can affect weight.[4,5,6]

Increasing local options for safe, active travel within communities is a critical component of reducing childhood obesity. Walkability is a broad term encompassing street connectivity and infrastructure, urban sprawl, land use and other aspects of the neighborhood environment .[7] Installation of sidewalks, marked crosswalks, traffic calming measures (e.g., pedestrian-friendly medians, traffic islands, curb extensions, and traffic circles) and street and sidewalk lighting can contribute to a safe, pedestrian-friendly environment. In addition, such features have been associated with increased walking within a community.[8, 9]

The Centers for Disease Control and Prevention and the Institute of Medicine both recommend developing infrastructure and social programs which support walking and biking, especially focused on roads leading to and from residential areas and schools. They call for local communities to develop and implement plans, ordinances, codes and incentives to retrofit existing roadways to improve sidewalk access, street lighting, safe crosswalks and traffic calming

measures, and to address these same factors as they build new roads.[10, 11] The National Policy and Legal Analysis Network to Prevent Childhood Obesity developed a best practice guideline for street design, entitled *Complete Streets*, which notes that such improvements have proven benefits.[12] Leadership for Healthy Communities, a national organization that supports state and local policymakers' efforts to prevent childhood obesity, created a toolkit itemizing the many resources available for local planners and policymakers to better understand options and implications associated with walkability.[13]

This brief aims to describe key components of local and neighborhood street design which influence walking behavior. It also shows how community-level household income relates to the presence of these components in a nationally representative sample of communities within the United States.

Key Findings

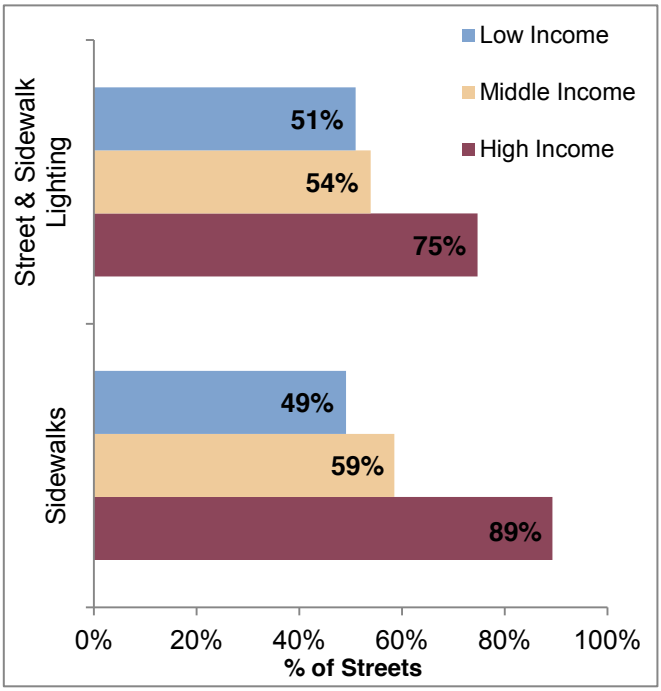
People living in high-income communities are more likely to encounter walkable streets (See Figure 1).

- Streets with street and/or sidewalk lighting are significantly more common in high-income areas (75%) than in middle-income (54%) or low-income communities (51%).
- Streets with sidewalks on one or both sides of the street are significantly more common in high-income areas (89%) than in middle-income (59%) or low-income communities (49%).

Marked crosswalks and other traffic calming devices such as pedestrian-friendly medians, traffic islands, curb extensions and traffic circles are less common overall than sidewalks and sidewalk lighting (See Figure 2).

