

# **IMPACT AND EFFECTIVENESS**

## **TABLE 47**

### **Street Design**

Effectiveness Tables

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Impact Tables

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# EFFECTIVENESS TABLES

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
United States				
<b>Author</b> Wells, Yang (2008) Georgia, Florida, Alabama  <b>Design</b> Intervention Evaluation Prospective cohort study  <b>Duration</b> Not Reported	<b>Measures</b> Neighborhood walkability (land-use mix, density, street connectivity [cul de sac density])  <b>Outcome(s) Affected</b> Physical activity (Digiwalker2 pedometers and activity log)	<p><b>Net Positive for Physical Activity in Lower-income Families (Street Design)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <p>1. (N=32) In terms of street network patterns, moving to an area with fewer culs-de-sacs was associated with about 5303 more steps per week (757 more steps per day, std. error; 2219.76, p=0.025).</p>	<b>More Evidence Needed</b> Study design = Intervention evaluation Intervention duration = Not reported Effect size = Net positive for physical activity in lower-income families	<b>Maintenance</b> Not Reported <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Li, Harmer (2009), Li, Harmer (2008), Li Harmer (2009) Oregon  <b>Design</b> Association Cross-sectional study One prospective cohort study and two cross-sectional studies  In cohort study participants completed a health survey at baseline (2006-2007) and one year follow-up (2007-2008). In the same years the built environment (e.g., land use mix, fast-food density, street connectivity) were assessed however no intervention was implemented.  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use mix, street connectivity, public transit stations, green and open spaces)  <b>Outcome(s) Affected</b> Overweight/obesity (researcher measured height and weight) and physical activity (survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: 1) Greater access to fast food restaurants will lead to greater access to unhealthy foods, which will lead to increased consumption of unhealthy foods and higher body mass index and overweight/obesity. 2) Greater access to full-service or sit-down restaurants will lead to greater access to healthy foods which will lead to increased consumption of healthy foods and lower body mass index and overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY</b></p> <p>1. (cross-sectional data) A one standard deviation increase in street connectivity increased walking prevalence by 16% for neighborhood walking (p=0.034), 20% for transportation (p=0.004) and 11% for errands (p=0.025).  2. Among girls, the perceptions of nice houses in the neighborhood (<math>B=2.98</math>, <math>p=0.003</math>) and having an easily walkable/cyclable neighborhood (<math>B=2.75</math>, <math>p=0.0001</math>) was significantly positively associated with walking frequency. Easy to walk/cycle remained significantly associated with walking frequency in the multiple regression model (<math>p&lt;0.05</math>).</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Reed, Wilson (2006) South Carolina <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (sidewalk presence) <b>Outcome(s) Affected</b> Physical activity (2001 Behavioral Risk Factor Surveillance System Physical Activity Module –BRFSS)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Whites (Street Design)</b></p> <p><b>(Assumption: Perceptions of access to sidewalks are associated with increased levels of physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>For walking, the perceived presence of sidewalks increased the odds for irregular walking only (<math>OR=1.88</math>; 95% CI=1.13, 3.11).</li> <li>No associations were observed for physical activity levels and the presence of sidewalks (<math>p &gt;0.05</math>).</li> <li>In whites, perceiving that sidewalks were present increased the odds for meeting recommended levels of physical activity (<math>OR=3.59</math>, 95% CI=1.05, 12.24, <math>p=0.0212</math>) compared to inactive adults.</li> <li>Perceived presence of sidewalks was not associated with regular walking in whites (<math>p&gt;0.05</math>).</li> <li>In non-whites, no significant associations were observed between the presence of sidewalks and physical activity levels or walking (<math>p&gt;0.05</math>).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Whites</b> Study design = Association Effect size = Positive association for physical activity in the study population and whites	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Suminski, Heinrich (2008) Midwest United States <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (functional and safety aspects of the sidewalk and streets, traffic volume, street lights, obstructions, cracks/overgrowth, landscaping, graffiti) <b>Outcome(s) Affected</b> Physical activity (Block Walking Method [BWM], an observational method examining the number of individuals on street segment)	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Neighborhoods with increased street connectivity, safety, and aesthetic quality will lead to increased levels of physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>The percentage of sidewalks that were incongruent was the only environmental characteristic in the highly walked segments that was in the expected direction (highly walked mean=<math>0.25\pm0.05</math>, non-highly walked mean=<math>0.40\pm0.31</math>, <math>p&lt;0.05</math>).</li> <li>None of the environmental characteristics were significantly related with jogging.</li> <li>Bicyclists were more likely to be seen in segments with a less landscapable area (<math>r=-0.28</math>, <math>p&lt;0.05</math>).</li> </ol>	<b>No Association for Physical Activity in the Study Population</b> Study design = Association Effect size = No association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Lee, Tudor-Locke (2008), Sisson, Lee (2006) Arizona <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability and accessibility (presence of sidewalks, street connectivity and school bus availability) <b>Outcome(s) Affected</b> Physical activity (bikeability instrument assessed average daily traffic)	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: 1) Neighborhoods with increased street accessibility will have increased physical activity levels, 2) High busing schools will have less active transit.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>A Spearman correlation revealed that bikeability scores and biking prevalence yielded a non-significant, low-negative correlation (<math>r(12)=-0.20</math>, <math>p=0.53</math>).</li> </ol> <p>(Note: Individual street scores were averaged to represent a composite bikeability and walkability score for each elementary school.)</p>	<b>No Association for Physical Activity in the Study Population</b> Study design = Association Effect size = No association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Joshu, Boehmer (2008) and Brownson, Baker (2001)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability and county sprawl</i> (perceived barriers to physical activity including hills, lack of sidewalk, sprawl index; metropolitan counties gross population density; percentage of county population living in suburban and urban densities; net density; block size; and percentage of blocks with less than 1/100 square miles)  <b>Outcome(s) Affected</b> Overweight/obesity (body mass index) and physical activity (surveys)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Perceptions of barriers and heavy traffic will lead to decreased physical activity, which will lead to increased levels of overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>1. An increase in the number of perceived neighborhood barriers increased the odds of being obese (chi-square for linear trend, <math>p&lt;0.05</math>).</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>2. Neighborhood characteristics, including the presence of sidewalks (<math>OR=1.28</math>, 95% CI=1.02, 1.59) and enjoyable scenery (<math>OR=1.46</math>, 95% CI=1.13, 1.88) were positively associated with physical activity.</li> </ol> <p>(Note: Perceived barriers to physical activity was a composite including hills, lack of sidewalks, personal barriers like fear of injury, limited time, and intensity and frequency of physical activity.)</p>	<b>Positive Association for Overweight/obesity in the Study Population</b>  <b>Positive Association for Physical Activity in the Study Population</b>  Study design = Association  Effect size = Positive association for overweight/obesity and physical activity in the study population	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Cervero (2002)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Transit friendly neighborhoods</i> (comparative travel times and travel costs of competing modes of travel, socio-demographic characteristics of trip-makers, origin and destination)  <b>Outcome(s) Affected</b> Physical activity (1994 Household Travel Survey)	<p><b>Not Reported for Desired Health Outcomes (Street Design)</b></p> <p><b>Positive Association for Transit Use in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Neighborhoods with increased sidewalk infrastructure, density, and land-use mix will promote a more active environment and individuals will be more likely to use active transportation.)</b></p> <p><b>Street Design</b></p> <p><u>TRANSIT USE:</u></p> <ol style="list-style-type: none"> <li>1. Neighborhoods with fairly well developed sidewalk infrastructure appear to have influenced mode choice to some degree, ostensibly by providing more attractive settings for taking a bus or joining a vanpool (ratio of sidewalk miles to road miles; origin TAZ; coefficient: -0.7282, standard error= 0.2628, <math>p=0.0056</math>; destination TAZ; coefficient: -0.8371, standard error= 0.2664, <math>p=0.0017</math>).</li> <li>2. Having relatively complete sidewalk networks at the trip destination promoted transit usage (coefficient estimate=0.4701, <math>p=0.2935</math>).</li> </ol>	<b>More Evidence Needed</b>  Study design = Association  Effect size = Not reported	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Sharpe, Granner (2004)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (access to safe, pleasant places to be active and/or walk)  <b>Outcome(s) Affected</b> Physical activity (questionnaire assessed physical activity)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Adult perceptions of increased access to places to be active and quality of environmental features like sidewalks will lead to increased physical activity.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>1. Prior to adjustment, significant associations with physical activity included perceived condition of neighborhood sidewalks for walking or jogging (data not shown). After adjustment, odds ratios remained significant for perceived condition of neighborhood sidewalks for walking or jogging (<math>OR=2.04</math>, 95%CI: 1.25-3.35, <math>p&lt;0.05</math>). While the presence or absence of a sidewalk on at least one side of neighborhood streets was not significantly associated with greater odds of meeting the physical activity recommendation, the perception of well-maintained neighborhood sidewalks among the 27.6% of respondents who reported the presence of sidewalks in their neighborhoods was significantly associated with physical activity (adjusted <math>OR=2.04</math>, 95%CI: 1.25-3.35).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b>  Study design = Association  Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Frank, Kerr (2007) <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land use diversity and street connectivity [e.g., intersection density] and access to recreation space) <b>Outcome(s) Affected</b> Physical activity (Strategies for Metropolitan Atlanta's Regional Transportation and Air Quality [SMARTRAQ])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased land use mix, density, and street connectivity will lead to active transportation.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY</u></p> <ol style="list-style-type: none"> <li>Living in the top tertile for street connectivity (3rd tertile; walking ≥ 1 time per 2 days; OR=1.7, CI:1.3-2.2, p&lt;0.001; walking ≥ 0.5 miles/day; OR=1.8, CI: 1.2-2.7, p&lt;0.01) was significantly related to both walking outcomes, specifically when the odds ratio for density was greater for walking 0.5 mile or more.</li> <li>For 12-15 year olds reporting that they walked at least once over 2 days, number of intersections (OR=1.7, CI: 1.1-2.8, p&lt;0.05) was significant.</li> <li>For 12-15 year olds reporting that they walked ≥0.5 miles/day, number of intersections (OR=2.4, CI: 1.1-5.1, p&lt;0.05) was significant.</li> <li>For the 16-20 year olds reporting that they had walked at least once over 2 days, intersection density (OR=2.0, CI: 1.1-3.6, p&lt;0.05) was significant.</li> <li>For those reporting that they had walked ≥ 0.5 miles per day, intersection density (OR=3.1, CI: 1.3-7.4, p&lt;0.01) was significant.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Hoehner, Brennan (2005) Missouri and Georgia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use, street segments, access to destinations, sidewalks) <b>Outcome(s) Affected</b> Physical activity (telephone survey)	<p><b>Negative Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Individuals with greater access to places to be physically active will participate in increased transportation and/or recreational physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Levelness of sidewalks as assessed by the audit showed a significant negative association (OR=0.6, 95%CI: 0.4-0.9) for engaging in any transportation activity and with meeting recommendations (OR=0.5, 95%CI: 0.3-0.8) through transportation activity (p&lt;0.05 for trend). This suggests that respondents with fewer cracks or heaves on their neighborhood sidewalks were less likely to report walking and bicycling for transportation.</li> </ol>	<b>Negative Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Negative association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported The sample was diverse with respect to age, ethnicity, and educational attainment, and slightly under-represented men.
<b>Author</b> Grow, Saelens (2008) Massachusetts, Ohio, California <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood accessibility (street connectivity and land-use mix) <b>Outcome(s) Affected</b> Physical activity (survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Individuals with increased access to places to be active will have higher levels of physical activity than their counterparts.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Multivariate regression models using adolescent and parent reports revealed that positive estimates were found for street connectivity and pedestrian infrastructure in relation to the number of sites to which adolescents walked/biked.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> McGinn, Evenson (2007) Mississippi and North Carolina <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (neighborhood perceptions of connectivity, and walkability [high-speed traffic, heavy traffic, lack of cross walks, lack of sidewalks]) <b>Outcome(s) Affected</b> Physical activity (Behavioral Risk Factor Surveillance System [BRFSS], environment survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p>(Assumptions: 1) High traffic speeds, increased traffic volume, and higher rates of pedestrian involved crashes will lead to decreased physical activity. 2) Increased street connectivity will lead to increased activity.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <p><i>Forsyth County, NC</i></p> <ol style="list-style-type: none"> <li>Those whose half-mile neighborhoods had high connectivity were more likely to be insufficiently active than inactive during outdoor leisure activity (<math>OR=1.5</math>, <math>95\%CI=1.0-2.2</math>, <math>p&lt;0.05</math>).</li> <li>When examining the eighth-mile buffer, neighborhoods with high connectivity were less likely to meet recommendations or to be insufficiently active than to be inactive during leisure activity and for walking for any purpose (meets recommendations; <math>OR=0.7</math>, <math>95\%CI=0.4-1.0</math>, <math>p&lt;0.05</math>, insufficiently inactive; <math>OR=0.7</math>, <math>95\%CI=0.5-1.0</math>, <math>p&lt;0.05</math>, insufficiently inactive; <math>OR=0.7</math>, <math>95\%CI=0.4-1.0</math>, <math>p&lt;0.05</math>).</li> <li>Individuals that perceived the absence of crosswalks as not a barrier for physical activity were associated with decreased odds of being active (<math>OR=0.6</math>, <math>95\%CI=0.4-1.0</math>, <math>p&lt;0.05</math>).</li> <li>Individuals that perceived the absence of sidewalks as not a barrier for physical activity were associated with increased odds of activity particularly when examining insufficiently active versus inactive individuals during outdoor leisure activity (<math>OR=1.4</math>, <math>95\%CI=1.0-2.1</math>, <math>p&lt;0.05</math>).</li> <li>Individuals with perceptions that the absence of crosswalks were not a barrier for physical activity were associated with decreased odds of being active, particularly for being insufficiently active vs. inactive during outdoor leisure activity (<math>OR=0.6</math>, <math>95\%CI=0.4-1.0</math>, <math>p&lt;0.05</math>).</li> </ol> <p><i>Jackson, MS</i></p> <ol style="list-style-type: none"> <li>Individuals perceiving that a lack of crosswalks was not a problem were associated with being insufficiently active rather than inactive for leisure activity and outdoor leisure activity (<math>OR=1.7</math>, <math>95\%CI=1.1-2.6</math>, <math>p&lt;0.05</math> and <math>OR=1.4</math>, <math>95\%CI=1.0-2.2</math>, <math>p&lt;0.05</math>, respectively).</li> <li>Individuals who did not perceive a lack of crosswalks as a barrier for physical activity had increased odds of being active during leisure activity and outdoor leisure activity (<math>OR=1.8</math>, <math>95\%CI=1.0-3.2</math>, <math>p&lt;0.05</math> and <math>OR=2.3</math>, <math>95\%CI=1.4-3.9</math>, <math>p&lt;0.05</math>, respectively).</li> </ol> <p><i>Both Sites</i></p> <ol style="list-style-type: none"> <li>Perceiving that there were enough crosswalks in the neighborhood was associated with decreased odds of engaging in any transportation activity (<math>OR=0.7</math>, <math>95\%CI=0.5-1.0</math>, <math>p&lt;0.05</math> for both sites).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported A disproportionate sampling strategy was adopted for the NC sample frame to ensure representation for areas outside of the Winston-Salem
<b>Author</b> Jago, Baranowski (2006); Jago, Baranowski (2005) Texas <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (access to playgrounds and transit, street connectivity and intersection density, and perceptions of safety) <b>Outcome(s) Affected</b> Physical activity (accelerometer) and overweight/obesity (height and weight [body mass index])	<p><b>Positive Association for Physical Activity in Study Population (Street Design)</b></p> <p><b>Positive Association for Sedentary Behavior in the Study</b></p> <p>(Assumption: Aesthetically pleasing and safe environments with accessible places for physical activity leads to increased walking and cycling levels and decreased sedentary behaviors.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>A positive association was found between sidewalk characteristics and light intensity physical activity (<math>r=0.204</math>, <math>p=0.003</math>).</li> <li>Sidewalk characteristics were positively (<math>t= 2.85</math>, <math>p=0.005</math>) associated with minutes of light-intensity physical activity.</li> <li>Walking and cycling ease was negatively associated with street access and condition (<math>r= -0.197</math>, <math>p=0.005</math>).</li> </ol> <p><b>SEDENTARY BEHAVIOR:</b></p> <ol style="list-style-type: none"> <li>A negative association was found between sidewalk characteristics and with sedentary behavior (<math>r= -0.199</math>, <math>p=0.004</math>).</li> <li>In the spatial regression model, sidewalk characteristics were significantly negatively associated with minutes of sedentary activity (<math>t= -2.70</math>, <math>p=0.008</math>).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Sedentary Behavior in the Study Population</b> Study design = Association Effect size = Positive association for physical activity and sedentary behavior in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Zhu, Lee (2009) Texas  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (sidewalk availability and quality, maintenance and condition of neighborhood amenities, presence of tree shade and street lighting, presence of bus stops, land-use mix diversity)  <b>Outcome(s) Affected</b> Physical activity (3-Page Questionnaire [PedsQL])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p>(Assumptions: 1) Positive parental perceptions of the condition of sidewalks and bus stops will lead to increased active commuting. 2) Decreased school provisioning for school buses will lead to increased active commuting.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Sidewalk availability and quality (maintenance, width, buffers from traffic, and no obstructions) was not significantly associated with children's walking behaviors.</li> <li>2. Maintenance, tree shade, quietness, street lighting, and perceived convenience of walking were marginally significantly related to walking (coefficient= 0.108, OR=1.114, 95% CI= 0.991-1.252, p&lt;0.1).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Addy, Wilson (2004); Wilson, Ainsworth (2007) South Carolina  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood connectivity (sidewalks, access to public recreation facilities, streetlights, having a pleasant neighborhood for walking, physically active neighbors, traffic volume, unattended dogs, crime, perception of neighbors being untrustworthy)  <b>Outcome(s) Affected</b> Overweight/obesity and physical activity/walking behavior (telephone survey [items from Behavioral Risk Factor Surveillance System])	<p><b>Positive Association for Physical Activity in Study Population (Street Design)</b></p> <p>(Assumption: Individuals with increased perceptions of their social environment, increased perceptions of neighborhood places to be physically active, and increased sidewalks and street connectivity will lead to increased levels of physical activity.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Participants reporting the presence of neighborhood sidewalks were 1.9 times more likely to report engaging in irregular walking versus no walking (95% CI: 1.11-3.11, p&lt;0.05).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported Households were selected from each county census tract to guarantee a balance in racial and geographic distributions however, males and Caucasians were slightly over-represented.
<b>Author</b> Boehmer, Lovegreen (2006) Arkansas, Missouri, Tennessee  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (presence of quality sidewalks and shoulders, perceived recreational facilities, land use, barriers related to traffic safety and crime, aesthetics)  <b>Outcome(s) Affected</b> Overweight/obesity (body mass index [BMI] self-report of height and weight)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Overweight/obesity in Women (Street Design)</b></p> <p>(Assumption: Access to facilities, street connectivity, and positive perceptions of neighborhood safety and pleasantness will lead to increased physical activity.)</p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>1. Having no sidewalks or shoulders on most streets was not significantly associated with obesity.</li> <li>2. Finding the community somewhat pleasant (OR=1.44, 95%CI= 1.13-1.92) or not pleasant (OR=1.85; 95%CI=1.31-2.59, p&lt;0.05) was associated with being obese.</li> <li>3. Women had stronger associations between obesity and indicators of poor aesthetics (OR= 1.3, 95% CI= 1.0-1.7 for interesting things; OR= 1.7, 95% CI= 1.2-2.3 for well-maintained).</li> <li>4. Finding the community somewhat pleasant (OR=1.73, 95%CI= 1.28-2.34) or not pleasant (OR=2.02, 95% CI= 1.29-3.15, p&lt;0.05) was all associated with being obese/inactive.</li> </ol>	<b>Positive Association for Overweight/obesity in the Study Population</b> <b>Positive Association for Overweight/obesity in Women</b> Study design = Association Effect size = Positive association for overweight/obesity in the study population and women	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported The communities in TN and AR were selected to match the MO sites on size, race/ethnicity, and proportion of the population living below the poverty level. 8 communities met the US Census definition of rural; 12 were located within a nonmetropolitan county.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Ainsworth, Wilcox (2003) South Carolina <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Active neighborhoods (access to recreational facilities, presence and absence of sidewalks and street lighting, and neighborhood traffic safety and safety from crime) <b>Outcome(s) Affected</b> Physical activity (2001 Behavioral Risk Factor Surveillance System [BRFSS])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  (Assumption: Individuals in neighborhoods with supports for physical activity like presence of street lights and good quality sidewalks will be more likely to participate in increased physical activity.)</p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. 22.8% of respondents reported the presence of sidewalks in the neighborhood and were more likely to meet recommendations for physical activity (OR=1.57, CI=1.14-2.17).</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Sanderson, Foushee (2003) Alabama <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Active neighborhoods (access to safe, pleasant places to be active and/or walk, safety [traffic, crime, dogs, lighting], lack of sidewalks) <b>Outcome(s) Affected</b> Physical activity (survey)	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b>  (Assumption: Individuals in neighborhoods with positive social dynamics and enablers for physical activity like good quality sidewalks and access to places to be physically active will have increased levels of physical activity.)</p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Researchers found no physical environmental variables that were significantly associated with comparison of either activity-level group.  (Note: Environmental variables include a composite score of distance to places to walk, safety from crime, street lighting, unattended dogs, presence of sidewalks, and traffic safety.) </p>	<b>No Association for Physical Activity in the Study Population</b> Study design = Association Effect size = No association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High Education level from the evaluation sample was similar to the Alabama BRFSS demographic data for African-American women, however, income level was somewhat lower.
<b>Author</b> Lee, Vernez Moudon (2006) Washington <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use, street vegetation, block size, perceptions of type of neighborhood, architecture, awareness of neighbors, traffic problems, air pollution) <b>Outcome(s) Affected</b> Physical activity (survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  (Assumptions: Increased diversity in land-use, street connectivity, and access to public transit will lead to increased active transportation.)</p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Route related variables, such as block size, traffic volume, sidewalk, and street trees, did not show a statistically significant association with transportation walking; but longer sidewalks were positively associated with recreation walking (frequent walking; OR=1.117, CI: 1.001-1.245, p&lt;0.05). </p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Fulton, Shisler (2005) United States <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood accessibility (perceptions of safety, presence of neighborhood sidewalks, opportunities for participation in sports teams, parental support) <b>Outcome(s) Affected</b> Physical activity (surveys/interviews)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Presence of good quality sidewalks will lead to increased Active Transportation to School (ATS) in youth.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Children who had sidewalks in the neighborhood were more likely to walk than those without sidewalks (OR=3.4; 95%CI= 2.3-5.1).</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Vernez Moudon, Lee (2007) Washington <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land use mix, street connectivity, distance to locations, residential density) <b>Outcome(s) Affected</b> Physical activity (survey [Behavioral Risk Factor Surveillance System, National Health Interview Survey, International Physical Activity Questionnaire-Long form])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Areas with more complete sidewalks and increased land-use and density will lead to higher levels of physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY</u>  1. Living in an area with more complete sidewalks along major streets (airline (sufficient relative to walking) OR=1.090, 95%CI=1.008-1.179, p&lt;0.05) was significant in the airline but not in the network models and was positively associated with the likelihood of walking sufficiently (p&lt;0.05).  2. Two route directness (airline/network ratio) variables, showed moderately significant (all p&lt;0.05) associations with walking to the closest grocery store/market (network; walking sufficiently relative to not walking, (OR= 1.025, 95%CI= 1.004-1.047) and to the school (OR= 0.987, 95%CI= 0.974-1.00). </p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Smith, Brown (2008) Utah <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use diversity, population density, pedestrian friendly design, neighborhood age, and walkability to work) <b>Pedestrian friendly street design (street connectivity and intersection density)</b> <b>Outcome(s) Affected</b> Overweight/obesity (Utah population database-driver license data)	<p><b>Positive Association for Overweight/obesity in Men (Street Design)</b>  <b>Positive Association for Overweight/obesity in Women (Street Design)</b>  <b>(Assumptions: Individuals in neighborhoods with increased density, connectivity, age of homes, and ease of walking to work will participate in higher levels of active transportation, which will lead to decreased overweight/obesity.)</b></p> <p><b>Street Design</b>  <u>OVERWEIGHT/OBESITY:</u>  1. The higher the number of intersections within 0.25 miles of the home, the more reduced the risk for overweight and obesity is in men (OR=0.991, 95% CI=0.985-0.997, p=0.004 and OR=0.988, 95% CI=0.980-0.996, p=0.004, respectively) and the more reduced the risk is for overweight in women (OR=0.993, 95%CI=0.985-1.0, p=0.042).  2. For men, being in the top 25% of all four walkability measures (defined as highest levels of density, pedestrian-friendly street design, neighborhood age, and walking to work) is associated with approximately a 1.28-point reduction in BMI. For women, the reduction is 0.95 points. For a hypothetical 6-foot, 200-pound man, the least walkable neighborhood would be associated with approximately 10 more pounds than the most walkable neighborhood. Using the female sample's average height and weight (5 feet, 5 inches; 149 pounds), the most walkable neighborhood would be associated with nearly 6 fewer pounds than the least walkable neighborhood. </p>	<b>Positive Association for Overweight/obesity in Men</b> <b>Positive Association for Overweight/obesity in Women</b> Study design = Association Effect size = Positive association for overweight/obesity in the men and women	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Frank, Schmid (2005) <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability index</i> (land-use mix, residential density, street connectivity, and intersection density) <b>Outcome(s) Affected</b> Physical activity (travel survey and accelerometer)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Increased land-use mix, intersection density, and walkability in a neighborhood leads to increased physical activity in residents.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. A natural log of the minutes of moderate physical activity per day was significantly correlated with intersection density (<math>r=0.111, p &lt;0.01</math>).</li> <li>2. The walkability index (intersection density, land-use mix, residential density) was a significant correlate for meeting the <math>\geq 30</math>-minute physical activity recommendation. Individuals were on average thirty percent more likely to record <math>\geq 30</math> minutes of activity with each increase in the walkability index quartile.</li> <li>3. Thirty-seven percent of individuals in the highest walkability index quartile met the minimum of <math>\geq 30</math> minutes for physical activity, while only eighteen percent of individuals in the lowest walkability quartile met the recommendation.</li> <li>4. Results demonstrate that the odds of meeting the recommended <math>\geq 30</math> minutes of moderate activity per day was 2.4 (OR) times greater for the fourth quartile group (walkability) than the referent group (least walkable) with a reported confidence interval (CI) of 1.18 to 4.88 (<math>p=0.015</math>). However, the third quartile group approaches a significant difference from the referent group as well (OR=2.02, 95%CI=0.99–4.12, <math>p=0.055</math>).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low Participants were more likely to be female (55.7%), and well educated, as 66.4% had at least a bachelor's degree. Study participants were 74.9% white as compared to 53.9% in the Atlanta region .
<b>Author</b> Frank, Andresen (2004) Atlanta <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (land-use mix, residential density, and street connectivity) <b>Outcome(s) Affected</b> Overweight/obesity and physical activity (travel diary)	<p><b>Positive Association for Overweight/obesity in White Men (Street Design)</b></p> <p><b>(Assumptions: Increased land-use mix, intersection density, and residential density lead to greater neighborhood walkability, which leads to higher levels of physical activity, which may lead to reduced overweight/obesity levels.)</b></p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>1. For white males, all three urban form variables - mixed use <math>r=-0.11</math>; <math>p&lt;0.001</math>, intersection density (<math>r=-0.089</math>; <math>p&lt;0.001</math>), and net residential use (<math>r=-0.096</math>; <math>p&lt;0.001</math>) - were inversely correlated with BMI.</li> </ol>	<b>Positive Association for Overweight/obesity in White Men</b> Study design = Association Effect size = Positive association for overweight/obesity in white men	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported Higher-density locations were oversampled to ensure a sample of households within a range of different types of urban environments.
<b>Author</b> Frank, Sallis (2006) Washington <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (land-use mix, residential density, street connectivity, retail floor ratio) <b>Outcome(s) Affected</b> Physical activity (IPAQ and travel diary)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Greater walkability in the neighborhood will lead to increased physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>1. When the walkability index was compared to BMI there was an expected relationship with walkability negatively related to body mass (<math>\beta= -0.113, t=-3.898, p&lt;0.0001</math>, partial correlate <math>-0.107</math>).</li> <li>2. Researchers found a 5% increase in walkability associated with a 0.23-point reduction in body mass index.</li> </ol> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>3. When the walkability index was compared to minutes per week devoted to active transportation there was an expected relationship, with walkability positively related to active transportation (<math>\beta= 0.304, t=10.659, p&lt;0.0001</math>, partial correlate=<math>0.289</math>).</li> <li>4. Researchers found a 5% increase in walkability associated with a per capita 32.1% increase in time spent in physically active travel and 6.5% fewer vehicle miles traveled.</li> </ol> <p>(Note: Walkability is a composite score using residential density, intersection density, land-use mix, and retail floor area ratio.)</p>	<b>Positive Association for Overweight/obesity in the Study Population</b> <b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for overweight/obesity and physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High The sample was well balanced by gender, education, household income, and vehicle ownership.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Khattak, Rodriguez (2005); Brown, Khattak (2008); Rodriguez, Khattak (2006) <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Urban form (land-use mix, street connectivity, and residential density) <b>Outcome(s) Affected</b> Overweight/obesity (height and weight) and physical activity (mail-in survey, BRFSS, Activity survey, Travel diary)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Individuals living in neighborhoods with increased land-use mix, street connectivity, and residential density are more likely to participate in greater levels of physical activity.)</b></p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Indirectly through the duration of MVPA, the association between both new urbanist dwelling types and BMI was not significantly associated with a reduction in BMI.</li> <li>Indirectly through the number of utilitarian physical activity trips the association between the new urbanist neighborhood and BMI shows a significant 0.119 reduction in BMI (0.390 [main effect] X -0.304 [coefficient] = -0.119) for household heads from the single-family dwellings compared with household heads from the conventional suburban neighborhood.</li> <li>Indirectly through utilitarian physical activity trips for the household heads residing in the new urbanist multi-family dwellings the association between the neighborhood and BMI was not significant.</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Residents of the new urbanist neighborhoods (mean=2.03) spend more time being physically active in their neighborhood than did residents of the conventional neighborhoods (mean=1.20) (moderate or vigorous physical activity <math>t=2.890</math>, <math>p&lt;0.001</math>).</li> </ol> <p>(Note: Neighborhood type was defined by presence of town center, land-use mix, and street connectivity.)</p>	<b>Positive Association for Overweight/obesity in the Study Population</b> <b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for overweight/obesity and physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Frank, Saelens (2007) <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use mix, density, retail floor ratio, street connectivity) <b>Outcome(s) Affected</b> Overweight/obesity (self-report height and weight [body mass index]) and physical activity (2 day travel diary)	<p><b>No Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Individuals with increased land-use mix, density, and street connectivity will participate in greater levels of physical activity, which will lead to decreased levels of overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Unexpectedly, obesity prevalence was higher in the second versus 1st non-motorized selection quartile (data not shown). As expected, prevalence was lower in the fourth (most walkable) versus the first (least walkable) walkability quartile (data not shown).</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Individuals in both the third and fourth quartiles for the non-motorized selection (availability to walk to shops and services) factor and walkability had significantly higher odds of any walk trips (3rd; OR=1.52, 95%CI=1.06-2.15, 4th; OR=2.49, 95%CI=1.80-3.36) and non-discretionary walk trips (3rd; OR=1.52, 95%CI=1.04-2.19, 4th; OR=2.43, 95% CI=1.71-3.36) than first quartile individuals for the selection and walkability factors (those not having access to shops and services).</li> <li>Only the fourth quartile (the most walkable neighborhoods) on walkability showed significantly greater odds of a discretionary walk trip (OR=3.3, 95%CI=2.93-7.10).</li> <li>Lower age, fewer motorized vehicles, lower proportion of licensed drivers, increased importance of non-motorized selection, and increased walkability were all significant predictors of increased likelihood of any walk trips (pseudo <math>R^2=0.15</math>).</li> </ol>	<b>No Association for Overweight/obesity in the Study Population</b> <b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = No association for overweight/obesity and positive association physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High Both samples were representative of the regional distribution across gender and household size. The neighborhood preference sample was derived from a representative sample of the larger SMARTRAQ survey across income and net residential density.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Atkinson, Sallis (2005); Saelens, Sallis, Black (2003)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (residential density, mixed land use, accessibility, connectivity, infrastructure, aesthetics, traffic safety, and crime within a 10-15 minute walk)  <b>Outcome(s) Affected</b> Physical activity (Survey and the Godin-Shephard Leisure Time Exercise Questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased density, connectivity, and home equipment availability will lead to increased physical activity levels.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <p>1. Accelerometer-derived total physical activity was positively correlated with connectivity at a modest level (<math>r=0.21</math>, <math>p=0.04</math>).</p>	<p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for physical activity in the study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p> <p>The neighborhoods differed in respect to mean age (<math>p=0.008</math>) and percentage of residents completing college differed significantly (<math>p=0.026</math>).</p>
