

# Salud America!

## The Robert Wood Johnson Foundation Research Network to Prevent Obesity Among Latino Children

### RESEARCH BRIEF

December 2011

## Built Environment Policy for Physical Activity in Mexican-American Children

### Introduction

Childhood obesity is highly prevalent among U.S. Latinos. National data indicate that more than 38 percent of Hispanic children ages 2 to 19 are overweight or obese, compared with less than 32 percent of all children those ages.<sup>1</sup> Low rates of physical activity are a central contributor to childhood obesity,<sup>2</sup> and Mexican-American children in particular are significantly less likely to be physically active than are children from other ethnic groups.<sup>3</sup> Research shows that the built environment—man-made structures such as sidewalks, community recreation centers, schools, grocery stores and parks—plays an important role in helping children lead active, healthy lives.<sup>4,5</sup> Factors such as access to recreational facilities, beautiful neighborhoods, sidewalk conditions, neighborhood safety and school location are associated with physical activity.<sup>6,7</sup> In order to create and promote environments that support physical activity, especially among children at high risk of obesity, public leaders must pursue a variety of strategies, including effective policy changes.<sup>8</sup>

### PRELIMINARY RESEARCH RESULTS

Our *Salud America!* pilot research project, “Assessing the Built Environment in *Colonias* to Influence Policy Promoting Physical Activity in Mexican-American Children and Families,” aims to produce policy recommendations for improving the

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#### PEER REVIEW

Peer review for this research brief was conducted by *Salud America!* National Advisory Committee Member Terry Huang, Ph.D., M.P.H., professor and chair, Department of Health Promotion, Social & Behavioral Health, University of Nebraska Medical Center.

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[www.salud-america.org](http://www.salud-america.org)

<sup>1</sup> Ogden CL, Carroll MD, Curtin LR, Lamb MM and Flegal KM. “Prevalence of High Body Mass Index in US Children and Adolescents, 2007–2008.” *Journal of the American Medical Association*, 303(3): 242–249, 2010.

<sup>2</sup> Butte NF, Christiansen E, and Sørensen TI. “Energy imbalance underlying the development of childhood obesity.” *Obesity*, 15(12): 3056–66, 2007.

<sup>3</sup> Centers for Disease Control and Prevention. “Physical activity levels among children aged 9–3 years -United States, 2002.” *MMWR Weekly*, 52(33): 785–788, 2003.

<sup>4</sup> U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. *Be Active, Healthy, and Happy!*, 2010, <http://www.health.gov/PAGuidelines/pdf/paguide.pdf>.

<sup>5</sup> Sallis JF and Glanz K. “The role of built environments in physical activity, eating, and obesity in childhood.” *Future Child*, 16(1): 89–108, 2006.

<sup>6</sup> Babey SH, et al. “Physical activity among adolescents. When do parks matter?” *Am J Prev Med*, 34(4): 345–8, 2008.

<sup>7</sup> Saelens BE and Handy SL. “Built environment correlates of walking: a review.” *Med Sci Sports Exerc*, 40(7) Suppl: S550–66, 2008.

<sup>8</sup> Floyd MF, Crespo CJ and Sallis JF. “Active living research in diverse and disadvantaged communities stimulating dialogue and policy solutions.” *Am J Prev Med*, 34(4): 271–4, 2008.



built environment to support physical activity (PA) among low-income Mexican-American children and their families in 14 colonias in Hidalgo County, Texas. Colonias are unincorporated settlements along the U.S.-Mexico border where many people live in impoverished conditions and lack basic services such as running water.<sup>9</sup> As part of the study, we are: Investigating the perceptions children ages 8-13 have about environmental factors that influence their PA; documenting the environmental characteristics of colonias; and reaching out to local stakeholders and policymakers regarding PA among children and families in colonias. We have completed the first two steps and are currently scheduling meetings with local stakeholders and policymakers to present preliminary data and obtain their input on policy recommendations.