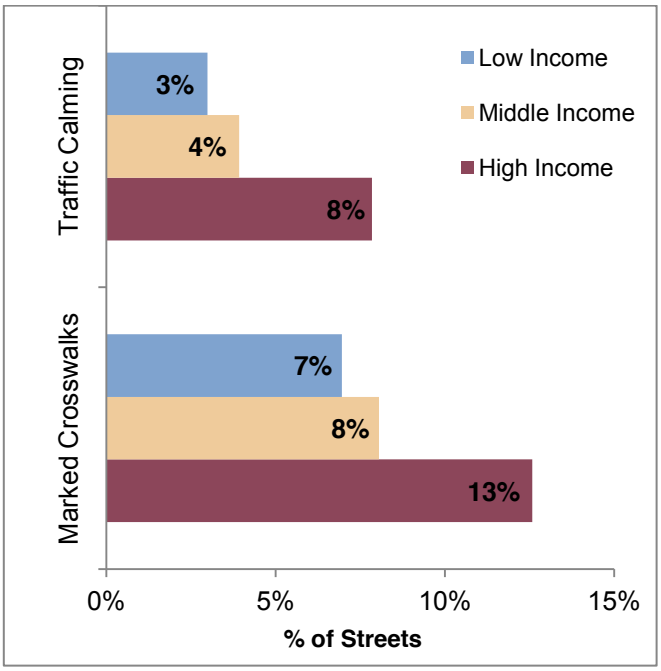
- Streets with traffic calming features are significantly more common in higher-income areas (8%) than in middle-income (4%) or low-income communities (3%).
- Streets with marked crosswalks are significantly more common in high-income areas (13%) than in middle-income (8%) or low-income communities (7%).

Figure 1
Availability of Sidewalks and Street and Sidewalk Lighting in Communities



Note: The following differences were significant at p<=0.001: Low-income vs. High-income; Middle-income vs. High-income.

Figure 2
Availability of Traffic Calming Devices and Marked Crosswalks in Communities



Note: The following differences were significant at p<=0.001: Low-income vs. High-income; Middle-income vs. High-income.

Source: www.pedbikeimages.org / Dan Burden

Conclusions and Policy Implications

Other research concludes that living in walkable communities is related to increased physical activity and lower risk of obesity, and that living in highly walkable areas can benefit both lower-income groups and higher-income groups.[14, 15] Encouraging walking in lower-income communities through increased use of traffic calming measures, marked crosswalks, sidewalk construction and street/sidewalk lighting would help address current disparities in access to community resources and health.

Children may especially benefit from safer walking environments around schools. Adding marked crosswalks at all intersections near schools and on the primary community roadways leading to and from schools would be the most cost-effective of all the above mentioned improvements.

State and local governments do have options to increase walking in neighborhoods. Policies addressing walkable design and linking design improvements to funding for local capital improvement projects may affect change. Planning efforts should involve adopting best practices for local street design and introducing these suggestions during the public review process to educate residents about their impact. These best practices can be institutionalized through zoning and subdivision codes, including adding incentives for developers to incorporate pedestrian friendly improvements when small scale redevelopment occurs. Together these steps require dedication and long-term planning, but they also have lasting health effects.

Study Overview

The findings in this brief are based on data from the Bridging the Gap Community Obesity Measures Project (BTG-COMP), an ongoing, large-scale effort conducted by the Bridging the Gap research team. BTG-COMP identifies local policy and environmental factors that are likely to be important determinants of healthy eating, physical activity and obesity among children and adolescents. BTG-COMP collects, analyzes and shares data about local policies and environmental characteristics relevant to fast-food restaurants, food stores, parks, physical activity facilities, school grounds and street segments in a nationally representative sample of communities where public school students live.

For this study, communities around schools were classified into three mutually exclusive and exhaustive income categories based on US Census Bureau, American Community Survey, 2005-2009 series. Residents living in high-income communities made, on average, more than $57,000 per year; those living in middle-income communities made, on average, between $45,000-$57,000 per year; with those living in low-income communities making less than $45,000 per year. Streets were proportionally sampled in each community so that residential, arterial, and streets within two miles of schools were represented.

Source: www.pedbikeimages.org / Dan Burden

Authors

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About Bridging the Gap

Bridging the Gap is a nationally recognized research program of the Robert Wood Johnson Foundation dedicated to improving the understanding of how policies and environmental factors affect diet, physical activity and obesity among youth, as well as youth tobacco use. The program identifies and tracks information at the state, community and school levels; measures change over time; and shares findings that will help advance effective solutions for reversing the childhood obesity epidemic and preventing young people from smoking. Bridging the Gap is a joint project of the University of Illinois at Chicago's Institute for Health Research and Policy and the University of Michigan's Institute for Social Research. For more information, visit *www.bridgingthegapresearch.org*.

Endnotes

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