<b>Author</b> Forsyth, Hearst (2008), Forsyth, Oakes (2007), Oakes, Forsyth (2007)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (street pattern, block size, traffic calming devices, distance to stores, land-use mix, and residential density)  <b>Outcome(s) Affected</b> Physical activity (International Physical Activity Questionnaire and 7-day travel and walking diary)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased block sizes, street connectivity, and land-use mix leads to increased levels of physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <p>1. Larger blocks seem to increase odds ratios for leisure walking by about 40% (<math>OR=1.40</math>; 95%CI 0.96, 2.05, p-value not reported).</p> <p>2. Total walking in mean miles per day is positively correlated with sidewalks (length per unit area; CE; 0.4510; length divided by road length; CE; 0.3449), street lights (CE; 0.4874), traffic calming (CE; 0.3629), and several of our many measures of connected street patterns (signs vary) (<math>p&lt;0.05</math>).</p> <p>3. Travel walking measured both by survey and diary was positively correlated with sidewalks (length per unit (Ipu)/IPAQ; CE; 0.4866; Ipu Diary; CE; 0.6224; length/road(l/r) IPAQ; CE; 0.5282; l/r Diary; CE; 0.5945) and connected street patterns (# access pts./IPAQ; CE; 0.5176, # pts/Diary; CE; 0.5384; intersections IPAQ; CE; 0.4052, int. Diary; CE; 0.5279; 4-way IPAQ; CE; 0.4602; 4-way Diary; CE; 0.5782; nodes IPAQ; CE; 0.4284, nodes Diary; CE; 0.4673; ratio 4-way IPAQ; CE; 0.4164, 4-way Diary; CE; 0.4698) (all <math>p&lt;0.05</math>).</p> <p>4. Leisure walking was negatively correlated with sidewalks (length/road IPAQ CE; -0.3318, <math>p&lt;0.05</math>) and street lights and connected street patterns (IPAQ # access points CE; -0.3349; IPAQ connected nodes CE; -0.3643, <math>p&lt;0.05</math>).</p>	<p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for physical activity in the study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p>
<b>Author</b> Bungum, Lounsbury (2009)  <b>Design</b> Association  <b>Cross-sectional study</b>  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Perceptions of neighborhood accessibility</i> (street network and intersection density)  <b>Outcome(s) Affected</b> Physical activity (survey and modified version of Children's Attitudes Toward Physical Activity measure)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased street connectedness will increase active transport to school.)</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <p>1. Those who attended the most connected school were 2.08 (CI=1.19-3.60, <math>p=0.011</math>) times more likely to use active transport to school than were those at the other schools.</p> <p>2. Males were 2.69 (CI=1.63-4.43, <math>p&lt;0.001</math>) times more apt to use active transport to school than were females, while neither physical activity benefits nor physical activity barriers predicted use of active transport to school.</p>	<p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for physical activity in the study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Handy, Cao (2008); Handy, Cao (2006) California <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (land-use mix, aesthetic quality, distance to locations, neighborhood safety, and street connectivity) <b>Outcome(s) Affected</b> Physical activity (survey measured frequency of transport and leisure walking and walking to specific destinations in the past 30 days, change in walking and biking before the move [for movers] or from one year ago [for non-movers] and frequency/intensity of activity in the previous week)	<p><b>Positive Association for Physical Activity in Study Population (Street Design)</b>  <b>(Assumption: Increased land-use mix, aesthetic quality, and street connectivity lead to increased physical activity levels.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Respondents who preferred to have cul-de-sacs (coefficient=-0.065, p=0.084) walked less frequently, suggesting a self-selection effect. After controlling for all effects, distance to potential destinations, both objective (coefficient=-0.144, p&lt;0.0001) and perceived (coefficient=0.268, p&lt;0.0001) remained positively associated with neighborhood walking. Perceived safety (coefficient =-0.071, p=0.029) remained negatively associated with walking and attractiveness (coefficient=0.078, p=0.038) remained positively associated.</li> <li>2. Compared to suburban residents, residents in traditional neighborhoods perceived their neighborhoods on average as having higher accessibility (mean=0.15 vs. mean=-0.18, p&lt;0.001) and attractiveness (mean=0.28 vs. mean=-0.33, p&lt;0.001).</li> <li>3. Changes in perceptions of accessibility (walking coefficient=0.103, p&lt;0.0001) were associated with increased neighborhood physical activity and walking.</li> </ol>	<b>Positive Association for Physical Activity in Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low According to the 2000 US Census the evaluation sample tended to be older on average than neighborhood residents and the percent of households with children is lower among the evaluation sample for most neighborhoods. Median household income for the evaluation sample was higher than the census median for all but one neighborhood.
<b>Author</b> Doyle, Kelly-Schwartz (2006) United States <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (street connectivity, block size, density of intersections and roads) <b>Outcome(s) Affected</b> Physical activity (National Health and Nutrition Examination Survey III, 1988-1994 [NHANES]) and overweight/obesity (weight and height [body mass index])	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b>  <b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased walkability, less sprawl, and safety leads to lower body mass index [BMI] and increased physical activity.)</b></p> <p><b>Street Design</b>  <b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>1. Individuals who live in counties that are more walkable and have lower crime rates tended to walk more and to have lower body mass indices (BMIs) than people in less walkable and more crime-prone areas, even after controlling for a variety of individual variables related to health (walkability; coefficient= -0.054, standard error=0.028, p&lt;0.05, crime; coefficient= -2.00, standard error=4.20, not significant).</li> </ol> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>2. Individuals who live in counties that are more walkable and have lower crime rates tended to walk more than people in less walkable and more crime-prone areas (coefficient=0.053, standard error=0.020, p&lt;0.01 for walkability, crime not significant).</li> </ol> <p>(Note: The walkability scale was measured using street connectivity, block size, and accessible routes.)</p>	<b>Positive Association for Overweight/obesity in the Study Population</b> <b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity and overweight/obesity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported Respondents in the interview sample, but not the examination sample, tended to be somewhat older, less healthy, and more often non-Hispanic White. Because we included all of these variables as controls in our analysis, these differences should not affect our results.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Heinrich, Lee (2008); Heinrich, Lee (2007)  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (street connectivity and accessibility) (sidewalk presence)  <b>Outcome(s) Affected</b> Overweight/obesity and physical activity (Pathways to Health study data [National Health Interview Survey and interviews])	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Greater neighborhood accessibility, amenities, and features will lead to increased physical activity, which will lead to decreased overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>At the aggregated neighborhood level (n=12), 71% of the variance in obesity prevalence was accounted for by accessibility (<math>\beta=-1.02</math>, <math>p=0.05</math>), average feature quality (<math>\beta=1.05</math>, <math>p=0.09</math>), average number of amenities per resource (<math>\beta=-1.19</math>, <math>p=0.03</math>), and average incivilities per resource (<math>\beta=0.70</math>, <math>p=0.04</math>), (<math>F(4,11)</math> 4.32, <math>p&lt;0.05</math>).</li> <li>Neighborhoods with greater connectivity had residents with lower average BMI (<math>r=-0.58</math>, <math>p=0.05</math>).</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Greater neighborhood street connectivity (<math>\beta=0.672</math>, <math>p=0.001</math>) and fewer average incivilities per neighborhood (<math>\beta=-0.54</math>, <math>p=0.005</math>) were associated with more days walked per week [<math>F=21.8</math> (2,11); <math>p&lt;0.001</math>; <math>r^2=0.83</math>].</li> <li>Higher street connectivity (<math>\beta=0.902</math>, <math>p=0.001</math>) and fewer physical resources were correlated with meeting moderate physical activity guidelines [<math>F=39.18</math> (2,11); <math>p&lt;0.001</math>; <math>r^2=0.90</math>]</li> <li>A greater percent of accessible physical activity resources (<math>\beta=0.584</math>, <math>p=0.046</math>) was related to the number of days vigorous physical activity was performed during the past week [<math>F=5.17</math> (2,11); <math>p&lt;0.05</math>; <math>r^2=0.34</math>]</li> <li>Females walked half as many days per week as males did (<math>OR=0.623</math>, 95%CI: 0.428-0.905, <math>p=0.013</math>), while greater street connectivity resulted in 1-2 more days walked per week (<math>OR=1.553</math>, 95%CI: 1.105-2.183, <math>p=0.011</math>).</li> <li>Females were up to one-third less likely to meet moderated physical activity guidelines than were males (<math>OR=0.602</math>, 95%CI: 0.37-0.978, <math>p=0.41</math>), while having greater street connectivity was linked to a 1.2 to 3.3 greater chance of meeting moderate physical activity guidelines (<math>OR=1.987</math>, 95%CI: 1.21-3.263, <math>p=0.007</math>).</li> </ol>	<b>Positive Association for Overweight/obesity in the Study Population</b>  <b>Positive Association for Physical Activity in the Study Population</b>  Study design = Association Effect size = Positive association for overweight/obesity in the study population and positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> King, Toobert (2006)  California, Oregon, Georgia, Rhode Island, Tennessee  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (residential density, land use mix, access to restaurants and retail stores, street connectivity, walking and cycling facilities, aesthetics)  <b>Outcome(s) Affected</b> Physical activity (Community Health Activities Model Program for Seniors (CHAMPS) questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Increased residential density, land-use mix, and street connectivity will lead to increased physical activity.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Having many alternative routes when going from place to place was positively associated with minutes per week of walking for errands at the Oregon site (parameter estimate=0.35(121), <math>p=0.02</math>, total <math>r^2=6.6</math>).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b>  Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Kerr, Frank (2007) Georgia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (residential density, mixed-land use, street connectivity) <b>Outcome(s) Affected</b> Physical activity (Strategies for Metropolitan Atlanta's Regional Transportation and Air Quality [SMARTRAQ] household travel survey [including a 2-day diary])	<p><b>Positive Association for Physical Activity in Women (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Men (Street Design)</b></p> <p><b>Positive Association for Physical Activity in White Participants (Street Design)</b></p> <p><b>(Assumption: Neighborhoods with diverse land-use and accessibility will lead to increased levels of pedestrian walking.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Intersection density was significantly related to walking in both males and females. The relationship between urban form and walking appeared to be stronger in females for intersection density (OR=1.8, 95%CI: 1.2-2.7, p&lt;0.01) than males (intersection density: OR=1.5, 95%CI: 1.1, p&lt;0.05)</li> <li>Intersection density was strongly and significantly related to walking in white participants in the expected direction at the p&lt;0.001 level (OR=1.9, 95% CI: 1.4-2.8).</li> </ol> <p>(See text for more results related to socioeconomic and demographic variables.)</p>	Positive Association for Physical Activity in Women Positive Association for Physical Activity in Men Positive Association for Physical Activity in White Participants Study design = Association Effect size = Positive association for physical activity in women, men and white participants	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Norman, Nutter (2006) California <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (intersection and residential density, retail floor area ratio, land-use mix, street connectivity) <b>Outcome(s) Affected</b> Overweight/obesity (height and weight were used to calculate body mass index [BMI]) and physical activity (measured with accelerometers)	<p><b>Positive Association for Physical Activity in Girls (Street Design)</b></p> <p><b>(Assumption: Neighborhood walkability leads to increased levels of physical activity, which will lead to decreased overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>For girls, significant correlations were found for total minutes/day of moderate-to-vigorous physical activity with number of intersection density (<math>r=-0.14</math>, <math>p&lt;0.01</math>). Intersection density (<math>r^2=0.25</math>, <math>\beta=-0.127</math>, <math>p=0.006</math>) remained significant after multiple linear regression.</li> </ol>	Positive Association for Physical Activity in Girls Study design = Association Effect size = Positive association for physical activity in girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Roemmich, Epstein (2007) New York <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (street connectivity, access to locations, and residential density) <b>Outcome(s) Affected</b> Physical activity (PA) and screen time (assessed with accelerometers and a 'Habit Book')	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Boys (Street Design)</b></p> <p><b>(Assumptions: Street connectivity and greater access to places to be physically active is associated with greater physical activity and inversely associated with greater screen time.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>For boys, neighborhood street connectivity was positively correlated to total physical activity (<math>p \leq 0.05</math> for all).</li> <li>When combining the boys and girls into a single group, total physical activity was correlated to street connectivity (<math>r=0.25</math>, <math>p \leq 0.05</math>).</li> <li>Street connectivity was correlated with MVPA (<math>r=0.26</math>, <math>p \leq 0.05</math>).</li> <li>For boys, street connectivity (0.34) was positively correlated with moderate-to-vigorous physical activity (<math>p \leq 0.05</math>).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Boys</b> Study design = Association Effect size = Positive association for physical activity in the study population and boys	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Samimi, Mohammadian (2008) United Statesa <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood Pedestrian Friendliness (auto use, intersection density, road density, block size) <b>Outcome(s) Affected</b> Overweight/obesity (height and weight [body mass index] from BRFSS data)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Individuals living in highly urbanized areas with increased road density, intersection density, and population density will be less obese than their counterparts.)</b></p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Using forward selection, positive correlations for auto-use (coefficient: 0.41, standard error: 0.03, <math>p &lt; 0.001</math>) and block size (coefficient: 0.28, standard error: 0.03, <math>p &lt; 0.001</math>) are seen for obesity.</li> <li>Using backward selection methods, positive correlations for auto-use (marginal effects=0.120; elasticity=0.425; and <math>p &lt; 0.001</math>) and block-size (marginal effects: 0.074; elasticity=0.055; and <math>p &lt; 0.001</math>) were seen for obesity.</li> <li>Using forward selection, negative coefficients for road density (CE: -0.45 E-02, SE: 0.64E-03) and intersection density (CE: -0.46E-03, SE: 0.56E-04) were found, suggesting that people living in urbanized areas are less likely to be obese (<math>p &lt; 0.001</math>).</li> </ol>	<b>Positive Association for Overweight/obesity in the Study Population</b> Study design = Association Effect size = Positive association for overweight/obesity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Zenk, Wilbur (2009) Illinois <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (public recreation center with an indoor track or treadmill, places to walk indoors, aesthetics, safety, and recreational open spaces, land-use mix, street connectivity, residential and public transit stop density) <b>Outcome(s) Affected</b> Walking (walking log books and heart rate monitors)	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Neighborhood walkability and availability of walking facilities/spaces were hypothesized to positively influence adherence to a home-based walking intervention, whereas lower neighborhood safety and unpleasant neighborhood aesthetics were hypothesized to negatively affect adherence.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Neighborhood walkability, aesthetics, recreational open space, and safety were not statistically significantly associated with adherence to walking prescriptions. There was no evidence that the environment moderated the effect of intervention group on adherence (data not shown).</li> </ol> <p>(Note: The measure representing walkability score was a composite for multiple strategy with variables related to access of facilities and open spaces, aesthetics, safety, and connectivity.)</p>	<b>No Association for Physical Activity in the Study Population</b> Design = Association Effective size = No association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Suminski, Poston (2005) Midwestern United States  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (construction/integrity of sidewalks and streets, neighborhood traffic volume and speed, lighting, crime, aesthetics, availability of shops, parks, work, and schools)  <b>Outcome(s) Affected</b> Walking behavior (questionnaire)	<p><b>Negative Association for Physical Activity in Men (Street Design)</b>  <b>(Assumption: Having a safe neighborhood with destinations within walking distance leads to increased physical activity and active transportation.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Men were less likely to walk for transportation in the neighborhood if the functional (OR=0.22, 95%CI=0.06-0.89) or aesthetic (OR=0.17, 95%CI=0.03-0.89) features of the neighborhood were average versus below average (<math>p&lt;0.05</math>).    (Note: Neighborhood "safety" was a composite score using traffic volume and speed, lighting, and crime. The "functional" feature of the neighborhood was represented by three items related to the construction/integrity of neighborhood sidewalks and streets.)</p>	Negative Association for Physical Activity in Men Study design = Association Effect size = Negative association for physical activity in men	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Kerr, Rosenberg (2006) Washington  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (residential density, proximity and ease of access to nonresidential land uses, street connectivity, walking or cycling facilities, aesthetics, pedestrian traffic safety, and crime safety)  <b>Outcome(s) Affected</b> Active transportation (survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Increased parental perceptions of neighborhood walkability will lead to more active commuting.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Parent concerns, neighborhoods aesthetics, and stores within a 20-min walk were independently associated with active commuting (parent aesthetics; OR= 5.2, 95%CI = 2.71-9.96, <math>p&lt;0.05</math>, aesthetics; OR=2.5, 95% CI=1.33-4.80, <math>p&lt;0.05</math>, store distance; OR= 3.2, 95%CI= 1.68-6.01, <math>p&lt;0.05</math>).  2. Parent concerns and neighborhood aesthetics were independently associated with active commuting (parent concerns; OR=4.9, 95% CI=2.54-9.40, <math>p&lt;0.05</math>, aesthetics; OR=2.4, 95% CI=1.23-4.56, <math>p&lt;0.05</math>).</p>	Positive Association for Physical Activity in the Study Population Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Tilt, Unfried (2007) Washington  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Perceptions of destinations, walkability and aesthetics in the neighborhood (access to mixed land-use, distance to locations, access and proximity to vegetation)  <b>Outcome(s) Affected</b> Overweight/obesity (height and weight [body mass index]) and active transportation (survey)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b>  <b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Residents living in neighborhoods that had numerous types of destinations within walking distance, high amounts of vegetation, and high satisfaction with that vegetation would not only make more walking trips but also would have lower body mass index scores.)</b></p> <p><b>Street Design</b>  <u>OVERWEIGHT/OBESITY:</u>  1. In areas with high accessibility, BMI was lower in areas that had high NDVI, or more greenness (<math>r^2=.129428</math>, model <math>p&lt;.0001</math>; t test of interaction <math>p=.0257</math>).    <u>PHYSICAL ACTIVITY:</u>  2. Objective accessibility was related to walking trips per month (<math>r^2=.051</math>, <math>p&lt;.0001</math>), although objective measures of actual greenness were not.</p>	Positive Association for Overweight/obesity in the Study Population Positive Association for Physical Activity in the Study Population Study design = Association Effect size = Positive association for overweight/obesity and physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Liu, Wilson (2007) Indiana <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability and aesthetics (land-use mix and access to vegetation) <b>Outcome(s) Affected</b> Overweight/obesity (height and weight [body mass index])	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p>(Assumptions: 1) Increased distance to accessible food stores will increase the likelihood of overweight and obesity. 2) Increased vegetation will lead to increased physical activity, which will lead to decreased rates of overweight and obesity.)</p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <p>1. In the Higher Population Density Townships, vegetation (adjusted odds 0.899 standard error 1.038 p&lt;0.01) was negatively associated with risk of overweight (fully adjusted model).</p>	<b>Positive Association for Overweight/obesity in the Study Population</b> Study design = Association Effect size = Positive association for overweight/obesity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> King, Castro (2000) United States <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (access to recreational facilities, traffic and crime safety, presence of sidewalks, streetlights, and neighborhood aesthetics) <b>Outcome(s) Affected</b> Physical activity (survey, the Behavioral Risk Factor Surveillance System [BRFSS], and National Health Interview Survey items)	<p><b>Positive Association for Physical Activity in Women (Street Design)</b></p> <p>(Assumptions: Individuals with positive neighborhood perceptions of traffic and crime safety, access to recreational facilities, and neighborhoods with streetlights, sidewalks and good aesthetic quality will be more likely to participate in physical activity.)</p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <p>1. Females reporting enjoyable scenery (OR=1.42, 95% CI=1.12-1.79, p&lt;0.01) in their neighborhoods were more likely to be physically active.</p>	<b>Positive Association for Physical Activity in Women</b> Study design = Association Effect size = Positive association for physical activity in Women	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported High This study was able to obtain a representative distribution of minority and low-income women. The study was unable to obtain sufficient numbers of Asian-Pacific Island women to be in the sample because of language difficulties and cultural barriers.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Sallis, Saelens (2009) Washington and Maryland <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<p><b>Measures</b>  Neighborhood walkability (density, mixed land use, street connectivity, retail floor area ratio) (sidewalk presence)</p> <p><b>Outcome(s) Affected</b>  Overweight/obesity (height and weight [body mass index]) and physical activity (International Physical Activity Questionnaire [IPAQ], accelerometers)</p>	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p>(Assumptions: Individuals living in areas with greater walkability, that is increased density, land-use mix, street connectivity, and retail floor area, will have high levels of physical activity, which will lead to decreased levels of overweight/obesity.)</p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>1. The walkability main effect was significant (<math>p=0.007</math>), with the odds of being overweight or obese 35% higher for participants living in low vs. high-walkability neighborhoods (<math>OR=1.35</math>, 95% CI; 1.09-1.69).</li> <li>2. Overall, the significant walkability main effect indicated a higher average of number of minutes per week of walking for transportation in high-walkability neighborhoods 44.3 min per week, compared to low-walkability neighborhoods 12.8 min per week (walkability main effect <math>p&lt;0.0001</math>).</li> <li>3. Walking for transportation was significantly higher in high-walkability neighborhoods compared to low-walkability neighborhoods for both high- and low-income neighborhoods; however, the differential was larger in high-income neighborhoods at 5.1 minutes compared to low-income neighborhoods at 2.3 minutes (walkability-by-income interaction <math>p=0.027</math>).</li> <li>4. The leisure walking main effect was significant (<math>p=0.012</math>), with people living in high-walkability neighborhoods averaging 18.5 minutes per week of leisure walking compared to 14.2 minutes per week in low-walkability neighborhoods.</li> <li>5. On average, participants in high-walkability neighborhoods had 5.8 more minutes per day of objectively measured MVPA than those in low-walkability (main effect <math>p=0.0002</math>).</li> <li>6. When the "reasons for moving here" score was added to control for preferences related to "activity-friendly" environments, the walkability main effect was still significant (<math>p&lt;0.0001</math>). For minutes of leisure walking, the walkability main effect was no longer significant (<math>p=0.36</math>).</li> </ol> <p>(Note: The walkability index was both street (street connectivity) and community (land use mix and residential density) design variables.)</p>	<p><b>Positive Association for Overweight/obesity in the Study Population</b></p> <p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for overweight/obesity and physical activity in the study population</p>	<p><b>Maintenance</b>  Not Applicable</p> <p><b>Sampling / Representativeness</b>  Not Reported</p>
<b>Author</b> Greenwalk, Boarnet (2001) Oregon <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<p><b>Measures</b>  Pedestrian friendly environment (ease of street crossing, sidewalk continuity, street connectivity, topography)</p> <p><b>Outcome(s) Affected</b>  Physical activity (1994 Portland Travel Diary)</p>	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p>(Assumption: Individuals in areas with increased population density and street connectivity are more likely to participate in non-work walking travel.)</p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>1. The percentage of area in a <math>\frac{1}{4}</math> mile buffer zone of the residence that is covered by a street grid format was significantly associated with non-work walking travel in the ordinary least squares model (coefficient= 0.9931173, <math>T=2.774</math>, <math>p&lt;0.05</math>), but became insignificant when instrumented.</li> <li>2. Using ordinary least squares and instrumental variable regressions, block group population density and PEF score show support for non-work walking travel. Block group population density and PEF score are both individually significant in the ordinary least squares (coefficient= 0.0000569, <math>T= 6.122</math>; <math>p&lt;0.05</math>; and coefficient; 0.0606048, <math>T=3.649</math>; <math>p&lt;0.05</math>, respectively) and the instrumented variable regressions (coefficient= 0.0000596, <math>T= 2.292</math>, <math>p&lt;0.05</math>; and coefficient= 0.0792254, <math>T=2.38</math>, <math>p&lt;0.05</math>, respectively).</li> </ol> <p>(Note: The Pedestrian Environment Factor or PEF scores consists of presence of crosswalks and sidewalks, and street connectivity.)</p>	<p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for physical activity in the study population</p>	<p><b>Maintenance</b>  Not Applicable</p> <p><b>Sampling / Representativeness</b>  Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Catlin, Simoes (2003)  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods</i> (indoor, and outdoor, trails, and parks, perceived criminal safety, traffic safety, pleasantness of neighborhood)  <b>Outcome(s) Affected</b> Overweight/obesity (Missouri Cardiovascular Disease Survey - self-reported weight and height [body mass index])	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>(Assumption:</b> Respondents having direct access to destinations in a safe and pleasing community will be more physically active, which will lead to lower rates of overweight/obesity.)</p> <p><b>Street Design</b></p> <p><b><u>OVERWEIGHT/OBESITY:</u></b></p> <p>1. Employed persons reporting the absence of sidewalks and shoulders were 1.74 times more likely to be overweight (95% CI: 1.26-2.40).</p>	<p><b>Positive Association for Overweight/obesity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for overweight/obesity in study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p> <p>Employed participants differed from the total sample in that there was a higher prevalence of men, younger age groups, post-high school education, and current smokers.</p> <p>A disproportionate stratified sampling design was used to randomly select households in the state of Missouri.</p> <p>Minority and low-income zip codes in urban centers were oversampled.</p>
<b>Author</b> Kligerman, Sallis (2007)  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (access to parks, land-use mix, retail, intersection, and residential density)  <b>Outcome(s) Affected</b> Overweight/obesity (height and weight were used to calculate body mass index [BMI]) and moderate to vigorous physical activity (measured with accelerometers)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption:</b> Respondents with greater access to parks, a diverse mix of destinations, and increased population and intersection density will participate in higher levels of physical activity, which will lead to decreased levels overweight/obesity.)</p> <p><b>Street Design</b></p> <p><b><u>PHYSICAL ACTIVITY:</u></b></p> <p>1. The walkability index (<math>r=0.168</math>, <math>p&lt;0.098</math>) for the 0.5-mile buffer yielded a significant or marginal bivariate correlation with moderate-to-vigorous physical activity.            2. In a linear regression, the walkability index was related to minutes of moderate to vigorous physical activity within 0.5 mile of homes, explaining approximately 4% of variance.</p> <p>(Note: The walkability index was comprised of measures examining street and community characteristics.)</p>	<p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for physical activity in the study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Troped, Saunders (2003) Massachusetts <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (safety from traffic and crime, land-use mix, street connectivity, hills, safety, and presence of trails) <b>Outcome(s) Affected</b> Recreation and transportation physical activity (Arlington Physical Activity and Bikeway Survey and the Monitoring of Trends and determinants in Cardiovascular Disease Optional Study of Physical Activity (MOSPA) survey)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Individuals living in neighborhoods with increased enablers for physical activity will participate in more physical activity than those living near barriers for physical activity.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Participants who reported sidewalks in their neighborhood and heavy traffic also reported a higher level of participation in recreational physical activity (mean[sd]: sidewalks = 138.3[94.4] and heavy traffic = 151.9[168.1], respectively both <math>p \leq 0.01</math>).</li> <li>Presence of sidewalks did not show statistically significant independent associations with recreational physical activity.</li> <li>Presence of streetlights (coefficient= 42.07, <math>p \leq 0.05</math>) and neighborhood sidewalks (coefficient= 47.75, <math>p &lt; 0.05</math>) were positively associated with minutes of transportation physical activity.</li> <li>Participants responding "yes" to having sidewalks (151.1[185.2], <math>p &lt; 0.05</math>) had higher levels of transportation physical activity.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High The sample is not representative of the whole United States but rather populations with similar demographic and geographic variables.
<b>Author</b> Bell, Wilson (2008) Indiana <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood aesthetics and accessibility (amount of neighborhood vegetation/greenness and residential density) <b>Outcome(s) Affected</b> Overweight/obesity (survey of medical records [height and weight])	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b>  <b>(Assumption: Increased greenness and residential density will lead to decreased overweight/obesity.)</b></p> <p><b>Street Design</b>  <b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>A 0.01-unit increase in greenness (Normalized Difference Vegetation Index - NDVI) was associated with lower BMI at Time 2 (<math>\beta = -0.06</math> SD, 95% CI= -0.09, -0.02, <math>p &lt; 0.01</math>).</li> <li>Higher greenness was associated with lower odds of increasing BMI (<math>OR = 0.87</math>; 95% CI= 0.79, 0.97; not shown in tables, for the logistic regression model).</li> <li>Associations between greenness (NDVI) and Time 2 BMI were similar with radial and network buffers (<math>\beta = -0.07</math> SSD, 95% CI= -0.11, -0.03; not shown in tables), and the model fits were identical (adjusted <math>r^2 = 0.53</math>).</li> </ol>	<b>Positive Association for Overweight/obesity in the Study Population</b> Study design = Association Effect size = Positive association for overweight/obesity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low The average block group median family income was lower than in the county as a whole (\$36,917/year vs. \$49,387/year).
<b>Author</b> Cohen, Ashwood (2006) Washington DC, Maryland, South Carolina <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Active neighborhoods (access to parks, presence of lighting, restroom, shaded areas, fountains, fencing, open spaces, playing fields, courts within the parks, and street connectivity) <b>Outcome(s) Affected</b> Moderate to vigorous physical activity (accelerometers)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Park proximity, park type, and park features leads to increased physical activity in adolescent girls.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Shaded areas (20 min for 3.0 MET; 14 min for 4.6 MET, <math>p &lt; 0.10</math> for both) were associated with increased MVPA.  (Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported 20% Black and 6% Hispanic, and 10% of households were below poverty level (neighborhood average; ½ mile radius)