We collected data from a variety of sources, including focus groups with 97 children and parents, an environmental audit of 125 colonia streets and 1,000 lots that combined several built environmental assessments<sup>10,11</sup> and survey questionnaires with 101 children. Preliminary findings include:

- **Mexican-American children in colonias do not meet physical activity requirements, are very sedentary and are likely to be overweight or obese.** Our survey of colonia children found that more than half are not active for at least one hour each day, as recommended by the Centers for Disease Control and Prevention<sup>4</sup>; nearly half do not play after-school sports or games in which they are very active at least four times a week; the average child watches almost three hours of television on school days; 59 percent spend up to two hours playing video or computer games or using the computer for tasks unrelated to school work; and 59 percent were overweight or obese.
- **The built environment influences physical activity among children in colonias.** During our focus group discussions, colonia children indicated they would be more physically active if they had a new park, sports and recreational areas such as a basketball court or swings, a walking area, lighted streets, and police watch. Children also highlighted several environmental barriers to physical activity: trash on the streets, gangs, bad outdoor odors, speeding cars, muddy streets, unleashed dogs and dirty playgrounds with rusty equipment.

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<sup>9</sup> Ward PM. Colonia and public policy in Texas and Mexico. Urbanization by stealth. 1 ed. 1999: University of Texas Press.

<sup>10</sup> Giusti C., Lee C., Lord D. & Wieters M. (2008) Transportation infrastructure and quality of life for disadvantage populations: A pilot study of El Cenizo Colonia in Texas. Texas A&M University, (167162-1).

<sup>11</sup> Yousefian A, Hennessy E, Umstadd MR, Economos CD, Hallam JS, Hyatt RR, et al. Development of the rural active living assessment tools: Measuring rural environments. Preventive Medicine. 2010;50(Supplement 1):S86-S92.

- Nearly all colonias lack sidewalks, pedestrian signage and parks.** Our environmental audit indicated that nearly all colonia streets (more than 91 percent) did not have sidewalks on both sides of the street and were filled with garbage, litter or broken glass. There was a single crosswalk sign and no streets had any pedestrian signs. Only one park was found in the audited area, and unleashed dogs were found roaming 37 percent of the audited streets.

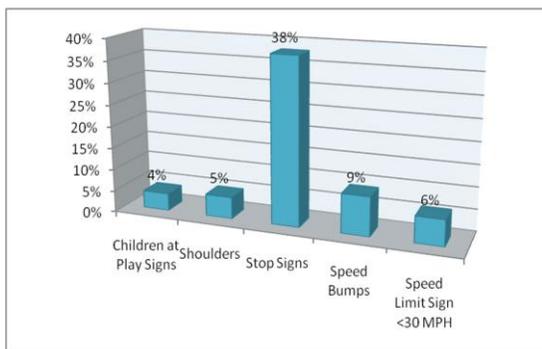


Figure 1. Conditions of colonias affecting physical activity levels.



Figure 2. Colonia Street.

## Conclusion and Policy Implications

The built environment has a well-documented effect on physical activity among both children and adults.<sup>12,13</sup> Our preliminary results suggest that children living in predominantly Latino colonias in South Texas are likely to be both sedentary and obese. These colonias tend not to have a built environment conducive to physical activity, resulting in a lack of activity and high rates of sedentary behavior and obesity among Mexican-American children and their families.

We shared preliminary and end-of-study data with local stakeholders regarding how policy changes can help create a built environment that best supports physical activity in colonias. We held eight meetings with local representatives from decision-making groups and received comments from 74 individuals. A majority of stakeholders in these meetings recommended the following: 1) Seek increased funding for nutrition and physical activity programs; 2) support community organizations for outreach activities; 3) distribute infrastructure funds more

<sup>12</sup> Kaczynski AT, Potwarka LR and Saelens BE. "Association of park size, distance, and features with physical activity in neighborhood parks." *Am J Public Health*, 98(8): 1451-6, 2008.

<sup>13</sup> King D. "Neighborhood and individual factors in activity in older adults: results from the neighborhood and senior health study." *J Aging Phys Act*, 16(2): 144-70, 2008.

effectively; and 4) address transportation issues that prevent colonia residents from accessing recreational facilities.