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Lindsey, Han (2006) Indiana <b>Design</b> Association Non-comparative study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (network mobility, neighborhood boundaries, road features, greenway vectors, gross population density, parcel-level land-use mix, vegetation) <b>Outcome(s) Affected</b> Trail use (infra-red monitor)	<p><b>Not Reported (for desired health outcomes)</b></p> <p><b>Positive Association for Trail use in Study Population (Street Design)</b></p> <p><b>(Assumption: Increased neighborhood mobility leads to greater physical activity levels.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Daily trail traffic is positively and significantly correlated with mean length of street segment (parameter estimate=0.1172, t=6.27, p&lt;0.0001).</li> <li>A 1% increase in the length of the mean street segment length is associated with an increase in trail traffic of 0.117%.</li> <li>Daily trail traffic is positively and significantly correlated with increases in greenness (parameter estimate=1.988, t=9.36, p&lt;0.0001), the area in trail neighborhoods in parking lots (parameter estimate=0.0346, t=16.02, p&lt;0.0001), and mean length of street segment (parameter estimate=0.1172, t=6.27, p&lt;0.0001).</li> </ol>	<b>Positive Association for Physical Activity in Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>International</b>				
<b>Author</b> Jenum, Lorentzen (2009), Lorentzen, Ommundsen (2009), Lorentzen, Ommundsen (2007), Jenum, Lorentzen (2003), Jenum, Anderssen (2006) Norway <b>Design</b> Intervention Evaluation Non-randomized trial <b>Duration</b> High 3 years	<b>Measures</b> Neighborhood walkability (labeling of walking paths, improved street lighting, snow clearing and gritting of pavements and walking paths) <b>Outcome(s) Affected</b> Physical activity and overweight/obesity (body mass index) (self-administered questionnaire)	<p><b>Net Positive for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Net Positive for Sedentary Behavior in the Study Population (Street Design)</b></p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>In the intervention district, body mass was reduced in 23.7% and increased in 37.9% of the participants, compared with 15.6% and 44.5% in the control district.</li> <li>The net proportion who increased their body mass was significantly lower in the intervention district versus the control district. This was found overall (14.2%, p&lt;0.001) and across non-Western immigrants (27.5%, p=0.001).</li> </ol> <p><b>SEDENTARY BEHAVIOR:</b></p> <ol style="list-style-type: none"> <li>At baseline, the proportion reporting no heavy activity was 40.5% in the intervention district versus 35.7% in the control district, with a net reduction in favor of the intervention district of 8.1% (95% CI: 2.4 to 13.8, p=0.005). The net reduction in the proportion of inactive people measured by stages of change was 6.9% (95% CI: 1.2 to 12.6, p=0.019) in favor of the intervention district. Measured by the heavy activity question, the net increase in favor of the intervention district in heavy physical activity was 9.5% (p=0.008) and by the stages of change 8.1% (p=0.024).</li> </ol>	<b>Effective for Overweight/obesity in the Study Population</b> <b>Effective for Sedentary Behavior in the Study Population</b> Design = Intervention evaluation Duration = High Effectiveness = Net positive for overweight/obesity and sedentary behavior in the study population	<b>Maintenance</b> Not Reported <b>Sampling / Representativeness</b> Low A higher proportion of Westerners, people with high BMI, physically active persons at baseline, women and persons aged 50+ years participated more in some intervention components.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Giles-Corti, Knuiman (2008); Tudor- Locke, Giles-Corti (2008); Giles- Corti, Timperio (2006); Giles-Corti, Knuiman (2007)  <b>Design</b> Intervention Evaluation  Prospective cohort  <b>Duration</b> Not Reported	<b>Measures</b> Neighborhood walkability (proximity, access to, and use of local businesses and neighborhood)  <b>Outcome(s) Affected</b> General physical activity and walking behavior (Neighborhood Physical Activity Questionnaire [NPAQ])	<p><b>Net Negative for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Net Positive for Physical Activity in Women (Street Design)</b></p> <p><b>(Assumptions: Individuals moving into neighborhoods with increased land-use diversity, access to services, and increased street connectivity will participate in greater amounts of physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Those moving into CDs remained significantly more likely than those moving into HDs to meet the threshold for both sufficient walking and physical activity (OR 1.41; 95% CI; 1.07-1.86; OR; 1.31 95% CI 1.02-1.69, respectively).</li> <li>The odds of achieving sufficient physical activity were also higher for those moving into LDs compared with HDs (OR; 1.32, 95% CI; 1.00-1.75), although for walking, the adjusted difference did not reach statistical significance.</li> <li>There were no differences in perceived access to destinations in their baseline neighborhoods among participants moving into different types of developments.</li> <li>Overall females appeared to be taking more steps per day after the move (Spearman's <math>r=0.551</math>; <math>\Delta=T_2-T_1= 34 \pm 3.071</math>).</li> <li>The relative change in steps/day was not significant across age groups in males (<math>\chi^2=17.35</math>, <math>p=0.137</math>) but was in females (<math>\chi^2=50.00</math>, <math>p&lt;0.001</math>).</li> </ol> <p>(Note: P-values were not provided in the text. Conventional Design = CD, Livable Design = LD, and Hybrid Design= HD; Liveable neighborhoods were designed using New Urbanism principles, which seeks to maximized design toward mixed-use, biking/cycling, and access to services like transit. Conventional designs are the complete opposite of liveable with one type of land-use, disconnected street access, and shopping store chain centers. Hybrid neighborhoods are a combination of LD and CD.)</p>	<b>More Evidence Needed</b> Study design = Intervention evaluation  Intervention duration = Not reported  Effect size = Net negative for physical activity in the study population and net positive for physical activity in women	<b>Maintenance</b> Not Reported  <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Humpel, Owen (2004)  <b>Design</b> Association  Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (community convenience to facilities and aesthetics)  <b>Outcome(s) Affected</b> General physical activity and walking (survey assessed frequency and duration of neighborhood weekly walking, type of walking [e.g., transport] perceptions of neighborhood aesthetics, convenience, access to services, and traffic and the International Physical Activity Questionnaire [IPAQ]-short form items assessed intensity, frequency, and duration of physical activity, total physical activity)	<p><b>Positive Association for Physical Activity in Men (Street Design)</b></p> <p><b>(Assumption: Perceiving the environment as aesthetically pleasing, convenient, and perceiving traffic as not being a problem increases individual physical activity levels.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Men with moderate (OR=1.77, 95% CI=1.06-2.97, <math>p&lt;0.05</math>) and high aesthetic scores (OR=1.91, 95% CI=1.08-3.37, <math>p&lt;0.05</math>) were more likely to walk in their neighborhood than individuals with lower scores.</li> <li>Men who increased their perception of aesthetics (OR=2.25, 95% CI= 1.24-4.05, <math>p&lt;0.01</math>) were more likely to have increased walking and twice as likely to have increased walking more than 30 minutes (aesthetics; OR=2.0, 95%CI=1.12-3.79, <math>p&lt;0.05</math>) compared to men with no perception change.</li> </ol> <p>(Note: The composite score for access was comprised of access to shops and public transit. Convenience scores were a composite of the accessibility of paths, parks, and other walking opportunities.)</p>	<b>Positive Association for Physical Activity in Men</b> Study design = Association  Effect size = Positive association for physical activity in men	<b>Maintenance</b> Not Applicable  <b>Sampling / Representativeness</b> Not Reported  Participants did not differ in their responses whether they were part of the original sample or follow-up.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Santos, Silva (2008) Portugal <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (access to destinations and aesthetics, residential density, street connectivity) <b>Outcome(s) Affected</b> Physical activity (International Physical Activity Questionnaire [IPAQ])	<p><b>Positive Association for Physical Activity in Women (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Men (Street Design)</b></p> <p><b>(Assumption: Positively perceived neighborhood attributes like access to destinations and social cohesion lead to increased physical activity (PA) levels in Azorean adults.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Women with positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 32.5% (95%CI: 1.150-1.528; p&lt;0.001) more likely to have a moderate physical activity level and 31.9% (95%CI: 1.121-1.551; p&lt;0.001) more likely to have a health enhancing physical activity (HEPA) level.</li> <li>2. Normal weight women (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 44.5% (95%CI: 1.166-1.791; p&lt;0.001) more likely to have moderate physical activity levels, whereas overweight/obese women (<math>BMI \geq 25 \text{ kg/m}^2</math>) 22% (95%CI: 1.007-1.478; p&lt;0.05) more likely to have moderate physical activity levels and 34.5% (95%CI: 1.3451.080-1.675; p&lt;0.05) more likely to have HEPA levels.</li> <li>3. Normal weight men (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 51.4% (95% CI: 1.091-2.101; p&lt;0.05) more likely to have moderate physical activity levels.</li> </ol> <p>(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	<b>Positive Association for Physical Activity in Women</b> <b>Positive Association for Physical Activity in Men</b> Study design = Association Effect size = Positive association for physical activity in women and men	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported The nature of the sampling design was not random and generalizability is limited.
<b>Author</b> Carnegie, Bauman (2002) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Perceptions of a quality environment (aesthetics, accessibility, safety) <b>Outcome(s) Affected</b> Walking behavior (1996 Physical Activity Survey for the State of New South Wales [NSW])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Individuals with positive impressions of their neighborhood will participate in greater amounts of physical activity, which will be reflected through the stages of change.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Those who did little walking (20 min or less per week) reported more negative perceptions of their aesthetic environment than those who reported walking for between 20 min and 2 hr and those who reported walking for more than 2 hr (<math>F(2, 1.163)= 5.19, p&lt;0.01</math>).</li> </ol> <p>(Note: The practical environment is a composite of access to shops, parks and beaches.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High The demographic composition of the sample was very similar to that provided by the most recent national census data. Respondents aged 40-45 were slightly overrepresented (29.2%), and those aged 56-60 years were slightly underrepresented (20.1%). Two percent of the resident population within the target age range were sampled for this study.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Kirby, Levesque (2007) Canada (Moose Factory Island)  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (convenience, safety, aesthetics, accessibility)  <b>Outcome(s) Affected</b> Walking behavior and various intensities of physical activity (Godin Leisure-Time Questionnaire)	<p><b>Positive Association for Physical Activity in Native Americans (Street Design)</b></p> <p>(Assumption: Positive perceptions of convenience, safety, aesthetics, and the presence of features for physical activity lead to increased physical activity.)</p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>The square root of aesthetics was significantly related to total weekly walking (<math>p&lt;0.05</math>; <math>\beta=0.186</math> respectively).</li> <li>Hierarchical regressions revealed that perceived environmental variables (e.g., convenience, safety, aesthetics) were not related to the variation in response for all intensity, strenuous, moderate, and light physical activity (<math>p&gt;0.05</math>).</li> </ol>	<b>Positive Association for Physical Activity in Native Americans</b> Study design = Association Effect size = Positive association for physical activity in Native Americans	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported Statistics Canada did not completely enumerate Moose Factory during the 1996 and 2001 Censuses, it is not possible to confirm the representativeness of the sample.
<b>Author</b> Hume, Salmon (2007) Australia  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (aesthetics, accessibility, social support, and safety)  <b>Outcome(s) Affected</b> Physical activity and walking/cycling behavior (accelerometers and a student questionnaire)	<p><b>Positive Association for Physical Activity in Girls (Street Design)</b></p> <p>(Assumptions: Perceiving aesthetically pleasing environments with opportunities for physical activity, access to destinations, and neighborhood safety leads to increased physical activity levels and walking.)</p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Among girls, the perceptions of nice houses in the neighborhood (<math>\beta=2.98</math>, <math>p=0.003</math>); lots of neighborhood graffiti (<math>\beta=2.59</math>, <math>p=0.04</math>); nice neighborhood house gardens (<math>\beta=1.91</math>, <math>p=0.03</math>); having an easily walkable/cyclable neighborhood (<math>\beta=2.75</math>, <math>p=0.0001</math>) was significantly positively associated with walking frequency. Easy to walk/cycle and lots of graffiti remained significantly associated with walking frequency in the multiple regression model (both <math>p&lt;0.05</math>).</li> </ol>	<b>Positive Association for Physical Activity in Girls</b> Study design = Association Effect size = Positive association for physical activity in girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Ball, Bauman (2001) Australia  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (aesthetics and convenience)  <b>Outcome(s) Affected</b> Walking behavior (1996 Physical Activity Survey for the State of New South Wales [NSW])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Women (Street Design)</b></p> <p>(Assumption: Individuals living near neighborhood locations in highly aesthetic neighborhoods were more likely to participate in greater bouts of walking.)</p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Those reporting more aesthetically pleasing (women only; <math>\chi^2=23.5</math>, <math>p&lt;0.05</math>) environments had higher proportions of walkers.</li> <li>Compared to those reporting a highly favorable aesthetic environment, individuals with a moderately aesthetic environment were 16% less likely (<math>OR=0.84</math>, <math>95\%CI=0.71-0.99</math>, <math>p&lt;0.05</math>) to walk for exercise, while those reporting a low aesthetic environment were 41% less likely (<math>OR=0.59</math>, <math>95\%CI=0.47-0.75</math>, <math>p&lt;0.01</math>) to walk for exercise.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Women</b> Study design = Association Effect size = Positive association for physical activity in the study population and women	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High Demographic data for the sample (age, gender, and household size) were weighted to the NSW population of 4.22 million adults ages 18 years and over. The sample was taken from a statewide representative population of Australian adults.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Fein, Plotnikoff (2004) Canada <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods</i> (access to places to be active, safety, street characteristics) <b>Outcome(s) Affected</b> Physical activity levels (Godin Leisure-Time)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: High scores for the environmental resource composite [e.g., more roads, more sidewalks] will lead to increased energy expenditure.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>            1. The environmental resource scales were positively correlated with energy expenditure (home r=0.16, neighborhood r=0.16, facilities r=0.12, school r=0.15, p&lt;0.01) as were the perceived importance scores (home r=0.22, neighborhood r=0.16, facilities r=0.20m school r=0.27, p&lt;0.01).            (Note: The environmental resource scales included availability of space (e.g., roads and sidewalks), convenient facilities and equipment.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported There was a relatively even distribution of participants across grades: Grade 9=21% Grade 10=28% Grade 11=26% Grade 12=25%
<b>Author</b> Mota, Gomes (2007) Portugal <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood walkability</i> (access to destination, street connectivity, infrastructure for walking and cycling, neighborhood safety, social environment, aesthetics, and recreation facilities) <b>Outcome(s) Affected</b> Physical activity (student questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>Positive Association for Physical Activity in Girls (Street Design)</b>  <b>(Assumption: Increased neighborhood street connectivity will lead to increased active transportation.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>            1. For neighborhood environment characteristics, only street connectivity was significantly different between the travel groups. 56.0% of active vs 46.1% of passive travelers agreed that there were many 4-way intersections in their neighborhood (p=0.02). Girls who agreed that there were many four-way intersections in their neighborhood were more likely to be active travelers (OR=1.63, 95%CI=1.08-2.45, p≤0.05).</p>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Girls</b> Study design = Association Effect size = Positive association for physical activity in the study population and girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> De Bourdequdhuij, Sallis (2003) Belgium <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood accessibility</i> (residential density, land use mix, access to public transportation, availability of sidewalks and bike lanes, neighborhood aesthetics, perceived safety from crime and traffic, connectivity of the street network) <b>Outcome(s) Affected</b> Physical activity (International Physical Activity Questionnaire-short form [IPAQ] and seven-page questionnaire) and Overweight/obesity (Height and weight [body mass index])	<p><b>Positive Association for Physical Activity in Males (Street Design)</b>  <b>(Assumptions: Increased perceptions of neighborhood safety and access to places to be physically active will lead to increased physical activity and decreased body mass index [BMI].)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>            1. Greater availability of sidewalks in the neighborhood was associated with walking in males (semi-partial correlate; 0.14, <math>p \leq 0.05</math>).</p>	<p><b>Positive Association for Physical Activity in Males</b>            Study design = Association            Effect size = Positive association for physical activity in males</p>	<p><b>Maintenance</b>            Not Applicable  <b>Sampling / Representativeness</b>            Low            Respondents appear to have better jobs, have a higher education, are more often employed, and under-represent the number of individuals living alone compared with the Flemish reference population.</p>
<b>Author</b> Burton, Turrell (2005) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods</i> (access to places to be active, safety, aesthetic quality, traffic, street lights, transit) <b>Outcome(s) Affected</b> Physical activity (Questionnaire)	<p><b>More Evidence Needed-Data Not Provided (Street Design)</b>  <b>(Assumption: In neighborhoods with increased access to places to be physically active inside and out, street accessibility, and traffic safety, individuals will participate in more physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u>            1. Environmental variables contributed the least to vigorous intensity activity (no results shown).            2. Neighborhood aesthetics contributed more to walking (Nagelkerke <math>r^2=0.4\%</math>), and the barrier of family obligations contributed more to total and moderate-intensity activity.            (Note: The environmental scale was developed from a battery of items, which led to the inclusion in multiple strategies. Environmental variables include footpaths [sidewalks], public transport, street lighting, perceived safety, busyness of streets and traffic flow, facilities for activity, cleanliness, and friendliness)</p>	<p><b>More evidence needed</b>            Study design = Association            Effect size = More evidence needed</p>	<p><b>Maintenance</b>            Not Applicable  <b>Sampling / Representativeness</b>            Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Carver, Timperio (2008) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (Intersection density, traffic calming features, length of local roads, local road index, proximity to cul-de-sac, intersection density, length of walking tracks, gates and barriers on roads, and total number of traffic/pedestrian lights) (sidewalk presence) <b>Outcome(s) Affected</b> Physical activity (Active Transport Survey, accelerometers)	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Negative Association for Physical Activity in Boys (Street Design)</b></p> <p><b>(Assumptions: The presence of traffic calming features like speed bumps and increased street connectivity will lead to greater habitual walking/cycling and moderate-to-vigorous physical activity (MVPA) outside school hours.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. The number of intersections and total length of walking tracks was negatively associated with younger boys' moderate-to-vigorous physical activity on weekends. (adjusted <math>\beta=-0.262</math>, <math>p&lt;0.05</math>, adjusted <math>\beta= -0.235</math>, <math>p&lt;0.05</math>, respectively).</li> <li>2. For children, there were no significant associations between the road environment and the likelihood of making seven or more walking/cycling trips per week.</li> <li>3. Adolescent boys residing in neighborhoods with a medium total length of local roads (i.e., 14.5-17.8 km) were more likely than those residing in areas with a low total length to make seven or more such trips (<math>OR= 3.02</math>, 95% CI= 1.01-9.06, <math>p&lt;0.05</math>).</li> <li>4. Adolescent boys that resided on a cul-de-sac rather than a through road were associated with an increase in moderate-to-vigorous physical activity of 9 minutes after school, 5 minutes in the evenings (adjusted <math>\beta= 0.231</math>, <math>p&lt;0.01</math>) and 22 minutes on weekend days.</li> </ol>	<p><b>No Association for Physical Activity in the Study Population</b></p> <p><b>Negative Association for Physical Activity in Boys</b></p> <p>Study design = Association</p> <p>Effect size = No association for physical activity in the study population and negative association for physical activity in boys</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p>
<b>Author</b> Giles-Corti, Donovan (2002); Giles-Corti, Donovan (2002); Giles-Corti, Donovan (2003); Giles-Corti, Macintyre (2003); McCormack, Giles-Corti (2007); McCormack, Giles-Corti (2008) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (access to destinations, land-use, road network distance, presence of sidewalks, access to transit) <b>Outcome(s) Affected</b> Overweight/obesity (height and weight [body mass index]) and physical activity (survey)	<p><b>Positive Association for Overweight/obesity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Individuals with greater access to places for physical activity and active transportation will be more likely to participate in greater amounts of physical activity, which will lead to decreased levels of overweight/obesity.</b></p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>1. Overweight individuals were more likely to live on highways (<math>OR=4.24</math>; 95%CI: 1.62-11.09), streets with no sidewalks (<math>OR=1.4</math>, 95%CI: 1.01-1.95), streets with sidewalks on one side only (<math>OR=1.32</math>; 95%CI: 0.98-1.79) and perceive no paths within walking distance (<math>OR=1.42</math>; 95% CI: 1.08-1.86).</li> <li>2. In comparison with those who had no sidewalk and no shop on their street, those who had access to either or both of these attributes were about 25% more likely to achieve recommended levels of walking (combined <math>OR=1.25</math>, 95%CI: 0.90-1.74).</li> <li>3. Respondents were more likely to walk for transport if they perceived that their neighborhood had sidewalks (<math>OR=1.65</math>, 95%CI: 1.12-2.41, <math>p=0.011</math>).</li> <li>4. The likelihood of walking for recreation was higher in residents who perceived their neighborhood as being attractive, safe, and interesting (<math>OR=1.49</math>, 95%CI: 1.14-1.95, <math>p=0.003</math>).</li> <li>5. Respondents were more likely to walk as recommended if they perceived their neighborhood as being attractive, safe, and interesting (<math>OR=1.50</math>, 95%CI: 1.08-2.09, <math>p=0.017</math>).</li> <li>6. Those who exercised vigorously were more likely to perceive their neighborhood as being attractive, safe, and interesting (<math>OR=1.39</math>, 95%CI: 1.08-1.79; <math>p=0.01</math>) and to claim that there were sidewalks in the neighborhood (<math>OR=1.52</math>, 95%CI: 1.05-2.21, <math>p=0.027</math>).</li> </ol> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>2. In comparison with those who had no sidewalk and no shop on their street, those who had access to either or both of these attributes were about 25% more likely to achieve recommended levels of walking (combined <math>OR=1.25</math>, 95%CI: 0.90-1.74).</li> <li>3. Respondents were more likely to walk for transport if they perceived that their neighborhood had sidewalks (<math>OR=1.65</math>, 95%CI: 1.12-2.41, <math>p=0.011</math>).</li> <li>4. The likelihood of walking for recreation was higher in residents who perceived their neighborhood as being attractive, safe, and interesting (<math>OR=1.49</math>, 95%CI: 1.14-1.95, <math>p=0.003</math>).</li> <li>5. Respondents were more likely to walk as recommended if they perceived their neighborhood as being attractive, safe, and interesting (<math>OR=1.50</math>, 95%CI: 1.08-2.09, <math>p=0.017</math>).</li> <li>6. Those who exercised vigorously were more likely to perceive their neighborhood as being attractive, safe, and interesting (<math>OR=1.39</math>, 95%CI: 1.08-1.79; <math>p=0.01</math>) and to claim that there were sidewalks in the neighborhood (<math>OR=1.52</math>, 95%CI: 1.05-2.21, <math>p=0.027</math>).</li> </ol>	<p><b>Positive Association for Overweight/obesity in the Study Population</b></p> <p><b>Positive Association for Physical Activity in the Study Population</b></p> <p>Study design = Association</p> <p>Effect size = Positive association for overweight/obesity and physical activity in the study population</p>	<p><b>Maintenance</b>            Not Applicable</p> <p><b>Sampling / Representativeness</b>            Not Reported</p>

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<b>Author</b> Lee, Kawakubo (2007) Japan <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (accessibility, safety, convenience, aesthetics) (sidewalk presence)  <b>Outcome(s) Affected</b> Physical activity (questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Positive perceptions of neighborhood safety, social support, convenience, and access to active transportation lead to increased physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Those who had high scores for "There are sidewalks suitable for walking in the neighborhood" (high walkable: low perception mean [sd] 191.7[200.6] vs. high perception mean [sd] 302.9[279.7], p&lt;0.05) (low walkable: low perception mean [sd] 125.9[182.1] vs. high perception mean [sd] 211.3[234.5], p&lt;0.05) spent significantly more walking time in both regions.</li> <li>In the low walkable region, those who had high scores for "There are several ways to get to one place" (low perception mean [sd]: 124.9[139.9] vs. high perception mean [sd]: 201.4[249.4], p&lt;0.05), "It is easy to cross streets" (low perception mean [sd]: 145.1[162.7] vs. high perception mean [sd]: 214.6[270.2], p&lt;0.05), "The sidewalks have few inclines and are easy to walk on" (low perception mean [sd]: 89.7[88.2] vs. high perception mean [sd]: 215.6[245.9], p&lt;0.01) and "The sidewalks are wide enough to walk on" (low perception mean [sd]: 132.2[138.8] vs. high perception mean [sd]: 232.8[284.5], p&lt;0.01) spent significantly more walking time.</li> <li>In the high walkable region, those who had high scores for "The neighborhood is conducive for taking a walk" (low perception mean [sd]: 245.0[233.5] vs. high perception mean [sd] 323.4[308.5], p&lt;0.05) spent significantly more time walking.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Owen, Cerin (2007) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (dwelling, density, street connectivity, land-use mix, and net retail area)  <b>Outcome(s) Affected</b> Physical activity (Survey [SMARTRAQ, IPAQ])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumptions: Increased density, street connectivity, land-use mix, and retail areas will lead to increased physical activity.)</b></p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Living in areas with a walkability index that was one standard deviation above the average was associated with 37 minutes more walking than living in areas with a walkability index that was one standard deviation below the average.</li> <li>Neighborhood walkability was associated with more walking for transport in residents for whom access to services was an important reason for living in a specific neighborhood (data not shown).</li> <li>Weekly frequency of walking for transport was independently related to neighborhood walkability (Model 1: B=0.02; Wald test=37.6, df=1; p&lt;0.001 and Model 2: B=0.01; Wald test=29.1, df=1; p&lt;0.001).</li> <li>There was no significant effect of neighborhood walkability on weekly minutes of walking for transport observed among residents for whom access to services was not an important reason for living in their neighborhood.</li> <li>No statistically significant relationships between neighborhood walkability and walking for recreation were found.</li> <li>No statistically significant moderators of the relationship between neighborhood walkability and walking for recreation were found.</li> </ol> <p>(Note: The walkability index was a composite of dwelling density, street connectivity, land-use mix, and net retail area.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low Survey respondents were more likely to be older, female, and employed (all $\chi^2$ tests significant at p<0.01) compared to the 2001 Adelaide Bureau of Statistics Census data.
<b>Author</b> Spence, Cutumisu (2008) Canada <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (density, street connectivity, land use mix, and availability) (sidewalk presence)  <b>Outcome(s) Affected</b> Overweight/obesity (anthropometric data - height, weight, body mass index [BMI])	<p><b>Positive Association for Overweight/obesity in Girls (Street Design)</b></p> <p><b>No Association for Overweight/obesity in Boys (Street Design)</b></p> <p><b>(Assumption: Greater walkability within the community leads to increased physical activity, which leads to decreased prevalence for overweight/obesity.)</b></p> <p><b>Street Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>The odds of girls being overweight were lower if they lived in neighborhoods with more intersections (CDC OR=0.57, 95% CI, 0.39-0.86; IOTF OR=0.48, 95% CI, 0.30-0.76).</li> <li>No significant associations were found between boys body weight status and intersection density.</li> </ol>	<b>Positive Association for Overweight/obesity in Girls</b> <b>No Association for Overweight/obesity in Boys</b> Study design = Association Effect size = Positive association for overweight/obesity in girls and no association for overweight/obesity in boys	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

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<b>Author</b> Panter, Jones (2008) England <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (residential density, street connectivity, walking/cycling facilities [such as sidewalks and pedestrian/bike trails] aesthetics and pedestrian traffic safety) <b>Outcome(s) Affected</b> Physical activity (questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Access to places in the community and increased street accessibility will lead to increased levels of physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Individuals that reported 5 or more weekly aerobic activity sessions gave a higher neighborhood walkability score (mean= 46.05 [0.48]) than individuals who did not (mean =43.79 [0.54]), although this association was not apparent when walking alone was considered (<math>p&lt;0.01</math>).</li> <li>Respondents rating their neighborhood as having intermediate or good walkability were over 3 times as likely to report 5 or more sessions of physical activity per week compared to those who gave the lowest rating (<math>OR= 3.14</math>, <math>p=0.02</math>; and <math>OR= 3.04</math>, <math>p=0.03</math> respectively).</li> </ol> <p>(Note: Walkability was a composite score using multiple variables like residential density, street connectivity, access to PA facilities, access to sidewalks and pavement, aesthetics, and traffic safety. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low When compared with 2001 census data for the neighborhoods from which the sample was drawn, respondents tended to be older and contain a greater percentage of females. Respondents also tended to be better educated with only 17.5% of local residents reporting a post-graduate qualification in the census compared with 29.4% of survey respondents.
<b>Author</b> De Vries, Bakker (2007) The Netherlands <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (residential vs. commercial space, type of residence, sports/recreation facilities and playgrounds, green space and water, safe walking and cycling, garbage and dirt, traffic safety, and the activity friendliness of the neighborhood) <b>Outcome(s) Affected</b> Physical activity (7-day physical activity log)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: Increased land-use mix, access to physical activity facilities, intersection density, and decreased litter in the neighborhood leads to greater levels of physical activity, Parallel parking spaces may cause drivers to slow down and parking lots may provide children with places to play, which can lead to increased levels of physical activity.)</b></p> <p><b>Street Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Children's physical activity was also positively associated with the frequency of parallel parking spaces (<math>\beta=2.152</math>; 95%CI= 1,408, 2,897) and parking lots (<math>\beta=3.169</math>; 95% CI=2.055, 4.284) (<math>p&lt;0.05</math> for both).</li> <li>Children's physical activity was negatively associated with intersections in the neighborhood (<math>\beta= -1.035</math>; 95% CI= -1.825, -0.246).</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported No difference was found in weight, sex, or maternal education between the final and original samples.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Kondo, Lee (2009) Japan <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (household count, land use type count, length of streets and sidewalks, intersection count, width of streets, residential density, land use mix-diversity, land use mix-access, street connectivity, aesthetics, and traffic and crime safety) <b>Outcome(s) Affected</b> Physical activity (Accelerometers and the International Physical Activity Questionnaire [IPAQ])	<p><b>No Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Females (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Males (Street Design)</b></p> <p>(Assumptions: Increased land-use mix, street connectivity, aesthetic appeal, and safety leads to increased physical activity.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>There were no significant differences in walking steps related to land use type, length of streets or sidewalks, number of intersections, and width of streets between the high and low scoring groups. There were no differences in walking time for leisure or transport associated with objective neighborhood measures between the high and low scoring groups.</li> <li>For males, there were no differences in walking steps between the high scoring group and the low scoring group for residential density, land use mix-diversity, land use mix-access, street connectivity, and safety.</li> <li>For females, mean total walking steps was significantly higher in the high scoring group than in the low scoring group for the walking places score (mean <math>\pm</math> standard error: <math>9488 \pm 511</math> vs. <math>7957 \pm 538</math>; <math>p &lt; 0.05</math>).</li> <li>For males, mean walking time for leisure was significantly longer in the high scoring group than in the low scoring group for the aesthetics score (mean <math>\pm</math> standard error: <math>20.6 \pm 6.0</math> vs. <math>0.6 \pm 6.7</math>; <math>p &lt; 0.05</math>) and for individuals with parks in the area compared to those without (<math>26.2 \pm 6.4</math> vs. <math>2.7 \pm 6.9</math>; <math>p &lt; 0.05</math>).</li> </ol> <p>(Note: Multiple GIS and perception measures were used to determine respondent's walkability score. The walking places score was related to access to sidewalks and trails.)</p>	<b>No Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Females</b> <b>Positive Association for Physical Activity in Males</b> Study design = Association Effect size = No association for physical activity in the study population and positive association for physical activity in females and males	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Low Those who responded to the questionnaire and wore accelerometers were significantly older than those who did not.
<b>Author</b> Craig, Brownson (2002) Canada <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (number of facilities, mix of facilities, accessible to pedestrian, walking routes, connection to transport modes and traffic, amount and variety of stimuli, aesthetics, time and effort, traffic threats, safety from crime, potential for crime) <b>Outcome(s) Affected</b> Physical activity (1996 Canadian Census self-administered questionnaire)	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p>(Assumption: Access to walkable routes for pedestrians and positive perceptions of neighborhood safety and the social environment lead to increased levels of physical activity.)</p> <p><b>Street Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Walking to work was significantly related to the environment score (T-ratio (25)=3.32, <math>p=0.003</math>), with a one-unit increase in the score being associated with a 25-percentage-point increase in the percentage walking to work.</li> <li>The environment score was related to the percentage walking to work, controlling for degree of urbanization (T-ratio (23)=2.03, <math>p=0.054</math>; Coefficient=0.02).</li> </ol> <p>(Note: An environment score based on 18 neighborhood characteristics [e.g., variety of destinations, visual aesthetics, accessibility, transportation systems and safety from traffic and crime] was developed with a higher score indicating a more walkable environment. This score was a composite of many different characteristics incorporating multiple strategies.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported The observed neighborhoods were known for diversity of urban design, social class, and economic status.

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Duncan, Mummery (2005) Australia  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (distance, aesthetics, connectivity, street light density)  <b>Outcome(s) Affected</b> Meeting physical activity recommendations, recreation walking (Active Australia Physical Activity Questionnaire)	<p><b>Negative Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumption: Greater access to parks and paths leads to increased levels of physical activity.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. People who had unacceptable route directness to the nearest parkland were 41% more likely to achieve sufficient levels of activity than people who had acceptable route directness to parkland (OR=1.41, CI=1.00-1.98).</li> <li>2. People who did not agree that the neighborhood footpaths were in good condition were 38% more likely to participate in recreational walking than those who thought the footpaths were in good condition (OR=1.38, CI=1.00-1.91).</li> </ol> <p>(Note: Footpaths are equivalent to trails. Registered dog owners were examined as a proxy for unattended dogs. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories. Not all p-values were provided.)</p>	<b>Negative Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Negative association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Mota, Gomes (2007) Portugal  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (access to destinations, street connectivity, walking and cycling infrastructure, neighborhood safety, social environment, aesthetics, recreation facilities)  <b>Outcome(s) Affected</b> Leisure Time Physical Activity (Leisure Time Physical Activity [LTPA] Questionnaire)	<p><b>Positive Association for Physical Activity in Girls (Street Design)</b>  <b>(Assumption: Access to recreational facilities, aesthetic features, and increased personal safety lead to increased levels of leisure time physical activity.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Logistic regression analysis showed that girls who agreed that "there are many interesting things to look at while walking in my neighborhood" were more likely to be leisure time physically active (OR = 1.59, 95% CI = 1.07-2.34, p ≤ 0.02).</li> <li>2. In girls, access to aesthetics features (Rho= 0.12, p≤0.006) was positively associated with leisure time physical activity.</li> </ol>	<b>Positive Association for Physical Activity in Girls</b> Study design = Association Effect size = Positive association for physical activity in girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Li, Dibley (2006) China  <b>Design</b> Association Cross-sectional study  <b>Duration</b> Not Applicable	<b>Measures</b> Neighborhood walkability (opportunities for recreation, safety, presence of sidewalks)  <b>Outcome(s) Affected</b> Sedentary behavior (adolescent physical activity recall questionnaire)	<p><b>Positive Association for Sedentary Behavior in the Study Population (Street Design)</b>  <b>Positive Association for Sedentary Behavior in Girls (Street Design)</b>  <b>(Assumption: Lack of opportunities for physical activity and unsafe neighborhood environments will lead to increased levels of inactivity.)</b></p> <p><b>Street Design</b>  <b>SEDENTARY BEHAVIOR:</b></p> <ol style="list-style-type: none"> <li>1. Adolescents living in a house without sidewalks were 30% more likely to be inactive (OR= 1.3, 95% CI= 1.0-1.6, p=0.01).</li> <li>2. Lack of sidewalks around the house was associated with physical inactivity in girls (OR= 1.5, 95% CI= 1.04-2.0, p=0.03).</li> </ol>	<b>Positive Association for Sedentary Behavior in the Study Population</b> <b>Positive Association for Sedentary Behavior in Girls</b> Study design = Association Effect size = Positive association for sedentary behavior in the study population and girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Humpel, Owen (2004) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Neighborhood accessibility (aesthetics, accessibility, safety, and weather)</i>  <b>Outcome(s) Affected</b> <i>Neighborhood walking, walking for exercise, walking for pleasure (self-reported survey)</i>	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>Positive Association for Physical Activity in Men (Street Design)</b></p> <p><b>(Assumption: Perceptions of safety, close location of residence to coastal areas, and accessibility of facilities leads to increased walking.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Higher proportions of neighborhood walkers were found among those with high perceptions for aesthetics (66.7%; <math>\chi^2=17.08</math>, <math>p&lt;0.001</math>).</li> <li>Men with the most positive perceptions about the aesthetic nature of the environment were more than seven times more likely to be high neighborhood walkers (<math>OR=7.43</math>; 95%CI 1.92-28.82; <math>p&lt;0.05</math>).</li> <li>Men with a high score on aesthetics were nearly four times as likely to walk for exercise (<math>OR=3.86</math>; 95%CI 1.03-14.46; <math>p&lt;0.05</math>).</li> <li>A higher proportion of those with the most positive perceptions for all four environmental perception categories reported more neighborhood walking (data not shown).</li> <li>Significantly higher proportions of those walking for exercise were found among those with the most positive perceptions for all four environmental perception categories (results not shown).</li> </ol> <p>(Note: Environmental perceptions were based on aesthetics, accessibility, safety, and weather. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> <b>Positive Association for Physical Activity in Men</b> Study design = Association Effect size = Positive association for physical activity in the study population and men	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported
<b>Author</b> Kamphuis, Van Lenthe (2008) The Netherlands <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods (access to recreational facilities and safety)</i>  <b>Outcome(s) Affected</b> <i>Participation in sports (Short Questionnaire to Assess Health-enhancing Physical Activity [SQUASH])</i>	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b></p> <p><b>(Assumption: Increased safety and having access to places for physical activity leads to an increase in sports participation.)</b></p> <p><b>Street Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Unattractive neighborhoods (<math>OR=1.45</math>, 95%CI: 1.2-1.75, <math>p&lt;0.0001</math>) increased the likelihood of not participating in sports.</li> </ol>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Maas, Verheij (2008) Netherlands <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods</i> (access to green space) <b>Outcome(s) Affected</b> Meeting physical activity recommendations, sports activities, walking and cycling, active transportation (The Second Dutch National Survey of General Practice [DNSGP-2] and Short Questionnaire to assess health enhancing physical activity [SQUASH])	<p><b>Positive Association for Physical Activity in the Study Population (Street Design)</b>  <b>(Assumptions: As the amount of green space near the home increases, physical activity increases.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Logistic multilevel analyses showed that there was no significant relationship between the percentage of green space and meeting the public health recommendations for physical activity.</li> <li>2. There was no relationship between the percentage of green space in the living environment, individual's participation in sports activities, and the amount of time people spent on sports activities.</li> <li>3. People walked less during leisure time when there was more green space in their direct living environment (1-km radius; coefficient= -0.007, standard deviation=0.002, p&lt;0.001, 3-km radius; coefficient= -0.006, standard deviation= -0.006, p&lt;0.009).</li> <li>4. There was no significant relationship between the percentage of green space in the living environment and the time spent on cycling during leisure time.</li> <li>5. There was no significant relationship between the percentage of green space and walking for commuting purposes.</li> <li>6. There was a negative relationship between the percentage of green space in a 1-km radius and whether or not people cycled for commuting purposes (coefficient= -0.005, standard deviation= 0.002, p=0.032). People who reported cycling for commuting, were likely to spend more time doing so if they had a higher percentage of green space in a 1-km and 3-km radius around their homes (1-km radius; coefficient= 0.83, standard deviation= 0.2, p&lt;0.001, 3-km radius; coefficient=0.62, standard deviation= 0.25, p=0.014).</li> <li>7. There was a negative relationship between the percentage of green space within 1-km radius of home and whether or not people cycle during leisure time (coefficient= -0.006, standard deviation= 0.002, p&lt;0.001).</li> <li>8. People with a higher percentage of green space in a 1-km radius around their home gardened more often (coefficient= 0.008, standard deviation= 0.002, p&lt;0.001). People who report gardening spend more time doing so when they have more green space in a 1-km or 3-km radius around their home (1-km radius; coefficient= 1.4, standard deviation= 0.3, p&lt;0.001; 3-km radius; coefficient=1.45, standard deviation= 0.45, p=0.001).</li> </ol> <p>(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	<b>Positive Association for Physical Activity in the Study Population</b> Study design = Association Effect size = Positive association for physical activity in the study population	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported Respondents were between 12 and 65 years of age. 67.3% of participants were between 26 and 65 years old. (evaluation sample)
<b>Author</b> Timperio, Giles-Corti (2008) Australia <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Active neighborhoods</i> (access to free public open spaces and recreational facilities) <b>Outcome(s) Affected</b> Moderate to vigorous physical activity (accelerometers)	<p><b>Positive Association for Physical Activity in Girls (Street Design)</b>  <b>(Assumption: Access to and increased number of parks and open spaces leads to increased physical activity in youth.)</b></p> <p><b>Street Design</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. Adolescent girls had more moderate-to-vigorous physical activity after school if their closest public open space had trees that provided shade (<math>\beta= 5.8 \text{ min/day}</math>, p&lt;0.01)</li> </ol>	<b>Positive Association for Physical Activity in Girls</b> Study design = Association Effect size = Positive association for physical activity in girls	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<b>Author</b> Rabin, Boehmer (2007) Europe <b>Design</b> Association Cross-sectional study <b>Duration</b> Not Applicable	<b>Measures</b> <i>Access to Healthy Food Options and a Healthy Living Environment</i> (access to and availability of stores containing healthy food options, percentage of paved roads and relative proximity of streets, population density within the urban areas, and quality of public transit) (sidewalk presence) <b>Outcome(s) Affected</b> Overweight/obesity (national level surveys and databases)	<p><b>Positive Association for Overweight/obesity in Men (Street Design)</b></p> <p>(Assumption: Increased levels of urbanization and access to public transportation will lead to increased levels of physical activity and increased access to fruits and vegetables, which will lead to lower body mass index and overweight/obesity.)</p> <p><b>Street Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <p>1. Male obesity prevalence was inversely associated with density of motorways (<math>\beta=-0.197</math>, <math>p=0.067</math>).</p>	<b>Positive Association for Overweight/obesity in Men</b> Study design = Association Effect size = Positive Association for overweight/obesity in men	<b>Maintenance</b> Not Applicable <b>Sampling / Representativeness</b> High As part of the selection criteria only studies that were nationally representative (both rural and urban samples) and based on self-reported data were used for evaluation.

# IMPACT TABLES

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>United States</b>						
<b>Author</b> Wells, Yang (2008) Georgia, Florida, Alabama	<b>Participation/ Potential Exposure</b> Participation = Not Reported Exposure = Not Reported All participants in the study received a house from Habitat Humanity, however it is unclear what each female's family composition looked like or how many people were affected by the move. <b>High-Risk Population</b> High Habitat for Humanity provides houses to lower-income families 77.1% African-American, 17.1% White, 5.7% Other (Asian, Latina, Native American), Mean annual income \$15,967 (lower income) [evaluation sample]	<b>Representative</b> Not Reported <b>Potential Population Reach</b> More Evidence Needed Participation = Not reported Representativeness = Not reported <b>Potential High Risk Population Reach</b> More Evidence Needed High-risk population = High Representativeness = Not reported	<b>Intervention Components</b> Simple Accessibility and land-use mix before and after a move to a newly designed neighborhood Homes were built by Habitat for Humanity and families were relocated to new areas. <b>Feasibility</b> Intervention Feasibility = Low Policy Feasibility = High Intervention activities: Habitat for Humanity were provided names of women receiving homes in four towns in the southeastern U.S. The towns, located in Georgia, Alabama, and Florida, were selected because in each, Habitat for Humanity was constructing a new neighborhood. Special Expertise: Habitat for Humanity organization and their team Resources: Labor and supplies for building, land for building, moving costs Cost: Not reported <b>Implementation Complexity</b> Low Intervention components = Simple Feasibility = High	<b>Population Impact</b> More Evidence Needed Effectiveness = Not reported Potential population reach = More evidence needed Implementation complexity = Simple <b>High-risk Population Impact</b> More Evidence Needed Effectiveness for high-risk populations = More evidence needed Potential high-risk population reach = More evidence needed Implementation complexity = High <b>Sustainability</b> Not Reported	<b>Community Design</b> <b>PHYSICAL ACTIVITY:</b> 1. (N=32) With respect to land-use mix, increases in the service-jobs-to-residents ratio from pre-to-post-move were associated with fewer steps per week (31,820 fewer steps per week, or 4645 fewer steps per day, std. error; 11921.57, p=0.013). 2. (N=70) Levels of walking in neo-traditional neighborhoods were slightly higher (62,207 steps/week) than in the suburban neighborhoods (58,617 steps/week) but not significantly (p=0.600).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Li, Harmer (2009); Li, Harmer (2008); Li, Harmer (2009) Oregon	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults aged 50-75 27% Lower income 92% White 57% Male (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood walkability (street connectivity)  <b>MULTI-COMPONENT:</b> 1. Density of neighborhood fast food outlets 2. Density and access to transit stations 3. Land-use mix and total number of neighborhood destinations  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Transportation</b> <u>PHYSICAL ACTIVITY:</u> 1. (cross-sectional data) The density of public transit stations was associated with more walking for transportation (estimated prevalence = 1.147, p=0.011) and meeting physical activity guidelines (estimated prevalence = 1.069, p=0.03).  <b>Neighborhood Availability of Restaurants</b> <u>OVERWEIGHT/OBESITY:</u> 1. (cross-sectional data) Residents living in high density fast food outlet neighborhoods who visited fast food or buffet restaurants 1 or 2 times weekly or more, were 1.878 (95% CI: 1.063,3.496; p<0.05) times more likely to be obese than those who lived in low density fast food outlet neighborhoods. 2. (cross-sectional data) Similar results for likelihood of being obese in areas with high density fast food outlets compared to those with low density fast food outlets were found for residents who did not meet recommended levels of physical activity, OR=1.792 (95%, CI:1.006, 3.190, p<0.05). 3. (N=1145) Multi-level analyses show that after adjustment for neighborhood- and resident-level socio-demographic characteristics a high density of fast-food outlets was associated with an increase of 3.09 pounds in weight and 0.81 inches in waist circumference among residents who frequently ate at fast-food restaurants (p<0.05). 4. (cross-sectional data) A one standard deviation increase in the density of fast-food outlets was associated with a 7% increase in the prevalence of overweight/obesity (p<0.01).  <b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. (cross-sectional data) Using Poisson regression model analyses, a 10% increase in the even distribution of square footage across all land uses (i.e., residential, public [offices and institutions], commercial) was associated with a 25% reduction in prevalence of overweight/obesity (p<0.01). 2. (N=1145) Multi-level analyses show that after adjustment for neighborhood- and resident-level socio-demographic characteristics, high walkability was associated with a decrease in 2.65 pounds in weight and 0.62 inches in waist circumference among residents who increased their levels of vigorous physical activity (p<0.05).  <u>PHYSICAL ACTIVITY:</u> 3. (cross-sectional data) A one unit increase in mixed land use was associated with a 5.76 times increase in walking for transportation (p<0.001), a 4.066 times increase in neighborhood walking (p<0.001), 1.495 increase in walking for errands (p<0.047) and 1.463 times increase for meeting physical activity recommendations (p=0.025). 4. (cross-sectional data) The density of public transit stations was associated with more walking for transportation (estimated prevalence = 1.147, p=0.01) and meeting physical activity guidelines (estimated prevalence = 1.069, p=0.03). 5. Among boys, access to the total number of neighborhood destinations (0.35, p=0.03) was positively associated with weekly walking frequency. Total number of accessible destinations score remained significantly positively associated with walking frequency in the multiple regression model (p<0.05). 6. (cross-sectional data) Green and open spaces for recreation was also associated with more neighborhood walking (estimated prevalence = 1.119, p=0.032) and meeting physical activity requirements (estimated prevalence = 1.065, p<0.001).  (Note: Walkability composite score consists of land-use mix, street connectivity, public transit stations, and green and open spaces)	Not Reported

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Reed, Wilson (2006) South Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. Adults, 18-75 years old	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence of neighborhood sidewalks)	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	Not Reported	1. The percentage of respondents who reside in areas where sidewalks were present was 44.3% (SE=4.4) and 61.4% (SE=2.2) lived where sidewalks were absent. This is in comparison to non-white respondents, 55.7% (SE=4.4) of which resided in areas where sidewalks are present and 38.6%(SE=2.2) who reside in areas where sidewalks are absent from their neighborhood ( $p=0.0008$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Suminski, Heinrich (2008) Midwest United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, Urban	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Length, quality, and presence of streets and sidewalks and aesthetic quality of the neighborhood  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	Not Reported	1. In a profile of the segments, highly walked (n=30 segments; 244 walkers/1800 min of observation), compared with non-highly walked (n=30 segments; 71 walkers/1800 min of observation) segments had a greater percentage of sidewalks that were defective [highly walked mean =3.4 (standard deviation=5.1) vs. non-highly walked=1.4 (1.8); p<0.05], more pieces of litter [highly walked=135.6 (141.9) vs. non-highly walked 42.4 (58.7); p<0.005], greater percentages of properties with graffiti [highly walked=6.0 (9.3) vs. non-highly walked =0.4 (2.0); p<0.005] and chipped paint [highly walked= 27.7 (15.8) vs. non-highly walked 17.7 (15.9); p<0.05], and a lower percentage of properties had flowers [highly walked= 42.2 (17.4) vs. non-highly walked= 60.5 (24.9); p<0.005].  2. More individuals were seen walking in segments with a higher volume of traffic ( $r=0.026$ , $p<0.05$ ), a greater percentage of defective sidewalks ( $r=0.39$ , $p<0.005$ ), more litter ( $r=0.43$ , $p<0.001$ ), less landscapable area ( $r=-0.27$ , $p<0.05$ ), a greater percentage of properties with graffiti ( $r=0.30$ , $p<0.05$ ), and a lower percentage of properties with flowers ( $r=-0.26$ , $p<0.05$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Lee, Tudor-Locke (2008), Sisson, Lee (2006) Arizona	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  5-13 years old, 53.7% non-Hispanic White students (high-busing), 36.5% non-Hispanic White students (low-busing), 39.8% Male (high-busing), 53.3% Male (low-busing), 55.2% free/reduced lunch (high-busing), 72.1% free/reduced lunch (low-busing) (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood walkability (presence of sidewalks, street connectivity)  <u>COMPLEX:</u> 1. Influence of high- and low-busing in areas surrounding elementary schools  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	Not Reported	1. Walking suitability scores were not statistically different between the busing strata (high-vs.-low), as indicated by the Mann-Whitney U test; $U(12)=11.0$ , $p=0.09$ . 2. The average scores for sidewalks (i.e., whether a sidewalk was continuous, partial, etc.) were the only item indicating a significant difference between the high-busing and low-busing schools; 21.7 vs. 0.03, respectively ( $p<0.01$ ). 3. No significant difference was noted for bikeability between high- and low-busing schools ( $z(20,48)=0.58$ , $p=0.57$ ) for street ranking. 4. A significant difference ( $z(3,24)=2.41$ , $p=0.016$ ) existed in biking prevalence between high and low busing schools. 5. One school identified a formal biking policy that designated approved bike trails and restricted bicycle use to students in at least fourth grade without parental permission. 6. Two other schools required parental permission for anyone to bike to school and the remaining three schools had informal policies from biking. 7. All schools required students to park and lock their bikes in designated bike rack areas on campus; four schools had cages around the bike racks that were locked during the day. 8. All schools required cyclists to dismount on campus and walk their bikes to the rack.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Joshu, Boehmer (2008) and Brownson, Baker (2001) United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 45.7% Minority: 54.3% White, 29.4% Black, 2.1% Asian/Pacific Islander, 2.7% Indian/ Alaskan native, 11% Other, 0.4% missing/ unknown, 39.3% Lower-income  67.1% Female (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence of sidewalks  <u>MULTI-COMPONENT:</u> 1. Access to places to exercise (e.g., shopping malls, parks, trails) 2. Perceptions of traffic barriers (safety) 3. Community sprawl  <u>COMPLEX:</u> 1. Social and personal barriers  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Access to parks (adjusted OR=1.95, 95% CI=1.52, 2.52), indoor gyms (adjusted OR=1.94, 95% CI=1.45, 2.60), and treadmills (adjusted OR=1.48, 95% CI=1.13, 1.93) were positively associated with physical activity.</li> <li>Among individuals indicating some degree of physical activity, the following environmental supports were associated with reports of increases in activity: shopping malls (25.9%), parks (28.5%), walking and jogging trails (29.9%), treadmills (30.6%), and indoor gyms (33.7%).</li> </ol> <p><b>Safety-Traffic</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Heavy traffic was associated with obesity within large metropolitan (adjusted OR= 1.9, 95% CI: 1.3-2.9), micropolitan (adjusted OR= 2.2, 95% CI: 1.03-4.5) and rural areas (adjusted OR= 1.7, 95% CI: 0.8-3.3).</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Heavy traffic (OR=1.28, 95% CI=1.04, 1.58) was positively associated with physical activity.</li> </ol> <p><b>Community Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Hierarchical linear modeling found that the effect of sprawl on BMI is greater for individuals who report a greater number of personal barriers. The effect of sprawl on BMI increased by -0.006 with each additional personal barrier.</li> </ol> <p>(Note: Perceived barriers to physical activity was a composite including hills, lack of sidewalks, personal barriers like fear of injury, limited time, and intensity and frequency of physical activity.)</p>	<ol style="list-style-type: none"> <li>An increase in the number of personal barriers increased the odds of being obese (chi-square for linear trend, <math>p&lt;0.001</math>).</li> <li>Obese individuals in small metropolitan (adjusted OR= 2.3, 95% CI: 1.05-5.2) and micropolitan areas (adjusted OR= 4.8, 95% CI: 1.6-14.2) were more likely to report being self-conscious about the appearance while active.</li> <li>Obese residents of micropolitan areas were more likely to report no time for activity (adjusted OR= 2.6, 95% CI: 1.1-6.1), and fear of injury (adjusted OR= 4.1, 95% CI: 1.2-14.1) and dislike of exercise (adjusted OR= 3.9, 95% CI: 1.3-11.7) were strongly associated with obesity in rural areas compared with other areas.</li> <li>Two policy variables were positively associated with physical activity: believing that employers should provide time for exercise (adjusted OR=1.27, 95% CI=1.01, 2.01), and support for the use of local government funds for walking or jogging trails (adjusted OR=1.42, 95% CI=1.00, 2.01).</li> <li>The presence of sidewalks was the most important neighborhood variable among those with higher incomes (<math>OR = 1.46</math>, 95% CI = 1.08, 1.97).</li> <li>Hills (OR=1.28, 95% CI=1.04, 1.58) were positively associated with physical activity.</li> <li>Among those with lower incomes, the most important neighborhood variable for physical activity was enjoyable scenery (<math>OR = 1.53</math>, 95% CI = 1.07, 2.18).</li> </ol>

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Cervero (2002) Maryland	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  General Population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Sidewalk infrastructure  <b>MULTI-COMPONENT:</b> 1. Land-use mix and population density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b>  <b>TRANSIT USE:</b> 1. Land-use mixtures at both trip ends lowered the probability of driving alone or ride-sharing versus taking a bus or train (origin: coefficient estimate= -2.488, p=0.016 for drive-alone and coefficient estimate= -2.679; p=0.011 for group ride and destination: coefficient estimate= -1.984; p=0.048 for drive alone and coefficient estimate= -2.222; p=0.027 for group-ride).  2. Having high shares of apartments and condominiums near one's place of residence lowered the odds of driving alone or ride-sharing relative to transit riding (coefficient; -1.64, standard error= 0.814, p=0.151).	1. Activity density at both the trip origin and destination significantly increased the odds of transit usage (coefficient estimate=0.0386, p<0.0001 and coefficient estimate=0.0258, p=0.0265, respectively).  2. A longer (in-vehicle and out-of-vehicle) travel time aboard transit relative to the private automobile lowered the odds of taking transit (coefficient; -0.0150, standard error= 0.0044, p=0.0009). And where transit fares exceeded the direct cost of motoring (including tolls and parking fees), residents tended to travel by car (coefficient; -0.0100, standard error= 0.0027, p<0.0001).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Sharpe, Granner (2004) South Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, General population, 63.1% White, 36.9% African-American (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Availability and condition of sidewalks and biking routes  <b>MULTI-COMPONENT:</b> 1. Access to places for physical activity 2. Perceived safety in the community  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <b>PHYSICAL ACTIVITY:</b> 1. For both unadjusted and adjusted linear models, the odds of meeting the physical activity recommendation were greater for higher numbers of known routes for walking or jogging in the county (least squares mean=1.41, F=5.28, p=0.02); numbers of known routes for bicycling in the county (least squares mean=0.58, F=9.45, p<0.01); number of days in a typical month respondents used a public track, trial, pathway, or mapped-out route for any type of physical activity (least squares mean =3.51, F=34.74, p<0.01); and number of days in a typical month respondents used public parks and other outdoor recreation areas for any type of physical activity (least squares mean=2.79, F=23.92, p<0.01) [statistics all from adjusted general linear model].  <b>Safety Interpersonal</b> <b>PHYSICAL ACTIVITY:</b> 1. Prior to adjustment, significant associations with physical activity included perceived safety of areas in the county to walk, job, ride a bike, or do other physical activities (data not shown).	1. The odds ratios for gender, race, and across levels of age and income were significantly associated with decreased likelihood of meeting physical activity recommendations (data not shown).  2. Prior to adjustment, significant associations with physical activity included knowledge of mapped-out bicycling routes in the county; knowledge of mapped-out routes for walking or jogging on sidewalks or beside roadways in the county; and some worksite supports (data not shown).  3. After adjustment, odds ratios remained significant for worksite-provided sports teams (OR=1.30, 95%CI: 1.02-1.64, p<0.05).  4. Prior to adjustment, significant associations with physical activity included knowledge of mapped-out bicycling routes in the county and knowledge of mapped-out routes for walking or jogging on sidewalks or beside roadways in the county (data not shown). After adjustment, odds ratios remained significant for knowledge of mapped-out bicycling routes in the county (OR=1.39, 95%CI: 1.10-1.76, p<0.05) and knowledge of mapped-out walking or jogging routes in the county (OR=1.33, 95%CI: 1.09-1.62, p<0.05).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Frank, Kerr (2007) Georgia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  5-20 year olds (target sample)  38% Minority  20% Lower income  20% had a household income less than \$30,000  ~50% Female (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Access to open and recreation spaces 2. Land use diversity  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b>  <u>PHYSICAL ACTIVITY:</u> 1. In 9-11 year olds, only four or more recreation spaces (OR=2.6, CI: 1.3-5.4, p<0.01) were associated with an increased likelihood of walking, size of park was not related to walking behavior. 2. For 5-8 year olds, living near recreation or open space (walking ≥1 time per 2 days; OR=2.1, CI: 1.3-3.4, p<0.001; walking ≥0.5 miles/day; OR=2.4, CI: 1.2-5.1, p<0.05) was significantly related to walking at least once over 2 days as well as walking ≥0.5 miles per day. 3. Having up to 5 acres of recreation space in a 1-km buffer was significantly related to walking (5-8 years; OR=2.2, CI: 1.2-4.1, p<0.01) (12-15 years; OR=2.2, CI: 1.3-3.7, p<0.01)(16-20 years; OR=2.6, CI: 1.5-4.6, p<0.001), however more than 6 acres of recreation or open space did not appear to be related to walking. 4. In the multivariate analyses having access to recreation and open spaces (walking ≥1 time per 2 days; OR=1.9, CI: 1.3-2.3, p<0.001; walking ≥0.5 miles/day; OR=1.7, CI: 1.2-2.4, p<0.01) was significantly related to walking. 5. For the 16-20 year olds reporting that they had walked at least once over 2 days recreation land use (OR=1.8, CI: 1.1-2.9, p<0.01) was significant. 6. For those reporting that they had walked ≥ 0.5 miles per day, recreation land use (OR=2.1, CI: 1.1-3.7, p<0.05) was a significant factor.  <u>Community Design</u>  <u>PHYSICAL ACTIVITY:</u> 1. Living in the top tertile for residential density (walking ≥ 1 time per 2 days= 2nd tertile; OR= 1.4, CI: 1.0-1.9, p<0.05; 3rd tertile; OR= 2.4, CI: 1.8-3.2, p<0.001; walking ≥0.5 miles/day; 3rd tertile; OR=2.7, CI:1.7-4.4, p<0.001) was significantly related to both walking outcomes, specifically when the odds ratio for density was greater for walking 0.5 mile or more. 2. Land-use mix (walking ≥ 1 time per 2 days; OR=1.8, CI: 1.4-2.3, p<0.001; walking ≥ 0.5 miles per day; OR=1.9, CI:1.3-2.9, p<0.001), commercial destinations (walking ≥ 1 time per 2 days; OR=1.8, CI: 1.4-2.3, p<0.001; walking ≥0.5 miles/day; OR=1.8, CI: 1.2-2.7, p<0.01), and recreation destinations (walking ≥ 1 time per 2 days; OR= 2.1, CI: 1.7-2.6, p<0.001; walking ≥0.5 miles/day; OR=2.1, CI: 1.5-2.9, p<0.001) within 1-km were all significantly related to walking.  <u>Results for only top tertile:</u> 3. For 9-11 year olds reporting that they had walked at least once over 2 days, residential density (OR=2.3, CI: 1.2-4.3, p<0.05) and living near recreation or open space (OR=1.8, CI: 1.1-2.9, p<0.05) were significant. None of the variables was significantly related to walking ≥0.5 miles per day for this age group. 4. For 12-15 year olds reporting that they walked at least once over 2 days, density (OR=3.7, CI: 2.2-6.4, p<0.001), mixed land use (OR=2.5, CI: 1.6-3.8, p<0.001), at least one commercial use (OR=2.6, CI: 1.7-4.0, p<0.001), and at least one recreation/open space (OR=2.5, CI: 1.7-3.6, p<0.001) were significant factors. <i>(continued next page)</i>	Not Reported

**(Continued from previous study)**

5. For 12-15 year olds reporting that they walked  $\geq 0.5$  miles/day, highest density (OR=4.9, CI: 2.1-11.4, p<0.001), mixed land use (OR=2.7, CI: 1.4-5.3, p<0.01), at least one commercial use (OR=2.7, CI: 1.4-5.4, P<0.001), and at least one recreation/open space (OR=2.4, CI: 1.3-4.2, p<0.001) were significant factors.
6. For the 16-20 year olds reporting that they had walked at least once over 2 days, mixed land use (OR=1.9, CI: 1.0-3.2, p<0.05), was significant.
7. For those reporting that they had walked  $\geq 0.5$  miles per day, residential density (OR=3.2, CI: 1.1-9.1, p<0.05) was a significant factor.
8. In the multivariate analyses, having greater residential density (walking  $\geq 1$  time per 2 days; OR=1.7, CI: 1.1-2.3, p<0.01; walking  $\geq 0.5$  miles/day; OR=1.8, CI: 1.0-3.1, p<0.05) was significantly related to walking.
9. Intersection density, land use mix, commercial land usage, gender, and household size were not significant in the multivariate model.
10. For 5-8 year olds, living near recreation or open space (walking  $\geq 1$  time per 2 days; OR=2.1, CI: 1.3-3.4, p<0.001; walking  $\geq 0.5$  miles/day; OR=2.4, CI: 1.2-5.1, p<0.05) was significantly related to walking at least once over 2 days as well as walking  $\geq 0.5$  miles per day.
11. Having up to 5 acres of recreation space in a 1-km buffer was significantly related to walking (5-8 years; OR=2.2, CI: 1.2-4.1, p<0.01) (12-15 years; OR=2.2, CI: 1.3-3.7, p<0.01)(16-20 years; OR=2.6, CI: 1.5-4.6, p<0.001), however more than 6 acres of recreation or open space did not appear to be related to walking.

(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<p><b>Author</b> Hoehner, Brennan (2005) Missouri and Georgia</p> <p><b>Participation/ Potential Exposure</b> Not Applicable</p> <p><b>High-Risk Population</b> Not Applicable Only cross-sectional data provided. Adults, 18 to 96 years old, 63.6% White, 32.6% Black, 3.8% other minority (sample)</p>	<p><b>Representative</b> Not Applicable</p> <p><b>Potential Population Reach</b> Not Applicable</p> <p><b>Potential High Risk Population Reach</b> Not Applicable</p>	<p><b>Intervention Components</b> Not Applicable</p> <p><b>Only cross-sectional data provided.</b></p> <p><b>Presence and absence of sidewalks</b></p> <p><b>MULTI-COMPONENT:</b></p> <ol style="list-style-type: none"> <li>1. Access to recreational areas</li> <li>2. Land-use and access to locations</li> <li>3. Access to public transit</li> <li>4. Access to a safe environment to participate in active transportation</li> </ol> <p><b>Feasibility</b> Not Applicable</p> <p><b>Implementation Complexity</b> Not Applicable</p>	<p><b>Population Impact</b> Not Applicable</p> <p><b>High-risk Population Impact</b> Not Applicable</p> <p><b>Sustainability</b> Not Applicable</p>	<p><b>Transportation</b> <b>PHYSICAL ACTIVITY:</b> 1. Those in the top quartile for street segments of bus stops were 1.5 times more likely to engage in transportation activity (95%CI: 1.0-2.3) and 1.6 times more likely to meet recommendations through transportation activity (95%CI: 0.99-2.6) compared to those in the lowest quartile as assessed by the audit (<math>p&lt;0.05</math> for trend).</p> <p><b>Safety-Interpersonal</b> <b>PHYSICAL ACTIVITY:</b> 1. Those in the highest quartile for segments with minimal garbage, litter, or broken glass were 0.4 times less likely (95%CI: 0.3-0.7) to engage in transportation activity and 0.4 times less likely (95%CI: 0.2-0.7) to meet recommendations through transportation activity than those in the lowest quartile (<math>p&lt;0.05</math> for trend). 2. Those in the highest quartile of physical disorder were 0.5 (95%CI: 0.3-0.8) and 0.4 (95%CI: 0.2-0.7) times less likely to engage in transportation activity or meet recommendations through transportation activity, respectively (<math>p&lt;0.05</math> for trend).</p> <p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <b>PHYSICAL ACTIVITY:</b> 1. Those who agreed that they had many places to exercise in their community and who reported more facilities within a 5-minute walk were slightly more likely to meet recommendations, but the direction of the trends and significance of the associations at different levels of these measures were inconsistent (data not shown).</p> <p><b>Community Design</b> <b>PHYSICAL ACTIVITY:</b> 1. People in the highest quartile for the total number of non-residential destinations were two to three times more likely to engage in any transportation activity (<math>OR=3.5</math>, 95%CI: 2.3-5.5) or meet recommendations (<math>OR=3.3</math>, 95%CI: 2.0-5.4) through transportation activity than respondents in the lowest quartile (<math>p&lt;0.05</math> for trend).</p>	<p>1. Compared to never using the nearest trail in the past 30 days, the odds of meeting recommendations through recreational activity were 1.4 (95%CI: 0.97-2.0) for 1 to 5 days; 2.4 (95%CI: 1.4-4.1) for 6 to 10 days; and 3.4(95%CI: 2.2-5.1) for &gt;10 days (<math>p&lt;0.05</math> for trend). 2. For use of the nearest private fitness facility, individuals were 1.3 times more likely (95%CI: 0.8-1.9) for 1 to 5 days; 2.3 times more likely (95%CI: 1.3-4.0) for 6 to 10 days; and 5.3 times more likely (95%CI: 3.3-8.6) for &gt; 10 days (<math>p&lt;0.05</math> for trend) to meet recommendations through recreational activity. 3. Compared with never using the park in the last 30 days, the odds of meeting recommendations through recreational activity individuals were 1.2 (95%CI: 0.8-1.7) for using it 1 to 5 days; 2.1 (95%CI: 1.3-3.4) for using it 6 to 10 days; and 4.3 (95%CI: 2.9-6.2) for using it &gt;10 days (<math>p&lt;0.05</math> for trend). 4. Respondents with &gt;92 active people observed within 400 m of their home (highest quartile) were about two to three times more likely to engage in any (<math>OR=2.1</math>, 95%CI: 1.4-3.2) or recommended levels of activity (<math>OR=2.7</math>, 95%CI: 1.7-4.3) through transportation compared to those with &lt;47 active people.</p>	

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Grow, Saelens (2008) Massachusetts, Ohio, California	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  11-18 year old adolescents  Parents: 80.5% White, 9.2% Black, and 5.7% Other  Adolescents: 75.0% White, 18.8% Black, 2.7% Asian/Pacific Islander, and 3.6% Other (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity, pedestrian infrastructure, and neighborhood aesthetic quality  <u>MULTI-COMPONENT:</u> 1. Neighborhood traffic safety 2. Access to recreational facilities 3. Land-use mix 4. Perceptions of neighborhood crime  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Adolescents who usually walked/biked to at least 5 sites (site median) had higher scores on perceived pedestrian infrastructure and on traffic safety both by parent report and self-report and had higher land use mix and street connectivity for adolescent report only (no statistics) 2. Parents and adolescents who usually walked/biked to at least 5 sites reported higher perceptions for pedestrian infrastructure and traffic safety. Only adolescents reported higher land-use mix and street connectivity (no statistics). 3. On the basis of adolescent and parent report multivariate regression models revealed that positive estimates were found for street connectivity, pedestrian infrastructure, and traffic safety and a negative estimate was found for crime threat in relation to the number of sites to which adolescents walked/biked. After adding proximity to the model, only traffic safety remained highly significantly associated with usual walking/biking to sites for both parent ( $\beta=0.55$ , $p<0.01$ ) and adolescent ( $\beta=0.3$ , $p<0.01$ ) reports.  <b>Safety Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Adolescent and parent report multivariate regression models revealed a negative estimate was found for crime threat in relation to the number of sites to which adolescents walked/biked.  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Living within a 10-min walk of large parks (Report for children; 69.2% active, $p<0.05$ , Report for adolescents; 55.9% active, $p<0.01$ , Adolescent report; 47.6% active, $p<0.01$ ) and public open spaces (Report for children; 59.5% active, $p<0.01$ , Report for Adolescents; 30.4% active, $p<0.05$ , Adolescent report; 36% adolescents active, $p<0.01$ ) were associated with increased likelihood of being active at those sites.  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Adolescents who usually walked/biked to at least 5 sites reported higher land-use mix (no statistics). 2. Living within a 10-min walk of large parks (Report for children; 69.2% active, $p<0.05$ , Report for adolescents; 55.9% active, $p<0.01$ , Adolescent report; 47.6% active, $p<0.01$ ) and public open spaces (Report for children; 59.5% active, $p<0.01$ , Report for Adolescents; 30.4% active, $p<0.05$ , Adolescent report; 36% adolescents active, $p<0.01$ ) were associated with increased likelihood of being active at those sites. 3. Multivariate analysis of parent report revealed that site proximity was only associated with adolescents' swimming pool use ( $RR=2.1$ , $p<0.05$ ).  (Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)	1. Parents reported that children walking/biking to the site was significantly associated with active use of most recreation sites: indoor recreation sites (72.7% active, $p<0.05$ ), basketball courts (45.5% active, $p<0.01$ ), walking/running tracks (68.8% active, $p<0.01$ ), school recreation site (70.8% active, $p<0.01$ ), small (73.7% active, $p<0.01$ ) and large public parks (68.8% active, $p<0.05$ ), public playgrounds (71.1% active, $p<0.05$ ), and open space (63% active, $p<0.01$ ). The same trend was found for parental report for adolescents (indoor recreation facilities: 54.5% active, $p<0.05$ ; basketball courts: 57.5% active, $p<0.01$ ; walking/running tracks: 62.5% active, $p<0.01$ ; school recreation site: 56.7% active, $p<0.01$ ; small parks: 52.4% active, $p<0.01$ ; large parks: 59% active, $p<0.01$ ; playgrounds: 43.1% active, $p<0.01$ ; open spaces: 45.5% active, $p<0.01$ ) and adolescent self-report (indoor recreation facilities: 53.8% active, $p<0.05$ ; basketball courts: 43.4% active, $p<0.01$ ; walking/running tracks: 56.8% active, $p<0.01$ ; school recreation sites: 44.4% active, $p<0.01$ ; small parks: 50% active, $p<0.01$ ; large parks: 48.1% active, $p<0.01$ ; playgrounds: 37.3% active, $p<0.01$ ; open spaces: 50% active, $p<0.01$ ). 2. Multivariate analysis of self-reported data revealed that walking/biking was the frequent transport for 9 of 12 sites (swimming pools: $RR=1.9$ , $p<0.05$ ; basketball courts, $RR=2.1$ , $p<0.05$ ; walking/running tracks: $RR=3.3$ , $p<0.01$ ; school recreation sites: $RR=2.3$ , $p<0.05$ ; small parks: $RR=6.9$ , $p<0.01$ ; large parks: $RR=2.9$ , $p<0.05$ ; playgrounds: $RR=5.1$ , $p<0.05$ ; bike/hike/walk trails: $RR=4.7$ , $p<0.01$ ; open spaces: $RR=9.8$ , $p<0.01$ ) and also 8 of 12 by parent report (basketball courts: $RR=4.5$ , $p<0.01$ ; walking/running tracks: $RR=4.6$ , $p<0.01$ ; school recreation sites: $RR=4.4$ , $p<0.01$ ; small parks: $RR=6$ , $p<0.01$ ; large parks: $RR=4.1$ , $p<0.01$ ; playgrounds: $RR=5$ , $p<0.01$ ; bike/hike/walk trails: $RR=3.7$ , $p<0.01$ ; open spaces: $RR=7.3$ , $p<0.01$ ). 3. For adolescents, walking/biking to sites was associated with use of play fields and courts (parental report only: 54.5% active, $p<0.05$ ), swimming pools (self-report only: 58.5% active, $p<0.01$ ), beach/lack/river/creek (parent report: 42.9% active, $p<0.01$ ; self report: 48.5% active, $p<0.01$ ), and bike/hike/walk trail (parent report: 52% active, $p<0.01$ ; self-report: 49.1%, $p<0.01$ ). 4. Adolescents who usually walked/biked to at least 5 sites (site median) had higher scores on perceived pedestrian infrastructure and had higher street connectivity for adolescent report only (no statistics).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> McGinn, Evenson (2007) Mississippi and North Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  57.0% White, 38.2 % Black (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and presence and absence of sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of high-speeds and traffic as barriers for physical activity 2. Access to diverse neighborhood destinations  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Safety-Traffic</b>  <u>PHYSICAL ACTIVITY:</u>  <i>Both Sites</i></p> <ol style="list-style-type: none"> <li>Perceptions that high-speed traffic, heavy traffic, and lack of sidewalks were a problem in an individual's neighborhood were not associated with any of the physical activity outcomes.</li> </ol> <p><i>Forsyth County, NC</i></p> <ol style="list-style-type: none"> <li>Individuals in areas with low-traffic speed were more likely to meet recommendations for leisure activity than to be inactive for all three buffer sizes, compared to those living in areas of high-traffic speed (One-Mile; OR=1.7, 95%CI=1.0-2.7, p&lt;0.05, Half-Mile; OR=1.6, 95%CI=1.0-2.6, p&lt;0.05, Eighth-Mile; OR=2.1, 95%CI=1.3-3.4, p&lt;0.05).</li> <li>When examining the eighth mile buffer, individuals in areas with low-traffic volume were more likely to be insufficiently active during leisure physical activity and outdoor leisure activity than to be inactive and engage in any transportation activity (OR=1.6, 95%CI=1.0-2.3, p&lt;0.05, OR=1.4, 95%CI=1.0-2.0, p&lt;0.05, and OR=1.4, 95%CI=1.0-2.1, p&lt;0.05, respectively).</li> <li>Individuals within the one-mile buffer, in areas where there was a low occurrence of crashes were more likely to meet recommendations for leisure physical activity for the one mile and half mile neighborhoods (OR=1.9, 95%CI 1.0-3.4, p&lt;0.05).</li> </ol> <p><i>Jackson County, MS</i></p> <ol style="list-style-type: none"> <li>Those whose one-mile neighborhoods had low-traffic volumes were more likely to not meet recommendations and be insufficiently active than inactive during leisure activity, outdoor leisure activity, or walking for any purpose, with significant associations for being insufficiently active compared to inactive during leisure activity and walking for any purpose (OR=0.5, 95%CI=0.3-1.1 and OR=0.5, 95%CI=0.3-1.0, p&lt;0.05, respectively).</li> <li>No associations were seen between objectively measured speed and street characteristics for any of the outcomes in any of the three neighborhood sizes in Jackson.</li> <li>Individuals within the one and half mile buffers, in areas with low occurrence of crashes were less likely to engage in any transportation activity compared with those who live in areas with a high occurrence of crashes (OR=0.6; 95%CI 0.4, 1.0; p&lt;0.05 and OR=0.6; 95%CI 0.4, 0.9; p&lt;0.05, respectively).</li> </ol> <p><b>Community Design</b>  <u>PHYSICAL ACTIVITY:</u>  <i>Forsyth County, NC</i></p> <ol style="list-style-type: none"> <li>Individuals with perceptions of walkable destinations present within their neighborhoods were associated with meeting recommendations for walking for any purpose and any transportation activity (OR=1.7, 95%CI= 1.1-2.8, p&lt;0.05).</li> </ol>	Not Reported

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Jago, Baranowski (2006); Jago, Baranowski (2005) Texas	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Male, 10-14 year olds (mean age=12.8), 69% Anglo-American, 3.3% African-American, 18.6% Hispanic, 9.1% other ethnicity (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Availability of sidewalks in good condition, street connectivity, and intersection density  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety from crime and unattended dogs 2. Proximity to playgrounds  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Walking and cycling ease was negatively associated with parks ( $r=-0.136$ , $p=0.05$ ).  <b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Walking and cycling ease was positively associated with tidiness ( $r=0.198$ , $p=0.004$ ) and negatively associated with crime ( $r= -0.325$ , $p<0.001$ ).	Not Reported
<b>Author</b> Zhu, Lee (2009) Texas	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  5-12 year olds, Urban and Suburban (evaluation sample)  55.4% Hispanic, 60.3% eligible for free or reduced lunch (2005-2006 Austin Independent School District)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Availability and quality of sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood traffic safety 2. Access to land-use mix 3. Access to public transit  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. A child was about 4 times more likely to walk if the parent perceived the distance to be close enough for the child to walk (coefficient= 1.390, OR=4.014, 95% CI=3.128-5.150, $p<0.001$ ). 2. The presence of certain features such as convenience stores (coefficient= -0.548, OR=0.578, 95% CI= 0.432-0.774, $p<0.001$ ) and office buildings (coefficient= -0.536, OR=0.585, 95% CI=0.393-0.872, $p<0.05$ ) en route were negative correlates with walking behavior.  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Parents' safety concerns (range: -2.8 to 2.0) and the need to cross highways or freeways were negative correlates to children's walking behaviors (coefficient= -0.253, OR=0.776, 95% CI= 0.695-0.867, $p<0.001$ ; coefficient= -0.485, OR=0.616, 95% CI= 0.422-0.898, $p<0.05$ , respectively).  <b>Transportation</b> <u>PHYSICAL ACTIVITY:</u> 1. The presence of bus stops (coefficient= -0.305, OR=0.737, 95% CI= 0.580-0.936, $p<0.05$ ) en route was negatively correlated with walking behavior.	1. Children were less likely to walk (coefficient= -1.201, OR=0.301, 95% CI=0.224-0.404, $p<0.001$ ) if schools provided bus services.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Addy, Wilson (2004); Wilson, Ainsworth (2007) South Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 18-75 years old	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence or absence of sidewalks and aesthetically pleasing environments  <u>MULTI-COMPONENT:</u> 1. Access to recreational facilities  <u>COMPLEX:</u> 1. Perceptions of social support  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>OVERWEIGHT/OBESITY:</u> 1. Among participants not meeting the recommendation for regular moderate or vigorous physical activity (n= 723), trusting neighbors and having public recreation facilities were significantly associated with BMI status ( $p<.05$ ). 2. Using walking/bicycling trails was significantly associated with BMI status ( $p<.05$ ). 3. The presence of recreational facilities ( $OR=2.07$ , 95%CI: 95%CI: 1.13-3.77), and use of walking/bicycling trails (as opposed to not having trails available, $OR=2.14$ , 95%CI: 1.01-4.52) were associated with approximately twice the odds of being overweight as opposed to obese. 4. Among participants who were not regular walkers (n=679), using trails ( $OR=2.72$ , 95%CI: 1.15-6.42, $p<0.05$ ) (as opposed to not having trails available) was associated with 2.7 times the odds of being overweight as opposed to obese in the subpopulation not engaging in regular recreational walking.  <u>PHYSICAL ACTIVITY:</u> 5. Participants reporting the use of malls for physical activity were 2 times more likely to report engaging in irregular walking versus no walking (95% CI:1.11-3.77). 6. Participants using trails were 3.1 times more likely to be regularly active versus inactive (95% CI: 1.36-6.98) and 2.3 times more likely to be irregularly active versus inactive (95% CI: 1.04-5.16, $p<0.05$ ).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Boehmer, Lovegreen (2006) Arkansas, Missouri, Tennessee	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 74.4% female, 93.4% white, 36.8% income <\$25,000, 59.1% income >\$25,000; 27% obese; 31% overweight (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence of sidewalks and shoulders on streets and neighborhood aesthetics  <b>MULTI-COMPONENT</b> 1. Access to recreational facilities 2. Land-use mix and distance to grocery stores 3. Perceptions of safety from crime 4. Access to fruits and vegetables and the distance to a grocery store 5. Perceptions of neighborhood traffic safety  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>Perceived lack of equipment for physical activity was associated with being obese (OR= 1.8, 95% CI= 1.3-2.4) and obese/inactive (OR= 1.8, 95% CI= 1.2-2.7) among only women.</li> <li>Neighborhood perceptions of a lack of places to be physically active (OR=1.46, 95%CI= 1.1-1.94) and no available equipment (OR=1.55, 95%CI=1.19-2.02) was associated with being obese.</li> <li>Farthest distance (&gt;20 minutes) to the nearest recreational facility (OR=1.53, 95% CI= 1.1-2.11) was a neighborhood environmental perception associated with being obese.</li> <li>Farthest distance (&gt;20 minutes) to the nearest recreational facility (OR=2.74, 95% CI= 1.68-4.48) was a neighborhood environmental perception associated with being obese.</li> </ol> <p><b>Neighborhood Availability of Food Stores</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>Further distance to the nearest supermarket was associated with increased odds of obesity (OR: 1.8, 95% CI= 1.3-2.4).</li> <li>The availability and quality of fresh fruits were not significantly associated with obesity.</li> </ol> <p><b>Safety-Interpersonal</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>Women had stronger associations between obesity and feeling slightly or not at all safe from crime (OR= 2.4; 95% CI= 1.6-3.5).</li> <li>Feeling unsafe from crime (OR=2.91, 95%CI= 1.86-4.55, p&lt;0.05) was more strongly associated with the odds of being obese/inactive.</li> <li>Feeling unsafe from crime (OR=2.09, 95%CI= 1.5-2.92, p&lt;0.05) and having an unmaintained community (OR=1.48, 95%CI=1.09-1.99) were more strongly associated with the odds of being obese.</li> <li>Feeling unsafe from crime (OR=2.59, 95% CI= 1.56-4.28) was a neighborhood environmental perception associated with being obese.</li> <li>Feeling unsafe from crime (OR=1.71, 95% CI= 1.19-2.46) was a neighborhood environmental perception associated with being obese.</li> <li>Having an unmaintained community (OR=1.48, 95%CI=1.09-1.99) was associated with being obese.</li> </ol> <p><b>Safety-Traffic</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <ol style="list-style-type: none"> <li>Feeling unsafe from traffic (OR=2.46, 95%CI= 1.63-3.71, p&lt;0.05) was more strongly associated with the odds of being obese and inactive than normal and active.</li> <li>Feeling unsafe from traffic (OR=1.65, 95%CI=1.2-2.27, p&lt;0.05) was more strongly associated with the odds of being obese than normal weight.</li> </ol> <p><b>Community Design</b></p> <p><b>OVERWEIGHT/OBESITY:</b></p> <p><i>Stratified Analysis:</i></p> <ol style="list-style-type: none"> <li>Neighborhood perceptions of having no or a few destinations within close proximity (3-6 destinations: OR=2.03, 95%CI= 1.33-3.09; 1-2 destinations: OR=1.72,95%CI= 1.13-2.62; none: OR=1.63, 95%CI= 1.07-2.5), feeling unsafe from crime (OR=2.91, 95%CI= 1.86-2.55, p&lt;0.05), feeling unsafe from traffic (OR=2.46, 95%CI= 1.63-3.71, p&lt;0.05), and finding the community somewhat pleasant (OR=1.73, 95%CI= 1.28-2.34) or not pleasant (OR=2.02, 95% CI= 1.29-3.15, p&lt;0.05) were all associated with being obese/inactive. <i>(continued next page)</i></li> </ol>	Not Reported

**(Continued from previous study)**

2. Further distance to the nearest supermarket was associated with increased odds of obesity (OR: 1.8, 95% CI= 1.3-2.4).  
3. Neighborhood perceptions of a lack of places to be physically active (OR=1.46, 95%CI= 1.1-1.94), no available equipment (OR=1.55, 95%CI=1.19-2.02), few or moderate number of destinations within close proximity (3-6 destinations: OR=1.49, 95%CI= 1.08-2.06; 1-2 destinations: OR=1.42, 95%CI= 1.03-1.97), feeling unsafe from crime (OR=2.09, 95%CI= 1.5-2.92, p<0.05), feeling unsafe from traffic (OR=1.65, 95%CI=1.2-2.27, p<0.05), finding the community somewhat pleasant (OR=1.44, 95%CI= 1.13-1.92) or not pleasant (OR=1.85; 95%CI=1.31-2.59, p<0.05), and having an unmaintained community (OR=1.48, 95%CI=1.09-1.99) were all associated with being obese.

*Multivariate Analysis:*

4. Furthest distance (>20 minutes) to the nearest recreational facility (OR=2.74, 95% CI= 1.68-4.48), having 3-6 destination types near home (OR=1.76, 95%CI= 1.09-2.84), and feeling unsafe from crime (OR=2.59, 95% CI= 1.56-4.28) were neighborhood environmental perceptions associated with being obese.  
5. Furthest distance (>20 minutes) to the nearest recreational facility (OR=1.53, 95% CI= 1.1-2.11) and feeling unsafe from crime (OR=1.71, 95% CI= 1.19-2.46) were neighborhood environmental perceptions associated with being obese.

(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Ainsworth, Wilcox (2003) South Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults, African-American, Females (target sample)  20 to 50 years old (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Presence and absence of sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood traffic safety  <b>COMPLEX:</b> 1. Neighborhood social support (belonging to community groups)  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Traffic</b> <b>PHYSICAL ACTIVITY:</b> 1. 34% of respondents reported having light traffic in the neighborhood and approached statistical significance for meeting physical activity recommendations (OR=1.53, CI=1.00-2.34).  <b>Social support:</b> 5. There was a statistically significant relationship between seeing people exercise in the neighborhood and (1) having insufficient or recommended levels of physical activity (versus being inactive) (OR=1.63, CI= 1.07-2.48) or (2) meeting recommendations (OR=1.57, CI= 1.16-2.12). 6. Women reporting lower social role strain (social roles score) were more likely to meet recommendations than women with high strain. (mean= 2.93 +/- 0.41, OR=1.49, CI=1.06 – 2.10).	1.The most commonly cited reasons for not exercising more were personal barriers, enablers, and motivators, lack of time (36.2%, 34.5%); lack of willpower (15.0%, 10.9%); and being too tired or lacking energy (12.2%, 9.2%). 2.The most commonly cited factors that would get participants to exercise more were more time (24.6%, 23.3%), greater willpower or self-motivation (19.6%, 15.4%), and support from a friend (8.9%, 6.5%). 3.The most commonly cited barriers for physical activity were lack of recreation facilities (18.6%, 15.8%), not enough sidewalks (9.9%, 8.7%), unattended dogs (8.4%, 8.1%), and no street lighting (7.7%, 9.0%). 4.The most commonly cited enablers were building a fitness center nearby (33.5%, 34.6%), providing better street lighting (10.1%, 10.3%), nearby organized exercise groups (11.0%, 6.8%), and more sidewalks (8.7%, 7.2%).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Sanderson, Foushee (2005) Alabama	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Rural, Female, Adults, 20-50 years old, 75-77% African American (evaluation sample)  The data was collected from a predominately impoverished rural area.	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Presence or absence of sidewalks  <u>MULTI-COMPONENT:</u> 1. Perceptions of safety from crime 2. Access to places for physical activity 3. Access to neighborhood destinations within walking distance 4. Perceptions of traffic safety  <u>COMPLEX:</u> 1. Neighborhood social support and self-efficacy	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Researchers found no physical environmental variables that were significantly associated with comparison of either activity-level group.  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Researchers found no physical environmental variables that were significantly associated with comparison of either activity-level group. 2. Women reporting good lighting at night were less likely ( $OR=0.48$ , 95% CI= 0.27- 0.88) to report any physical activity.  <b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Researchers found no physical environmental variables that were significantly associated with comparison of either activity-level group.  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Researchers found no physical environmental variables that were significantly associated with comparison of either activity-level group.  (Note: Environmental variables include a composite score of distance to places to walk, safety from crime, street lighting, unattended dogs, presence of sidewalks, and traffic safety. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)	1. Women meeting recommendations (n=221) compared to women who did not (n=346) were more than twice as likely to see people exercising in the neighborhood (87.2%, $OR=2.02$ , CI=1.08-3.77) and to attend religious services (84.9%, $OR=2.10$ , CI=1.21-3.65).  2. Women who reported any activity (n=481) compared with inactive women (n=86) were more likely to know people who exercise ( $OR=1.82$ , 95% CI=1.06-3.15), have higher social issue scores ( $OR=1.29$ , 95% CI=1.11-1.49), and were more than 3 times as likely to report attending religious services ( $OR=3.82$ , 95% CI=2.16-6.75).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Lee, Vernez Moudon (2006) Washington	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  Adults, 10% Minority, 90% White, 54% Female, 16% age 66 years or older (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross sectional data provided.  Length of sidewalks, and street vegetation (trees)  <u>MULTI-COMPONENT:</u> 1. Distance to grocery stores, restaurants, parks and trails, block size, and density 2. Perceptions of traffic safety and volume  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> <i>Objective Correlates of Walking</i> 1. Distance to the closest office and mixed use neighborhood centers for both-walkers ( $OR=2.591$ , $CI: 1.463-4.587$ , $p<0.01$ ), the recreation walker ( $OR=2.233$ , $CI: 1.198-4.161$ , $p<0.05$ ), and the transportation walker ( $OR=2.503$ , $CI: 1.314-4.768$ , $p<0.01$ ) was significant in all models. 2. Area level residential density was found to be significant in all models for both recreational and transport walkers ( $OR=0.135$ , $CI: 0.036-0.511$ , $p<0.01$ ), and independently for the recreation walkers ( $OR=0.101$ , $CI: 0.024-0.421$ , $p<0.05$ ), and the transportation walker ( $OR=0.186$ , $CI: 0.043-0.798$ , $p<0.05$ ). 3. Parcel-level density ( $OR=2.740$ , $CI: 1.239-6.056$ , $p<0.05$ ) showed a positive association with the likelihood of walking for both purposes relative to not walking at all. 4. Area based density ( $OR=0.135$ , $CI: 0.036-0.511$ , $p<0.001$ ) showed a negative association with the likelihood of walking for both purposes relative to not walking at all. 5. Frequent walkers have a 17% decreased odds of walking ( $OR=0.825$ , 95% $CI=0.688-0.989$ , $p<0.05$ ) for transportation compared to non-walkers in a sloped environment. 6. Frequent walkers have a 15% increased odds of walking for recreation compared to non-walkers in a sloped environment. 7. Moderate walkers had a 56% decreased odds of perceiving their neighborhood as having a mix or only commercial atmosphere when ( $OR=0.441$ , $CI: 0.200-0.972$ , $p<0.05$ ) compared to non-walkers. 8. Both socio-demographic and physical environmental variables had a stronger association with transportation walking than with recreation walking. The Frequency Models showed the fit of the recreational model (pseudo R-square=0.349) to be much poorer than that of the transportation model (pseudo R-square=0.641).  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Route related variables, such as block size, traffic volume, sidewalk, and street trees, did not show a statically significant association with transportation walking; but longer sidewalks was positively associated with recreation walking (frequent walking; $OR=1.117$ , $CI: 1.001-1.245$ , $p<0.05$ ).	1. The odds of transportation walking were 1.7 times higher for moderate walkers ( $OR=1.765$ , $CI: 1.247-2.494$ , $p<0.01$ ) and 2.7 times higher for frequent walkers when compared to non-walkers with increased social support ( $OR=2.652$ , $CI: 1.673-4.203$ , $p<0.01$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Fulton, Shisler (2005) United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  5-18 year olds, 7% African-American, 8% Hispanic , 4% Other, 80% White (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Access to sidewalks  <u>MULTI-COMPONENT:</u> 1. Level of urbanization  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Compared to children in rural areas, children in central cities, suburbs, or small cities/towns were more likely to walk (OR=2.2, 95%CI= 1.0-4.6; OR=2.4, 95%CI= 1.3-4.5, and OR=2.3, 95%CI=1.3-4.2, respectively).	1. Compared to girls, boys have 1.8 times the odds of using active transportation to school (95% CI=1.3-2.5).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Vernez Moudon, Lee (2007) Washington	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  Adults, General population, Urban and Suburban	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Complete sidewalks  <b>MULTI-COMPONENT:</b> 1. Land-use mix, density, and distance to commercial facilities 2. Access to a grocery store and restaurant  <b>COMPLEX:</b> 1. Perceptions of social support  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <b>PHYSICAL ACTIVITY:</b> 1. Having too many grocery stores near home was negatively associated with walking in one airline model (airline model [walking sufficiently relative to not walking] OR= 0.667, 95%CI= 0.454-0.980, p<0.05). 2. Walking was negatively associated with distance to NC5 (office and mixed-use; airline model, odds of walking sufficiently relative to not walking OR=1.274, 95%CI=1.041-1.559, p<0.05) and distance to (office only network model; odds of walking sufficiently relative to not walking, OR=1.581, 95%CI=1.146-2.180; network model odds of walking sufficiently relative to walking moderately; OR=1.235, 95%CI=1.020-1.495, p<0.05) as well as the size of the closest NC8 (office, airline model, odds of walking sufficiently relative to walking moderately; OR= 0.779, CI= 0.655-0.927, p<0.05; odds of walking sufficiently relative to walking moderately, OR=0.801, 95%CI=0.712-0.901, p<0.05) to home. 3. Living closer to a grocery store/market (Airline model Odds of walking moderately relative to not walking; OR=0.375, 95%CI= 0.189-.743, p<0.01) (Airline model Odds of walking sufficiently relative to not walking OR=0.443, 95% CI=0.219-0.896, p<0.05)], an eating/drinking place (Airline model Odds of sufficient walking relative to walking moderately OR=0.688, 95%CI=0.493-0.959, p<0.05), a bank (Network model Odds of walking moderately relative to not walking OR=0.775, 95% CI=0.620-0.968)), and a NC2 ([grocery, restaurant, retail] Network model Odds of walking sufficiently relative to not walking OR=0.640, 95%CI= 0.441-0.928, p<0.05) were correlated with increased walking. 4. The density of the respondent's parcel was also strongly associated with walking sufficiently (airline sufficient not walking, OR=1.959, 95%CI=1.148-3.346) (network sufficient relative to not walking, OR=2.021, 95%CI=1.239-3.294) (network sufficient to moderate, OR=1.457, 95%CI=1.118-1.899) (p<0.01 for all) and significantly correlated with both the network and airline models.  <b>Neighborhood Availability of Food Stores and Restaurants</b> <b>PHYSICAL ACTIVITY:</b> 1. Living closer to a grocery store/market (Airline model Odds of walking moderately relative to not walking; OR=0.375, 95%CI= 0.189-.743, p<0.01) (Airline model Odds of walking sufficiently relative to not walking OR=0.443, 95% CI=0.219-0.896, p<0.05)], an eating/drinking place (Airline model Odds of sufficient walking relative to walking moderately OR=0.688, 95%CI=0.493-0.959, p<0.05), a bank (Network model Odds of walking moderately relative to not walking OR=0.775, 95% CI=0.620-0.968)), and a NC2 ([grocery, restaurant, retail] Network model Odds of walking sufficiently relative to not walking OR=0.640, 95%CI= 0.441-0.928, p<0.05) were correlated with increased walking.	1. Survey variables strongly associated with walking sufficiently to enhance health included household income, not having difficulty walking, using transit, perceiving social support for walking, walking outside of the neighborhood, and having a dog (p<0.01). 2. Perceived social support for walking in the neighborhood had the strongest association with increased odds of walking. Odds of walking moderately to not walking, (OR= 1.622, 95%CI=1.216-2.165, p<0.01) and Odds of walking sufficiently relative to not walking, (OR=1.855, 95% CI=1.366-2.520, p<0.01).

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Smith, Brown (2008) Utah	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  25-64 year olds, Adults, General Population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Street connectivity and intersection density  <b>MULTI-COMPONENT:</b> 1. Population density and land-use diversity  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Higher density reduces the risk of overweight among men (OR=0.997; 95% CI 0.993, 1.00; p=0.051). Higher population density increases the obesity risk for women (OR=1.06; 95%CI 1.001, 1.011; p=0.026). 2. An analysis of weight across quartiles of walkability factors, including density, reveals the expected negative relationship (p=0.039) between the top quartile of density (compared to the lowest quartile) and women's obesity odds. The unexpected overall positive relationship is attributable to the large effect of the third quartile (50th-74th percentile, p=0.002) 3. For men, being in the top 25% of all four walkability measures (defined as highest levels of density, pedestrian-friendly street design, neighborhood age, and walking to work) is associated with approximately a 1.28-point reduction in BMI. For women, the reduction is 0.95 points. For a hypothetical 6-foot, 200-pound man, the least walkable neighborhood would be associated with approximately 10 more pounds than the most walkable neighborhood. Using the female sample's average height and weight (5 feet, 5 inches; 149 pounds), the most walkable neighborhood would be associated with nearly 6 fewer pounds than the least walkable neighborhood. 4. As the age of the housing in the neighborhood increases, BMI declines, as do the odds of overweight and obesity (men: OR=0.922, 95%CI=0.915-0.929, p<0.001 and OR=0.879, 95%CI=0.87-0.889, p<0.001, respectively and women: OR=0.933, 95%CI=0.924-0.942, p<0.001 and OR=0.925, 95%CI=0.915-0.936, p<0.001, respectively).	Not Reported
<b>Author</b> Frank, Schmid (2005) Georgia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  Adults, General Population (target sample)  74.9% White, 15.9% Black, 43.8 average years old (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Intersection density and street connectivity  <b>MULTI-COMPONENT:</b> 1. Land-use mix and residential density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. A natural log of the minutes of moderate physical activity per day was significantly correlated with land use mix ( $r=0.145$ , $p <0.01$ ) and net residential density ( $r=0.179$ , $p <0.01$ ). 2. The walkability index (intersection density, land-use mix, residential density) was a significant correlate for meeting the $\geq 30$ -minute physical activity recommendation. Individuals were on average thirty percent more likely to record $\geq 30$ minutes of activity with each increase in the walkability index quartile. 3. Thirty-seven percent of individuals in the highest walkability index quartile met the minimum of $\geq 30$ minutes for physical activity, while only eighteen percent of individuals in the lowest walkability quartile met the recommendation. 4. Results demonstrate that the odds of meeting the recommended $\geq 30$ minutes of moderate activity per day was 2.4 (OR) times greater for the fourth quartile group (walkability) than the referent group (least walkable) with a reported confidence interval (CI) of 1.18 to 4.88 ( $p=0.015$ ). However, the third quartile group approaches a significant difference from the referent group as well (OR=2.02, 95%CI=0.99–4.12, $p=0.055$ ).	Not Reported

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Frank, Andresen (2004) Atlanta	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data was provided  Adults, African-American, Caucasian (target)  65% White, 35% African-American (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and intersection density  <b>MULTI-COMPONENT:</b> 1. Land-use mix, distance to locations, and net residential density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. For each quartile increase in land-use mix there was a 12.2% reduction associated with the odds of being obese (OR=0.878, 95%CI= 0.839-0.919, p<0.0001). 2. The change from a land use mix of zero to the average land use mix in the region (0.15) decreases the odds of obesity for the average person by 4.65%. Increasing the land use mix to 0.25, the 90th percentile in the Atlanta metropolitan area, decreases the odds of obesity by 6.85%. 3. The proportion of obese persons in the sample declined from 20.2% in the lowest to 15.5% in the highest land-use-mix quartile. 4. For white males, all three urban form variables - mixed use r=-0.11; p<0.001), intersection density (r=-0.089; p<0.001), and net residential use (r=-0.096; p<0.001) - were inversely correlated with BMI. 5. Mixed use (r=-0.086; p<0.001) and residential density (r=-0.039; p=0.02) were negatively associated with BMI for white females. 6. No linear relationships were found between BMI and urban form for blacks.  <u>PHYSICAL ACTIVITY:</u> 7. Walking distance was positively associated with land use mix for white males ( $r=0.046$ , $p=0.01$ ), black females ( $r=0.059$ , $p=0.01$ ), and white females ( $r=0.051$ , $p<0.001$ ) 8. Walking distance was positively related to residential density for white males and females ( $r=0.050$ , $r=0.065$ , respectively, $p<0.001$ ). 9. No linear relationships were found between urban form and walk distance for black males.	Not Reported
<b>Author</b> Frank, Sallis (2006) Washington	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided.  Adults, general population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross sectional data provided.  Street connectivity  <b>MULTI-COMPONENT:</b> 1. Land-use mix, residential density, and retail floor ratio  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. When the walkability index was compared to BMI there was an expected relationship with walkability negatively related to body mass ( $\beta = -0.113$ , $t=-3.898$ , $p<0.0001$ , partial correlate $-0.107$ ). 2. Researchers found a 5% increase in walkability associated with a 0.23-point reduction in body mass index.  <u>PHYSICAL ACTIVITY:</u> 3. When the walkability index was compared to minutes per week devoted to active transportation there was an expected relationship, with walkability positively related to active transportation ( $\beta = 0.304$ , $t=10.659$ , $p<0.0001$ , partial correlate=0.289). 4. Researchers found a 5% increase in walkability associated with a per capita 32.1% increase in time spent in physically active travel, 6.5% fewer vehicle miles traveled, 5.6% fewer grams of oxides of nitrogen (NOx) emitted, and 5.5% fewer grams of volatile organic compounds (VOC) emitted.  (Note: Walkability is a composite score using residential density, intersection density, land-use mix, and retail floor area ratio.)	1. The walkability index was significantly related to emissions that cause the formation of ozone ( $\beta = -0.140$ , $t=-10.841$ , $p<0.0001$ , partial correlation= $-0.131$ ). 2. Researchers found a 5% increase in walkability associated with 5.6% fewer grams of oxides of nitrogen (NOx) emitted and 5.5% fewer grams of volatile organic compounds (VOC) emitted.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Khattak, Rodriguez (2005); Brown, Khattak (2008); Rodriguez, Khattak (2006) North Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Representative</b> Not Applicable Only cross-sectional data provided.  Responding individuals compared well in terms of socioeconomic characteristics with census and the regional survey. Number of people and vehicles per household are largely consistent with the National Household Travel Survey.  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Land-use mix and residential density  <u>COMPLEX:</u> 1. Neighborhood self-selection  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Heads of households in the new urbanist multi-family units had an average BMI (23.8, p=0.03) lower than the BMI (24.9) of household heads in conventional neighborhoods. The difference in overweight prevalence between households from multi-family dwellings (27.9 %) and conventional suburban neighborhoods (40.3%) approached, but did not achieve significance. 2. Indirectly through the duration of MVPA, the association between both new urbanist dwelling types and BMI was not significantly associated with a reduction in BMI. 3. Indirectly through the number of utilitarian physical activity trips the association between the new urbanist neighborhood and BMI shows a significant 0.119 reduction in BMI (0.390 [main effect] X -0.304 [coefficient] =-0.119) for household heads from the single-family dwellings compared with household heads from the conventional suburban neighborhood. 4. Indirectly through utilitarian physical activity trips for the household heads residing in the new urbanist multi-family dwellings the association between the neighborhood and BMI was not significant.  <u>PHYSICAL ACTIVITY:</u> 5. Residents of the new urbanist neighborhoods (mean=2.03) spend more time being physically active in their neighborhood than did residents of the conventional neighborhoods (mean=1.20) (moderate or vigorous physical activity t=2.890, p<0.001). 6. Households in neo-traditional neighborhoods generate 22.1% (e(0.20)-1) fewer auto trips and 23.4% fewer external trips than households in the conventional neighborhood (after controlling for other factors and accounting for self-selection). The walk trips show a dramatic 305.5% increase in neo-traditional developments. 7. The marginal effect corresponding to the new urbanist single-family dwelling indicates that heads of household make 0.39 (p=0.02) more utilitarian physical activity trips than their counterparts residing in the conventional suburban neighborhoods.  (Note: Neo-traditional/new urbanist neighborhoods had a distinct town center, mixed land use, and increased street connectivity, while new suburban/conventional neighborhoods had 50% more residential buildings and twice the land.)	1. Households in neo-traditional neighborhoods generate 22.1% (e(0.20)-1) fewer auto trips and 23.4% fewer external trips than households in the conventional neighborhood (after controlling for other factors and accounting for self-selection). The walk trips show a dramatic 305.5% increase in neo-traditional developments. 2. The marginal effect corresponding to the new urbanist single-family dwelling indicates that heads of household make 0.39 (p=0.02) more utilitarian physical activity trips than their counterparts residing in the conventional suburban neighborhoods.

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Frank, Saelens (2007) Georgia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. General population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <b>MULTI-COMPONENT:</b> 1. Land-use mix, density, retail floor ratio, and distance to locations  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Unexpectedly, obesity prevalence was higher in the second versus 1st non-motorized selection quartile. As expected, prevalence was lower in the fourth (most walkable) versus the first (least walkable) walkability quartile.  <u>PHYSICAL ACTIVITY:</u> 2. Individuals in both the third and fourth quartiles for the non-motorized selection (availability to walk to shops and services) factor and walkability had significantly higher odds of any walk trips (3rd; OR=1.52, 95%CI=1.06-2.15, 4th; OR=2.49, 95%CI=1.80-3.36) and non-discretionary walk trips (3rd; OR=1.52, 95%CI=1.04-2.19, 4th; OR=2.43, 95% CI=1.71-3.36) than first quartile individuals for the selection and walkability factors (those not having access to shops and services). 3. Only the fourth quartile (the most walkable neighborhoods) on walkability showed significantly greater odds of a discretionary walk trip (OR=3.3, 95%CI=2.93-7.10). 4. Lower age, fewer motorized vehicles, lower proportion of licensed drivers, increased importance of non-motorized selection, and increased walkability were all significant predictors of increased likelihood of any walk trips (pseudo R <sup>2</sup> =0.15).	Not Reported
<b>Author</b> Atkinson, Sallis (2005); Saelens, Sallis, Black (2003) California	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 81% White, 9% Hispanic/Latino, 5% Asian/Pacific Islander, 1% African-American, 34% multiple ethnicities; 52% female; >90% with some college/vocational training; mean age=48.2 years (SD=11.6) (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <b>MULTI-COMPONENT:</b> 1. Access to equipment and places to be physically active 2. Land-use mix and residential density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availabilty of Parks, Playgrounds, and Recreational Facilities</b> <u>PHYSICAL ACTIVITY:</u> 1. Self-reported total physical activity was positively correlated with home equipment availability at a moderate level ( $r=0.34$ , $p<0.01$ ).  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Residents in the high-walkability neighborhood engaged in almost 60 more minutes of moderate-intensity physical activity during the past 7 days than did low-walkability residents (194.8 min vs. 130.7 min, $F(1,105)=6.02$ , $p=0.016$ ). This was the primary contributor to greater overall objectively measured physical activity among high- vs. low-walkability neighborhood residents [ $F(1,105)=6.8$ , $p=0.01$ ]. 2. Percentage of residents walking for errands was higher in the high-walkability neighborhood than in the low-walkability neighborhood (85.2% vs. 59.6%; $\chi^2[1]=8.72$ , $p=0.003$ ). 3. Self-reported vigorous physical activity (VPA) was significantly and positively correlated with residential density at a moderate level ( $r=0.35$ , $p<0.01$ ), with more modest, but significant, positive correlations with home equipment availability ( $r=0.27$ , $p=0.01$ ) and the total environment index ( $r=0.28$ , $p<0.01$ ). 4. Accelerometer-derived VPA was significantly and positively correlated with the residential density at a moderate level ( $r=0.39$ , $p<0.001$ ), having more modest correlations with connectivity ( $r=0.25$ , $p=0.01$ ) and the environmental index ( $r=0.23$ , $p=0.02$ ).	1. Parent concerns about their child walking or biking to school were significantly inversely associated with residential density and neighborhood-level walkability (OR= 2.0, 95%CI= 1.08-3.84, $p<0.05$ and OR=1.7, 95%CI=1.00-2.85, $p<0.05$ , respectively). 2. Parents of children aged 12-18 had significantly fewer concerns about active commuting ( $p=0.004$ ) than parents of children 5-11 years old, but child gender and parent education or gender were not significantly related to parent concerns. 3. A parental concerns scale was most strongly associated with child active commuting (OR=5.2, 95% CI= 2.71-9.96, $p<0.05$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Forsyth, Hearst (2008), Forsyth, Oakes (2007), Oakes, Forsyth (2007) Minnesota	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 65% Female, 81% Caucasian (evaluation sample)	<b>Representative</b> Not Applicable  Only cross-sectional data provided.  Study participants appear relatively homogenous with respect to SES but heterogeneous with respect to density and street connectivity.  The northern sector of the Minneapolis-St. Paul metropolitan area was chosen for its environmental diversity.	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Residential density 2. Perceptions of neighborhood safety from crime 3. Access to places for physical activity 4. Access to transit  <u>COMPLEX:</u> 1. Social environment  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Community Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>High density areas have twice the odds of increased travel walking as low density areas (OR=1.99; 95%CI 1.29, 3.06), but block size has no similar effect. For the negative binomial model the odds ratio was (1.47, p&lt;0.10).</li> <li>There are small positive correlations between mean and median accelerometer counts of total physical activity with straight-line and network distances to the nearest video store, hardware store, and pharmacy, although not to other destinations (results not shown).</li> <li>Park distance was negatively correlated with accelerometer readings, however while the values were significant they were low (results not shown).</li> <li>Using Spearman's correlations there was significant positive association with accelerometry physical activity and having places to go in walking distance from their home, hills, and nearness to book stores and participant's job (although significant, r values were low with the highest being r=0.13 for closeness to job or school) (results not shown).</li> <li>Regression models reveal high density areas are marginally associated with an increase in total walking and, in some cases, total physical activity for racial minorities, those without college degrees, the less healthy, and the obese (results not shown).</li> <li>There are very few correlations with the 3 measures of total physical activity and these are all negative correlations with measures of retail (accelerometer mean; CE; -0.3488) and commercial uses (accelerometer mean; CE; -0.3473) (p&lt;0.05).</li> <li>Notably absent were any positive correlations with mixed use-apart from a modest one with miscellaneous retail (CE; 0.3505, p&lt;0.05).</li> <li>Travel walking measured both by survey and diary was positively correlated with social land uses (IPAQ; CE; 0.4166; Diary; CE; 0.3379, p&lt;0.05).</li> <li>Leisure walking was negatively correlated with tax exempt land uses (IPAQ CE; -0.4214, p&lt;0.05).</li> </ol> <p><b>Transportation</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Travel walking measured both by survey and diary was positively correlated with sidewalks (length per unit (lpu)/IPAQ; CE; 0.4866; lpu Diary; CE; 0.6224; length/road(l/r) IPAQ; CE; 0.5282; l/r Diary; CE; 0.5945), transit (IPAQ; CE; 0.3716, Diary; CE; 0.4652), litter/graffiti (IPAQ; CE; 0.3325; Diary; CE; 0.5238) and connected street patterns (# access pts./IPAQ; CE; 0.5176, # pts/Diary; CE; 0.5384; intersections IPAQ; CE; 0.4052, int. Diary; CE; 0.5279; 4-way IPAQ; CE; 0.4602; 4-way Diary; CE; 0.5782; nodes IPAQ; CE; 0.4284, nodes Diary; CE; 0.4673; ratio 4-way IPAQ; CE; 0.4164, 4-way Diary; CE; 0.4698) (all p&lt;0.05).</li> <li>Leisure walking was negatively correlated with transit (IPAQ CE; -0.4882; Diary CE; -0.3360), sidewalks (length/road IPAQ CE; -0.3318, p&lt;0.05), street lights and connected street patterns (IPAQ # access points CE; -0.3349; IPAQ connected nodes CE; -0.3643, p&lt;0.05).</li> </ol> <p>(continued next page)</p>	Not Reported

**(Continued from previous study)**

**Availability of Parks, Playgrounds, Trails, and Recreation Centers**

**PHYSICAL ACTIVITY:**

1. Using Spearman's correlations there was significant positive association with accelerometry physical activity and whether people spoke to others in their neighborhood, perceptions of crime, having places to go in walking distance from their home, hills, nearness to book stores and participant's job, and access to bicycle and pedestrian paths (although significant, r values were low with the highest being  $r=0.13$  for closeness to job or school) (data not shown).

**Safety-Interpersonal**

**PHYSICAL ACTIVITY:**

1. Using Spearman's correlations there was significant positive association with accelerometry physical activity and whether people spoke to others in their neighborhood, perceptions of crime, and access to bicycle and pedestrian paths (although significant, r values were low with the highest being  $r=0.13$  for closeness to job or school) (results not shown).

2. Travel walking measured both by survey and diary was positively correlated with sidewalks (length per unit (lpu)/IPAQ; CE; 0.4866; lpu Diary; CE; 0.6224; length/road(l/n) IPAQ; CE; 0.5282; l/r Diary; CE; 0.5945), transit (IPAQ; CE; 0.3716, Diary; CE; 0.4652), litter/graffiti (IPAQ; CE; 0.3325; Diary; CE; 0.5238) and connected street patterns (# access pts./IPAQ; CE; 0.5176, # pts/Diary; CE; 0.5384; intersections IPAQ; CE; 0.4052, int. Diary; CE; 0.5279; 4-way IPAQ; CE; 0.4602; 4-way Diary; CE; 0.5782; nodes IPAQ; CE; 0.4284, nodes Diary; CE; 0.4673; ratio 4-way IPAQ; CE; 0.4164, 4-way Diary; CE; 0.4698) (all  $p<0.05$ ).

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Bungum, Lounsbury (2009) Utah	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  11-13 and 14-18 year olds 3.3% Hispanic, 1.2% American Indian, 1.2% Asian-Pacific Islander, 0.5% African-American, 2.3% Mixed racial composition, 88% White, 3.5% did not report ethnic composition, 15.1 ± 1.5 years old [mean age] (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Access to available street networks for Active Transportation to School (ATS) and intersection density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Handy, Cao (2008); Handy, Cao (2006) California	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, General population, Urban, Suburban (target sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Access to public transit 2. Perceptions of safety (crime) 3. Land-use mix and distance to destinations  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Individuals with higher perceptions of physical activity options (coefficient=0.0395, p=0.083) engaged in neighborhood physical activity more frequently.</li> <li>Changes in perceptions of physical activity options (NPA coefficient=0.0586, p=0.046; walking coefficient=0.103, p&lt;0.0001) were associated with increased neighborhood physical activity and walking.</li> <li>The minimum distance to a health club (coefficient=0.071, p=0.045) had positive effects on changes in biking.</li> </ol> <p><b>Safety-Interpersonal</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Respondents who preferred to be safe (coefficient=-0.102, p=0.008) walked less frequently, suggesting a self-selection effect. After controlling for all effects, distance to potential destinations, both objective (coefficient=-0.144, p&lt;0.0001) and perceived (coefficient=0.268, p&lt;0.0001) remained positively associated with neighborhood walking. Perceived safety (coefficient = -0.071, p=0.029) remained negatively associated with walking and attractiveness (coefficient=0.078, p=0.038) remained positively associated.</li> <li>Residents in suburban neighborhoods on average perceived their neighborhoods as having greater safety (mean=0.16 vs. mean=-0.14, p&lt;0.001) and outdoor spaciousness (mean=0.06 vs. mean=-0.05, p=0.02).</li> <li>Changes in perceptions of current safety (NPA coefficient=0.0672, p=0.025; walking coefficient=0.15, p&lt;0.0001) were associated with increased neighborhood physical activity and walking.</li> </ol> <p><b>Community Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Objective measures for minimum distance to a bank (coefficient=0.082, p=0.035), number of banks within 800m (coefficient=0.091, p=0.005), and number of types of businesses within 1600m (coefficient=0.073, p=0.040) were positively associated with increased walking.</li> <li>Individuals living in mixed-use neighborhoods (coefficient=0.0471, p=0.017) and living farther from health clubs (coefficient=0.0561, p=0.004) had higher neighborhood physical activity.</li> <li>Individuals with higher perceptions of stores within walking distance (coefficient=0.0549, p=0.004) engaged in neighborhood physical activity more frequently.</li> <li>The current number of household maintenance businesses within 1600 m (coefficient=0.090, p=0.012) and the minimum distance to a health club (coefficient=0.071, p=0.045) had positive effects on changes in biking.</li> <li>Changes in perceptions of attractiveness (NPA coefficient=0.151, p&lt;0.001) were associated with increased neighborhood physical activity and walking.</li> <li>A significantly higher share of residents in traditional neighborhoods reported walking to a store at least once in the last 30 days compared to suburban neighborhoods (data not shown). Over 86% of residents in traditional neighborhoods strolled at least once in the last 30 days versus 79% of residents in suburban neighborhoods, with an average frequency of 10.1 strolls compared to 7.7 strolls.</li> </ol>	<ol style="list-style-type: none"> <li>Compared to suburban residents, residents in traditional neighborhoods perceived their neighborhoods on average as having higher opportunities for socializing (mean=0.09 vs. mean=-0.12, p&lt;0.001). Residents in suburban neighborhoods on average perceived their neighborhoods as having greater outdoor spaciousness (mean=0.06 vs. mean=-0.05, p=0.02).</li> <li>Travel-minimizing attitude (coefficient=-0.077, p=0.014), pro-transit attitude (coefficient=-0.121, p&lt;0.0001), and preference for spaciousness (coefficient=-0.111, p=0.002) were all negatively associated with changes in biking, while attractiveness preference (coefficient=0.074, p=0.019) was positively associated.</li> <li>Changes in perceptions of socializing (NPA coefficient=0.0549, p=0.052; walking coefficient=0.14, p&lt;0.0001) were associated with increased neighborhood physical activity and walking.</li> </ol>

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Doyle, Kelly-Schwartz (2006) United States	<b>Participation/Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, Urban, Mean age= 46.8 ( $\pm 20.03$ ), 32% Non-Hispanic White, 28% Non-Hispanic Black, 33% Mexican American  Income/poverty level: mean=2.41, SD=1.81 (5-point scale, ratio of income to poverty level, higher score=higher income) (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood walkability including: number of intersections, connectivity, and number of roads  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>OVERWEIGHT/OBESITY:</u> 1. Individuals who live in counties that are more walkable and have lower crime rates tended to walk more and to have lower body mass indices (BMIs) than people in less walkable and more crime-prone areas, even after controlling for a variety of individual variables related to health (walkability; coefficient= -0.054, standard error=0.028, p<0.05, crime; coefficient= -2.00, standard error=4.20, not significant).  <u>PHYSICAL ACTIVITY:</u> 2. Individuals who live in counties that are more walkable and have lower crime rates tended to walk more than people in less walkable and more crime-prone areas (coefficient=0.053, standard error=0.020, p<0.01 for walkability, crime not significant).  (Note: The walkability scale was measured using street connectivity, block size, and accessible routes.)	1. Among lifelong residents of an area, lesser walkability and more crime were also associated with respondents reporting weight related chronic illness (diabetes and hypertension; walkability coefficient= -0.001, standard error=0.011 and crime coefficient= -0.978, se=1.70) and lower ratings of their own health (self-rated; walkability coefficient= 0.006, standard error= 0.006 and crime coefficient=0.692, se=0.80, physician health; walkability coefficient=0.031, se=0.025, and crime coefficient=-0.910, se=2.80, no significant association).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Heinrich, Lee (2008); Heinrich, Lee (2007) Midwest United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 18-93 years old, 100% Lower income	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood street networks  <b>MULTI-COMPONENT:</b> 1. Access to places to be physically active 2. Neighborhood incivilities  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>OVERWEIGHT/OBESITY:</u> 1. At the aggregated neighborhood level (n=12), 71% of the variance in obesity prevalence was accounted for by accessibility ( $\beta=-1.02$ , $p=0.05$ ), average feature quality ( $\beta=1.05$ , $p=0.09$ ), average number of amenities per resource ( $\beta=-1.19$ , $p=0.03$ ), and average incivilities per resource ( $\beta=0.70$ , $p=0.04$ ), ( $F(4,11)$ 4.32, $p<0.05$ ).  <u>PHYSICAL ACTIVITY:</u> 2. Greater neighborhood street connectivity ( $\beta=0.672$ , $p=0.001$ ) and fewer average incivilities per neighborhood ( $\beta=-0.54$ , $p=0.005$ ) were associated with more days walked per week [ $F=21.8$ (2,11); $p<0.001$ ; $r^2=0.83$ ].  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>OVERWEIGHT/OBESITY:</u> 1. At the aggregated neighborhood level (n=12), 71% of the variance in obesity prevalence was accounted for by accessibility ( $\beta=-1.02$ , $p=0.05$ ), average feature quality ( $\beta=1.05$ , $p=0.09$ ), average number of amenities per resource ( $\beta=-1.19$ , $p=0.03$ ), and average incivilities per resource ( $\beta=0.70$ , $p=0.04$ ), ( $F(4,11)$ 4.32, $p<0.05$ ). 2. Male gender and increased quality of features ( $F(11,407)$ 37.19 and 12.66, $p<0.001$ ) predicted lower BMI among residents. 3. A statistically significant relationship was found between both the number of amenities per resource and obesity prevalence ( $r=-0.61$ , $p=0.04$ ) and amenity quality and obesity prevalence ( $r=-0.60$ , $p=0.04$ ). 4. As resource accessibility increased obesity prevalence decreased ( $r=-0.51$ , $p=0.09$ ).  <u>PHYSICAL ACTIVITY:</u> 5. A greater percent of accessible physical activity resources ( $\beta=0.584$ , $p=0.046$ ) was related to the number of days vigorous physical activity was performed during the past week [ $F=5.17$ (2,11); $p<0.05$ ; $r^2=0.34$ ]. 6. Higher street connectivity ( $\beta=0.902$ , $p=0.001$ ) and fewer physical resources were correlated with meeting moderate physical activity guidelines [ $F=39.18$ (2,11); $p<0.001$ ; $r^2=0.90$ ].	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<p><b>Author</b> King, Toobert (2006)  California, Oregon, Georgia, Rhode Island, Tennessee</p> <p><b>Participation/ Potential Exposure</b> Not Applicable</p> <p><b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults, Elderly, African-American, Lower-income (target population)</p> <p>55 years and older (Stanford); 18-72 years old (Atlanta); 65 years and older (Rhode Island)</p> <p>10.6% minorities (California); 3.3% minorities (Oregon);  97.7% minority (Georgia); 1.9% minority (Rhode Island); 100% minority (Tennessee) (evaluation sample)</p>	<p><b>Representative</b> Not Applicable</p> <p><b>Potential Population Reach</b> Not Applicable  Only cross-sectional data was provided.</p> <p><b>Potential High Risk Popluation Reach</b> Not Applicable</p>	<p><b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.</p> <p>Street connectivity</p> <p><b>MULTI-COMPONENT:</b> 1. Land-use mix and distance to locations 2. Perceptions of neighborhood safety from crime 3. Perceptions of neighborhood traffic safety</p> <p><b>COMPLEX:</b> 1. Perceptions of social support</p>	<p><b>Population Impact</b> Not Applicable</p> <p><b>High-risk Population Impact</b> Not Applicable</p> <p><b>Sustainability</b> Not Applicable</p>	<p><b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Stores within easy walking distance of home were positively associated with minutes per week of walking for errands at the Stanford site (parameter estimate=0.34(93), p=0.048, total <math>r^2=15.6</math>) and minutes per week of leisurely walking at the Atlanta site (parameter estimate=0.25(251), p=0.03, total <math>r^2=6.3</math>). 2. Living in a neighborhood of mostly detached, single-family homes was positively associated with minutes per week of moderate-and/or-vigorous intensity physical activity at the Oregon site (parameter estimate=139.0(121), p=0.02, total <math>r^2=7.7</math>) and negatively associated with minutes per week of leisurely walking at the Rhode Island site (parameter estimate= -1.1(94), p=0.05, total <math>r^2=11.2</math>).</p> <p><b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> <i>CHAMPS baseline and intervention;</i> 1. In Stanford, participants who strongly agreed with "most drivers exceed the posted speed limits while driving in the neighborhood" showed fewer minutes per week of 6-month moderate-intensity or more vigorous physical activity (by approximately 90 minutes or more per week) relative to intervention participants reporting speeding drivers to be less of an issue this interaction effect reached significance (<math>F</math> for interaction term= 3.8, [1,89], p=0.05). 2. In Oregon, the interaction term involving the item that states "the crosswalks in my neighborhood help walkers feel safe crossing busy streets" reached significance [<math>F</math> for interaction term=5.2(1,117, p=0.02)]. Participants who strongly agreed with this item showed more minutes per week of 24-month moderate-intensity or more vigorous physical activity (by approximately 100 minutes/week) relative to intervention participants endorsing lower levels of this item. 3. In Oregon, the neighborhood traffic and crime-related safety subscale reached statistical significance (<math>F</math> for interaction term= 5.9[1,117], p=0.016).</p> <p><b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Seeing stray or loose dogs in one's neighborhood was negatively associated with minutes per week of moderate-intensity or more vigorous physical activity in the Atlanta sample (parameter estimate= -63.2(218), p=0.006, total <math>r^2=6.7</math>) and was negatively associated with hours per week walking for errands at the Memphis site (parameter estimate = -0.27(73), p=0.04, total <math>r^2=26.0</math>). Seeing stray or loose dogs in one's neighborhood was negatively associated with minutes per week of leisurely walking at the Memphis (parameter estimate= -0.45(73), p=0.03, total <math>r^2=13.9</math>) and Atlanta sites (parameter estimate= -0.30(251), p=0.017, total <math>r^2=6.3</math>). <i>CHAMPS baseline and intervention;</i> 2. In Oregon, participants who strongly agreed that their neighborhood was generally safe showed more minutes per week of 24-month moderate-intensity or more vigorous physical activity (by approximately 150 minutes or more per week) relative to intervention participants reporting their neighborhoods as being less safe. 3. In Oregon, the neighborhood traffic and crime-related safety subscale reached statistical significance (<math>F</math> for interaction term= 5.9[1,117], p=0.016). Participants who strongly agreed that "my neighborhood is safe enough that I would let a 10-year old boy walk around my block alone in the daytime" showed more minutes per week of 24-month moderate-intensity or more vigorous physical activity (by approximately 150 minutes per week) relative to intervention participants reporting lower levels of this item. 4. In Atlanta, the interaction involving a variable of perceived neighborhood safety-the presence of crosswalks in the neighborhood that helped walkers feel safe crossing busy streets-reached statistical significance (<math>F</math> for interaction term=3.1(2,197), p=0.048). Participants randomized to the physical activity intervention involving tailored messages plus telephone follow-up who strongly agreed that "the crosswalks in my neighborhood help walkers feel safe crossing busy streets" showed more minutes per week of 12-month moderate-intensity or more vigorous physical activity (by more than 100 minutes/week) relative to intervention participants reporting lower values on this item.</p>	<p>1. Seeing or speaking with others when walking in one's neighborhood was positively associated with minutes per week of moderate-and/or-vigorous intensity physical activity at the Stanford (parameter estimate=70.4(93), p=0.009, <math>r^2=13.3</math>) and Atlanta sites (parameter estimate=59.3(218), p=0.029, total <math>r^2=6.7</math>). While seeing or speaking with others when walking in the neighborhood was positively associated with minutes per week of walking for errands at the Stanford (parameter estimate=0.46(93), p=0.02, total <math>r^2=15.6</math>) and Memphis sites (parameter estimate=0.25(73), p=0.05, total <math>r^2=26.0</math>).</p>	

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Kerr, Frank (2007) Georgia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  5-18 year olds, ~33% non-White, 50% male, 50% with annual household income >\$60,000	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Intersection density and street connectivity  <b>MULTI-COMPONENT:</b> 1. Access to recreation spaces 2. Density and land-use mix  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Participants with more than 2 cars in the household were almost 3 times as likely to walk if they had access to recreation space (95%CI: 1.6-4.2, p&lt;0.001) or lived in an area of high residential density (95%CI: 1.6-5.1, p&lt;0.001).</li> <li>Access to recreation space (OR=2.3, 95%CI: 1.7-3.2, p&lt;0.001) appeared to have a stronger association among males with than females (access to recreation: OR=1.7, 95%CI: 1.2-2.4, p&lt;0.001).</li> <li>Access to recreation spaces (OR=1.4; 95% CI: 1.0-2.0, p&lt;0.05) was significantly related to walking in non-whites.</li> </ol> <p><b>Community Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Residential density and mixed land use were significantly related to walking in both males and females. The relationship between urban form and walking appeared to be stronger in females for the variables land use mix (OR=2.2, 95%CI: 1.5-3.1, p&lt;0.001), and commercial land use (OR=2.1, 95%CI: 1.5-3.1, p&lt;0.001) than males (land use mix: OR=1.5, 95%CI: 1.1-2.1, p&lt;0.01; commercial land use: OR=1.6, 95%CI: 1.1-2.2, p&lt;0.01).</li> <li>High residential density (OR=2.5, 95%CI: 1.6-3.8, p&lt;0.001) appeared to have a stronger association among males with than females (OR=2.3, 95%CI: 1.5-3.5, p&lt;0.001).</li> <li>The following urban form variables were strongly and significantly related to walking in white participants in the expected direction at the p&lt;0.001 level :residential land use (OR=3.2, 95% CI: 2.2-4.5); mixed land use (OR=1.8, 95% CI: 1.4-2.5); at least 1 commercial land use (OR=2.0, 95% CI: 1.5-2.7); at least 1 recreation/open space land use (OR=2.7, 95% CI: 2.0-3.6), all p&lt;0.001.</li> <li>Land use mix (OR=1.7; 95% CI: 1.1-2.7; p&lt;0.05) was significantly related to walking in non-whites</li> <li>In households with 1 car, only land use mix (OR=2, 95%CI: 1.1-3.5, p&lt;0.05) and commercial land use (OR=2, 95%CI: 1.2-3.6, p&lt;0.05) were significantly related to walking.</li> </ol>	1. Participants were significantly more likely to walk if they had fewer than 3 cars; 25% as opposed to 8.9% walked at least once over the 2 days.

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<b>Author</b> Norman, Nutter (2006) California	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. Suburban, 11-18 year olds, 3.6% Asian/Pacific Islander, 6.4% African American, 0.8% Native American, 13.1% Hispanic, 56.8% White, 19.3% Other (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and intersection density  <b>MULTI-COMPONENT:</b> 1. Access to neighborhood parks and size of parks 2. Land-use, residential density, and retail floor area ratio  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. No statistically significant correlations were found between environmental variables and BMI percentile for girls or boys.  <u>PHYSICAL ACTIVITY:</u> 2. For boys, total minutes/day of physical activity was correlated only with retail floor area ratio ( $r=0.12$ , $p<0.05$ ). Retail floor area ratio remained a significant contributor after multiple linear regression ( $r^2=0.23$ , $\beta=0.135$ , $p=0.007$ ).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>OVERWEIGHT/OBESITY:</u> 1. BMI percentile was marginally correlated with number of recreation facilities for boys ( $r=0.08$ , $p<0.11$ ).  <u>PHYSICAL ACTIVITY:</u> 2. For girls, significant correlations were found for total minutes/day of moderate-to-vigorous physical activity with number of recreation facilities ( $r=0.11$ , $p<0.05$ ) and the number of parks ( $r=0.14$ , $p<0.01$ ). The number of recreation facilities (adjusted $r^2=0.25$ , $\beta=0.11$ , $p=0.016$ ) remained significant after multiple linear regression, but the number of parks became non-significant.	Not Reported
<b>Author</b> Roemmich, Epstein (2007) New York	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. 8-12 year olds ( $10.5\pm1.4$ ); 9% Black; 2% Other; 89% White (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <b>MULTI-COMPONENT:</b> 1. Access to parks and recreation areas 2. Neighborhood density and diversity, design  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. For boys, percentage park area (coefficient=0.34) and percentage park and recreation area (coefficient=0.32) were positively correlated to total physical activity ( $p\le0.05$ for all). 2. When combining the boys and girls into a single group, total physical activity was correlated to percentage park area ( $r=0.22$ , $p\le0.04$ ).  <u>SEDENTARY BEHAVIOR:</u> 3. Percentage park area + recreation were inversely correlated with television watching in boys but not girls ( $p\le0.05$ ).  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. For boys, percentage park area (coefficient=0.34) and percentage park and recreation area (coefficient=0.32) were positively correlated to total physical activity ( $p\le0.05$ for all). 2. When combining the boys and girls into a single group, total physical activity was correlated to percentage park area ( $r=0.22$ , $p\le0.04$ ).  <u>SEDENTARY BEHAVIOR:</u> 3. Percentage park area + recreation were inversely correlated with television watching in boys but not girls ( $p\le0.05$ ).	1. Home environment, rather than neighborhood environment, variables were correlated with sedentary behaviors in that the number of televisions in the home was related to television watching time ( $r=0.31$ , $p\le0.01$ ). 2. Percentage park area + recreation were inversely correlated with television watching in boys but not girls ( $p\le0.05$ ).

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Author Samimi, Mohammadian (2008) United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data.  <b>Potential High Risk Popluation Reach</b> Adults, general population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross sectional data provided.  Intersection density, block size, and road density  <b>MULTI-COMPONENT:</b> 1. Population density, land-use diversity, and urbanization  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Using forward selection, negative coefficients for population density (CE: -0.61E-05, SE: 0.75E-06) were found, suggesting that people living in urbanized areas are less likely to be obese ( $p<0.001$ ).  <u>OBESITY:</u> 1. Using backward selection methods, positive correlations for transit-use (marginal effects: 0.092, elasticity: 0.002, $p<0.001$ ) and block size (marginal effects: 0.026, elasticity: 0.006, $p=0.001$ ) were seen for general health. 2. A one percent decrease in the use of automobiles can decrease obesity by 0.4%.	1. Using backward selection methods, positive correlations for transit-use (marginal effects: 0.092, elasticity: 0.002, $p<0.001$ ) and block size (marginal effects: 0.026, elasticity: 0.006, $p=0.001$ ) were seen for general health. 2. A one percent decrease in the use of automobiles can decrease obesity by 0.4%.
Author Zenk, Wilbur (2009) Illinois	<b>Participation/ Potential Exposure</b> Not Applicable  On average, participants completed 38.1% of the prescribed walks, including an average of 44.5% and 28.8% of the prescribed walks for the enhanced intervention group and minimal intervention group, respectively ( $t=-3.487$ , $p=0.001$ ).  <b>High-Risk Population</b> Not Applicable  Only environmental data collected cross-sectional.  40-65 year olds, African-American, Females, Urban and Suburban; 100% Minority (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood connectivity and aesthetics  <b>MULTI-COMPONENT:</b> 1. Perceptions of safety 2. Availability of places for activity  <b>COMPLEX:</b> 1. Tailored walking prescription (2 times per week for first 4 weeks, progress to 4 times per week for 20-30 min) 2. Motivational workshops (enhanced group). 3. Support telephone calls  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Neighborhood walkability, aesthetics, recreational open space, and safety were not statistically significantly associated with adherence to walking prescriptions. There was no evidence that the environment moderated the effect of intervention group on adherence (results not shown).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Neighborhood walkability, aesthetics, recreational open space, and safety were not statistically significantly associated with adherence to walking prescriptions. There was no evidence that the environment moderated the effect of intervention group on adherence (results not shown).  (Note: The measure representing walkability score was a composite for multiple strategy with variables related to access of facilities and open spaces, aesthetics, safety, and connectivity.)	Not Reported

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<b>Author</b> Suminski, Poston (2005)  Midwestern United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided. Adults, 89.7% White, 1.7% Hispanic, 1.5% African American, and 1.3% Asian American (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided. Aesthetic quality of the environment and integrity of sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood traffic safety 2. Access to parks 3. Perceptions of neighborhood safety from crime 4. Accessible destinations in the neighborhood  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Women were 5.7 times more likely to walk for transportation if they indicated having an average number of available places in and around their neighborhood to which they could walk (95%CI 1.63-19.73; p<0.01). 2. Women with an average number of neighborhood destinations were more likely to walk for transportation in the neighborhood (OR=5.7, 95%CI=1.63-19.73) than women with a below average number of neighborhood destinations (p<0.01).  <b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Women were 4.5 times more likely to walk for exercise in their neighborhood if neighborhood safety was average compared to below average (95%CI 1.01-20.72; p<0.05). 2. Women were more likely (threefold) to walk their dog if neighborhood safety was average versus below average (95% CI 1.01-11.08; p<0.05).  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Women were 4.5 times more likely to walk for exercise in their neighborhood if neighborhood safety was average compared to below average (95%CI 1.01-20.72; p<0.05). 2. Women were more likely (threefold) to walk their dog if neighborhood safety was average versus below average (95% CI 1.01-11.08; p<0.05).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Women were 5.7 times more likely to walk for transportation if they indicated having an average number of available places (including shops, parks, et cetera) in and around their neighborhood to which they could walk (95%CI 1.63-19.73; p<0.01).  (Note: Neighborhood "safety" was a composite score using traffic volume and speed, lighting, and crime. The "functional" feature of the neighborhood was represented by three items relted to the construction/integrity of neighborhood sidewalks and streets.)	Not Reported

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<b>Author</b> Kerr, Rosenberg (2006) Washington	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Parents: 20-65 years old, 83.3% White, 16.7% Minority  Children: 45.9% were >12 years old (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and perceptions of neighborhood aesthetics  <u>MULTI-COMPONENT:</u> 1. Perceptions of neighborhood safety (crime) 2. Perceptions of neighborhood traffic 3. Perceived access to local shops and facilities 4. Perceived access to recreational facilities  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Perceived access to local stores and biking or walking facilities accounted for some of the effect of walkability on active commuting (OR=2.0, 95% CI=1.03-4.00, p&lt;0.05).</li> </ol> <p><b>Safety-Traffic</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Parents of children aged 12-18 had significantly fewer concerns about active commuting (p=0.004) than parents of children 5-11 years old.</li> <li>Parent concerns, neighborhood aesthetics, and stores within a 20-min walk were independently associated with active commuting (parent aesthetics; OR= 5.2, 95%CI 2.71-9.96, p&lt;0.05, aesthetics; OR=2.5, 95% CI=1.33-4.80, p&lt;0.05, store distance; OR= 3.2, 95%CI= 1.68-6.01, p&lt;0.05).</li> <li>A parental concerns scale was most strongly associated with child active commuting (OR=5.2, 95% CI= 2.71-9.96, p&lt;0.05).</li> <li>Parent concerns and neighborhood aesthetics were independently associated with active commuting (parent concerns; OR=4.9, 95% CI=2.54-9.40, p&lt;0.05, aesthetics; OR=2.4, 95% CI=1.23-4.56, p&lt;0.05).</li> </ol> <p><b>Safety-Interpersonal</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Parents of children aged 12-18 had significantly fewer concerns about active commuting (p=0.004) than parents of children 5-11 years old.</li> <li>Parent concerns, neighborhood aesthetics, and stores within a 20-min walk were independently associated with active commuting (parent aesthetics; OR= 5.2, 95% CI 2.71-9.96, p&lt;0.05, aesthetics; OR=2.5, 95% CI=1.33-4.80, p&lt;0.05, store distance; OR= 3.2, 95%CI= 1.68-6.01, p&lt;0.05).</li> <li>A parental concerns scale was most strongly associated with child active commuting (OR=5.2, 95% CI= 2.71-9.96, p&lt;0.05).</li> <li>Parent concerns and neighborhood aesthetics were independently associated with active commuting (parent concerns; OR=4.9, 95% CI=2.54-9.40, p&lt;0.05, aesthetics; OR=2.4, 95% CI=1.23-4.56, p&lt;0.05).</li> </ol> <p><b>Community Design</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Parent concerns, neighborhoods aesthetics, and stores within a 20-min walk were independently associated with active commuting (parent aesthetics; OR= 5.2, 95%CI =2.71-9.96, p&lt;0.05, aesthetics; OR=2.5, 95% CI=1.33-4.80, p&lt;0.05, store distance; OR= 3.2, 95%CI= 1.68-6.01, p&lt;0.05).</li> <li>Perceived access to local stores and biking or walking facilities accounted for some of the effect of walkability on active commuting (OR=2.0, 95% CI=1.03-4.00, p&lt;0.05).</li> </ol> <p>(Note: Parental concerns were based on a scale that included both interpersonal and traffic fears.)</p>	1. Parent concerns about their child walking or biking to school were significantly inversely associated with residential density and neighborhood-level walkability (OR= 2.0, 95%CI= 1.08-3.84, p<0.05 and OR=1.7, 95%CI=1.00-2.85, p<0.05, respectively).

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Tilt, Unfried (2007) Washington	<b>Participation/ Potential Exposure</b> Not Applicable <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided General population (target sample)	<b>Representative</b> Not Applicable <b>Potential Population Reach</b> Not Applicable <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable Only cross-sectional data provided Street connectivity and aesthetics <b>MULTI-COMPONENT:</b> 1. Access and distance to multiple destinations (land-use mix) <b>Feasibility</b> Not Applicable <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable <b>High-risk Population Impact</b> Not Applicable <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Having a destination within walking distance had a significant positive relation with walking trips per month, BMI was not significantly correlated with walking trips per month ( $r=-.08198$ , $p=.0701$ ). <u>PHYSICAL ACTIVITY:</u> 2. There was a strong association between the importance of destination index score (access to a variety of destinations) and walking trips per month ( $r^2=.341410$ , $p<.0001$ ; regression coefficient for importance of destinations index = $0.0197742$ , $p<0.0001$ ).	1. Areas with low NDVI (vegetated/green) were associated with overestimation of the number of destinations with walking distance ( $F1, 499=11.009$ , $p=.001$ ).
<b>Author</b> Liu, Wilson (2007) Indiana	<b>Participation/ Potential Exposure</b> Not Applicable <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided 3-18 year olds, 77.2% Minority (evaluation sample)	<b>Representative</b> Not Applicable <b>Potential Population Reach</b> Not Applicable <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable Only cross-sectional data provided Presence of neighborhood vegetation <b>MULTI-COMPONENT:</b> 1. Access to various types of food retail locations <b>Feasibility</b> Not Applicable <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable <b>High-risk Population Impact</b> Not Applicable <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. With regard to findings for the Lower Population Density Townships, distance to the nearest supermarket (adjusted odds 1.038 standard error 0.019; $p=0.03$ ) was positively associated with risk of overweight.	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> King, Castro (2000) United States	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Female, Adults, 40 years of age and older, 26.4% White, 25.6% Black, 25.3% American Indian/ Native Alaska, 22.7% Hispanic , 60% reported annual household income < \$35,000 (evaluation sample)  White, adult, female (comparison sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Presence and absence of sidewalks and neighborhood aesthetics  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety from crime and unattended dogs  <b>COMPLEX:</b> 1. Social factors  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Females reporting the presence of unattended dogs were more likely to be physically active (OR=1.20, 95% CI=1.01-1.42, p<0.05). 2. Through regression analyses the presence of unattended dogs in one's neighborhood (OR=1.51, 95% CI=1.06-2.15, p<0.05) achieved statistical significance in African-Americans (n=646) and was positively associated with physical activity. 	1. Females reporting frequent observations of others exercising in their neighborhood were associated with more physical activity (OR=1.26, 95%CI=1.06-1.50, p<0.01). 2. Females reporting that they were not in good health (OR=0.93, 95% CI=0.86-0.99, p<0.05) were less likely to be physically active. 3. (n=653) By using regression analyses reporting that an individual was not in good health (OR=0.83, 95%CI=0.70-0.97, p<0.05) was negatively associated with physical activity achieved statistical significance for American Indian-Alaskan Native. 4. Through regression analyses the presence of hills in the neighborhood (OR=1.48, 95% CI=1.04-2.10, p<0.05) was positively associated with physical activity with White women and physical activity. 5. Females reporting the presence of hills (OR=1.46, 95% CI=1.22-1.75, p<.001) in their neighborhoods were more likely to be physically active. 6. The presence of hills in one's neighborhood (OR=1.89, 95% CI=1.21-2.93, p<0.01) and discouragement from others about exercise (OR=1.25, 95% CI=1.03-1.51) were positively associated with physical activity in the Hispanic subgroup. 7. Through regression analyses frequently observing others exercising in one's neighborhood (OR=2.08, 95% CI=1.45-2.98, p<0.001) was positively associated with physical activity in African-Americans.

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Sallis, Saelens (2009) Washington and Maryland	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  Adults, General population, 20-65 years (age range), 26% Minority (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Street connectivity and intersection density  <b>MULTI-COMPONENT:</b> 1. Net residential density and mixed land use  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. The walkability main effect was significant ( $p=0.007$ ), with the odds of being overweight or obese 35% higher for participants living in low vs. high-walkability neighborhoods ( $OR=1.35$ , 95% CI: 1.09-1.69).  <u>PHYSICAL ACTIVITY:</u> 2. Overall, the significant walkability main effect indicated a higher average of number of minutes per week of walking for transportation in high-walkability neighborhoods 44.3 min per week, compared to low-walkability neighborhoods 12.8 min per week (walkability main effect $p<0.0001$ ). 3. Walking for transportation was significantly higher in high-walkability neighborhoods compared to low-walkability neighborhoods for both high- and low-income neighborhoods; however, the differential was larger in high-income neighborhoods at 5.1 minutes compared to low-income neighborhoods at 2.3 minutes (walkability-by-income interaction $p=0.027$ ). 4. The leisure walking main effect was significant ( $p=0.012$ ), with people living in high-walkability neighborhoods averaging 18.5 minutes per week of leisure walking compared to 14.2 minutes per week in low-walkability neighborhoods. 5. On average, participants in high-walkability neighborhoods had 5.8 more minutes per day of objectively measured MVPA than those in low-walkability (main effect $p=0.0002$ ). 6. When the "reasons for moving here" score was added to control for preferences related to "activity-friendly" environments, the walkability main effect was still significant ( $p<0.0001$ ). For minutes of leisure walking, the walkability main effect was no longer significant ( $p=0.36$ ).  (Note: The walkability index was both street (street connectivity) and community (land use mix and residential density) design variables.)	Not Reported

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Greenwalk, Boarnet (2001) Oregon	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided. General Population	<b>Representative</b> Not Applicable <b>Potential Population Reach</b> Not Applicable <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable Only cross-sectional data provided. Street griddedness and sidewalk continuity  <b>MULTI-COMPONENT:</b> 1. Land-use mix and population density <b>Feasibility</b> Not Applicable <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable <b>High-risk Population Impact</b> Not Applicable <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Participants with a higher BMI reported fewer convenient physical activity facilities (Pearson $r=-0.11$ , $p<0.05$ ).  <u>PHYSICAL ACTIVITY:</u> 2. In males, moderate intensity activity was related to more satisfaction with neighborhood services (semi-partial correlate; 0.15, $p\leq0.05$ ). In females, more moderate intensity physical activity was related to better access to shopping in local stores (semi-partial correlate; 0.16, $p\leq0.05$ ). 3. In males, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate; 0.11, $p\leq0.05$ ). In females, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate; 0.14, $p\leq0.05$ ) and supportive worksite environment was related to more high intensity activity (semi-partial correlate; 0.12, $p\leq0.05$ ).  <u>SEDENTARY ACTIVITY:</u> 4. In males, the amount of sitting was related to higher perceived criminality in the neighborhood (semi-partial correlate; -0.22, $p\leq0.01$ ), longer distances to shops and businesses (land use mix, diversity) (semi-partial correlate; 0.14, $p\leq0.05$ ), and more convenience of shopping in local stores (land use mix, access to local shopping) (semi-partial correlate; 0.15, $p\leq0.01$ ).  (Note: The Pedestrian Environment Factor or PEF scores consists of presence of crosswalks and sidewalks, and street connectivity.)	Not Reported
<b>Author</b> Catlin, Simoes (2003) Missouri	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided. Adults, 71% White, 27.3% Black, 1.8% other ethnicity, 35.2% overweight, 23.9% obese, 52% female (sample)	<b>Representative</b> Not Applicable <b>Potential Population Reach</b> Not Applicable <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable Only cross-sectional data provided. Presence and absence of neighborhood sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceived criminal safety 2. Perceived traffic safety 3. Access to facilities for physical activity (indoor and outdoor, trails, parks) <b>Feasibility</b> Not Applicable <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable <b>High-risk Population Impact</b> Not Applicable <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>OVERWEIGHT/OBESITY:</u> 1. The absence of public outdoor exercise facilities was significantly associated with overweight (OR=1.21; 95% CI: 1.00-1.45).  <b>Safety-Interpersonal</b> <u>OVERWEIGHT/OBESITY:</u> 1. Individuals who perceived their neighborhood or community to have 1, 2, or 3 negative characteristics were 14% (95%CI: 0.93-1.4), 23% (95%CI: 0.91-1.66), and 56% (95%CI: 3.06-2.28) more likely to be overweight, respectively, than individuals who perceived their neighborhood to be safe and pleasant.  <b>Safety-Traffic</b> <u>OVERWEIGHT/OBESITY:</u> 1. Individuals who perceived their neighborhood or community to have 1, 2, or 3 negative characteristics were 14% (95%CI: 0.93-1.4), 23% (95%CI: 0.91-1.66), and 56% (95%CI: 3.06-2.28) more likely to be overweight, respectively, than individuals who perceived their neighborhood to be safe and pleasant. 2. Employed persons with 1 or 2 negative community perceptions were 1.45 times more likely to be overweight (95%CI: 1.07-1.96 and 95%CI: 0.92-2.26, respectively). Those with 3 negative perceptions were 2.83 times more likely to be overweight (95%CI: 1.53-5.24).  (Note: A four level composite variable was computed for perceived community factors, with zero representing an environment that is crime safe, traffic safe, and pleasant.)	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Kligerman, Sallis (2007) California	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  14-18 year olds (mean age 16.2 years), 61.2% Mexican-American (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  <b>MULTI-COMPONENT:</b> 1. Land-use mix, residential density, retail floor area ratio, and number of schools 2. Access to parks and recreational facilities  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. None of the recreation facilities variables were related to moderate-to-vigorous physical activity (data not shown).  <b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. All correlations between environmental variables and BMI were low and non-significant (data not shown).  <u>PHYSICAL ACTIVITY:</u> 2. Land-use mix ( $r=0.285$ , $p<0.004$ ) and the walkability index ( $r=0.168$ , $p<0.098$ ) for the 0.5-mile buffer were the only measures to yield significant or marginal bivariate correlations with moderate-to-vigorous physical activity. 3. In a linear regression, the walkability index was related to minutes of moderate to vigorous physical activity within 0.5 mile of homes, explaining approximately 4% of variance.  (Note: The walkability index was comprised of measures examining street and community characteristics.)	Not Reported
<b>Author</b> Troped, Saunders (2003) Massachusetts	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  General population  18 years and older, $51.2 \pm 16.8$ years of age (average), 93.6% White (evaluation sample)  Arlington is a Boston suburb with a mostly well educated (40.4% college degree), Caucasian population (93.9%). The town has a substantial older population with about 18% of residents aged 65 years and older.	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Presence of sidewalks and street connectivity  <b>MULTI-COMPONENT:</b> 1. Perceptions of heavy traffic in the neighborhood 2. Land-use mix  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Participants responding "yes" to having enjoyable scenery in the neighborhood (152.7[189.0], $p < 0.005$ ) had higher levels of transportation physical activity. 2. Distance to a community paved rail-trail showed a negative association with transportation physical activity (coefficient= -54.65, $p \leq 0.05$ ). 3. Enjoyable scenery did not show statistically significant independent associations with recreational physical activity. 4. Enjoyable scenery (coefficient; 48.94, $p=0.03$ ) was positively associated with minutes of transportation physical activity.  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Participants who reported heavy traffic in their neighborhood also reported a higher level of participation in recreational physical activity (heavy traffic = 151.9[168.1], respectively both $p \leq 0.01$ ). 2. Traffic did not show statistically significant independent association with recreational physical activity.	1. Participants responding "yes" to seeing people exercising (mean[sd]: 148.1[185.6], $p < 0.005$ ), having enjoyable scenery in the neighborhood (152.7[189.0], $p < 0.005$ ), or sidewalks (151.1[185.2], $p < 0.05$ ) had higher levels of transportation physical activity. 2. In one final model only self-efficacy and self-report of enjoyable neighborhood scenery (coefficient; 59.63, $p \leq 0.01$ ) remained statistically significant.

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Bell, Wilson (2008) Indiana	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  3-16 year olds, 64% Minority, 58% Black, 83% Lower income (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Green space near the residence  <u>MULTI-COMPONENT:</u> 1. Residential density  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. A higher greenness (NDVI) was associated with lower Time 2 BMI ( $\beta = -0.07$ SD, 95% CI=-0.11, -0.03, $p<0.01$ ) Residential density was not significantly associated with BMI at Time 2 when modeled without the greenness (NDVI).  2. Residential density was marginally associated with lower Time 2 BMI ( $\beta = -0.01$ , 95%CI; -0.01, 0.01, $p<0.06$ ) when greenness and density were modeled together.	1. Relationships between greenness (NDVI) and Time 2 BMI were significantly modified by insurance status (F-test, $p<0.01$ ), with results of greater magnitude for children and youth with private/other insurance ( $\beta = -0.13$ , SD, 95% CI=-0.21, -0.04, $p<0.01$ ) versus Medicaid ( $\beta = -0.06$ SD, 95% CI=-0.10, -0.01, $p=0.01$ ; not shown in tables).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Cohen, Ashwood (2006) Washington DC, Maryland, South Carolina	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  11-13 year old females	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence of shaded areas  <u>MULTI-COMPONENT:</u> 1. Access to parks and amenities 2. Presence of street lights 3. Distance to neighborhood parks  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>For the average girl having 3.5 parks within a 1-mile radius of home, accounted for an additional 68 minutes of non-school 3.0 MET MVPA and an additional 36.5 minutes of non-school 4.6 MET MVPA per 6 days.</li> <li>For every park, regardless of type, within a half mile radius from home there was an increase in non-school MVPA by 33 minutes for 3.0 METs (coefficient estimate=0.02, p&lt;0.005) and 17.2 minutes for 4.6 METs (coefficient estimate=0.03, p=0.04) per 6 days. Each additional park past the half-mile increased non-school MVPA by 12 minutes for 3.0 Mets (coefficient estimate=0.01, p&lt;0.009) and 6.7 minutes for 4.6 Mets (coefficient estimate=0.01, p=0.09) per 6 days.</li> <li>For the linear model, having either a neighborhood or community park within a half-mile of home was associated with 45.5 more 3.0 MET minutes (coefficient estimate=0.03, p&lt;0.05) and 24.2 more 4.6 MET minutes (coefficient estimate=0.04; p&lt;0.05) per 6 days. In the half-mile to 1-mile distance, MVPA increased by 29.6, 3.0 MET minutes (coefficient estimate=0.02, p&lt;0.05) and 18.6, 4.6 MET minutes (coefficient estimate=0.03; p&lt;0.05) per 6 days.</li> <li>Additional non-school MVPA minutes increased when girls had neighborhood/community parks (3.0 MET 42 min, p&lt;0.05; 4.6 MET 22 min, p&lt;0.05), mini-parks (3.0 MET 92 min, p&lt;0.05; 4.6 MET 40 min; p&lt;0.10), natural resource areas (3.0 MET 36 min, p&lt;0.05), walking paths (3.0 MET 59 min, p&lt;0.05; 4.6 MET 13 min; p&lt;0.05), and running tracks (3.0 MET 208 min, p&lt;0.05; 4.6 MET 82 min; p&lt;0.05) within a half mile of their homes.</li> <li>Playgrounds (39 min for 3.0 MET; 28 min for 4.6 MET, p&lt;0.05 for both), shaded areas (20 min for 3.0 MET; 14 min for 4.6 MET, p&lt;0.10 for both), drinking fountains (24 min for 3.0 MET, p&lt;0.05; 14 min for 4.6 MET, p&lt;0.10), streetlights (28 min for 3.0 MET; 18 min for 4.6 MET, p&lt;0.05 for both), basketball courts (37 min for 3.0 MET, p&lt;0.10; 30 min for 4.6 MET, p&lt;0.05), multipurpose rooms (13 min for 3.0 MET and 4.6 MET, p&lt;0.05 for both), park offices (14 min for 3.0 MET, p&lt;0.10), an ice rink (28 min for 3.0 MET, p&lt;0.10), a running track (208 min for 3.0 MET, p&lt;0.05), a swimming area (32 min for 4.6 MET, p&lt;0.05), and an amphitheater (16 min for 3.0 MET, p&lt;0.10) were associated with increased MVPA.</li> <li>Lawn games (-161 min for 3.0 MET, p&lt;0.05; -55 min for 4.6 MET, p&lt;0.10) and skateboard areas (-94 min for 3.0 MET; -48 min for 4.6 MET, p&lt;0.05 for both) were negatively associated with increased MVPA.</li> <li>Special use parks were negatively associated with both 3.0 MET and 4.6 MET MVPA (each p&lt;0.05).</li> </ol> <p><b>Safety-Interpersonal</b></p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Playgrounds (39 min for 3.0 MET; 28 min for 4.6 MET, p&lt;0.05 for both), shaded areas (20 min for 3.0 MET; 14 min for 4.6 MET, p&lt;0.10 for both), drinking fountains (24 min for 3.0 MET, p&lt;0.05; 14 min for 4.6 MET, p&lt;0.10), streetlights (28 min for 3.0 MET; 18 min for 4.6 MET, p&lt;0.05 for both), basketball courts (37 min for 3.0 MET, p&lt;0.10; 30 min for 4.6 MET, p&lt;0.05), multipurpose rooms (13 min for 3.0 MET and 4.6 MET, p&lt;0.05 for both), park offices (14 min for 3.0 MET, p&lt;0.10), an ice rink (28 min for 3.0 MET, p&lt;0.10), a running track (208 min for 3.0 MET, p&lt;0.05), a swimming area (32 min for 4.6 MET, p&lt;0.05), and an amphitheater (16 min for 3.0 MET, p&lt;0.10) were associated with increased MVPA. (continued next page)</li> </ol>	Not Reported

**(Continued from previous study)**

					<p><b>Community Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"><li>For the average girl having 3.5 parks within a 1-mile radius of home, accounted for an additional 68 minutes of non-school 3.0 MET MVPA and an additional 36.5 minutes of non-school 4.6 MET MVPA per 6 days.</li><li>For every park, regardless of type, within a half mile radius from home there was an increase in non-school MVPA by 33 minutes for 3.0 METs (coefficient estimate=0.02, p&lt;0.005) and 17.2 minutes for 4.6 METs (coefficient estimate=0.03, p=0.04) per 6 days. Each additional park past the half-mile increased non-school MVPA by 12 minutes for 3.0 Mets (coefficient estimate=0.01, p&lt;0.009) and 6.7 minutes for 4.6 Mets (coefficient estimate=0.01, p=0.09) per 6 days.</li><li>For the linear model, having either a neighborhood or community park within a half-mile of home was associated with 45.5 more 3.0 MET minutes (coefficient estimate=0.03, p&lt;0.05) and 24.2 more 4.6 MET minutes (coefficient estimate=0.04; p&lt;0.05) per 6 days. In the half-mile to 1-mile distance, MVPA increased by 29.6, 3.0 MET minutes (coefficient estimate=0.02, p&lt;0.05) and 18.6, 4.6 MET minutes (coefficient estimate=0.03; p&lt;0.05) per 6 days.</li><li>Additional non-school MVPA minutes increased when girls had neighborhood/community parks (3.0 MET 42 min, p&lt;0.05; 4.6 MET 22 min, p&lt;0.05), mini-parks (3.0 MET 92 min, p&lt;0.05; 4.6 MET 40 min; p&lt;0.10), natural resource areas (3.0 MET 36 min, p&lt;0.05), walking paths (3.0 MET 59 min, p&lt;0.05; 4.6 MET 13 min; p&lt;0.05), and running tracks (3.0 MET 208 min, p&lt;0.05; 4.6 MET 82 min; p&lt;0.05) within a half mile of their homes.</li></ol> <p>(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories. Metabolic equivalent-weighted moderate-to vigorous physical activity [MET MVPA] was calculated for the hours outside of school time using two different cut points: activity levels <math>\geq 3.0</math> metabolic equivalents and <math>\geq 4.6</math> metabolic equivalents, the latter indicating activity at the intensity of a brisk walk or higher.)</p>	
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<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Lindsey, Han (2006) Indiana	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Populuation</b> Not Applicable  Only cross-sectional data provided.  General population, 58% Male, 83% White, 14% African-American, 3% Other (evaluation population)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and greenness in the neighborhood  <b>MULTI-COMPONENT:</b> 1. Population density and neighborhood parking lot coverage  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <b>PHYSICAL ACTIVITY:</b> 1. Daily trail traffic is positively and significantly correlated with increases in population density (parameter estimate=0.0002, t=18.69, p<0.0001) and the percentage of trail neighborhood in commercial use (parameter estimate=0.0465, t=23.56, p<0.0001). 2. An increase in population density in trail neighborhoods of 100 persons per square kilometer for example, is associated with an increase in trail traffic of nearly 2%. 3. Every 1% increase in the area of parking lots is correlated with an increase in trail traffic of less than one-tenth of a percent.	1. Daily trail traffic ranged from 52 to 6155. For the year, the mean daily traffic was 87% higher on weekend days (2553) than on weekdays (1360).  2. Every 1% increase in the area of parking lots is correlated with an increase in traffic of less than one-tenth of a percent.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>International</b>						
<b>Author</b> Jenum, Lorentzen (2009), Lorentzen, Ommundsen (2009), Lorentzen, Ommundsen (2007), Jenum, Lorentzen (2003), Jenum, Anderssen (2006)  Norway	<p><b>Participation/ Potential Exposure</b> Participation = Not Reported  Exposure = High  All 6,700 individuals living in Romsås were exposed to the environment changes. A higher proportion of Westerners, people with high BMI, physically active persons at baseline, women and persons aged 50+ years participated more in some intervention components.</p> <p><b>High-Risk Population</b> Not Reported  Adults, Urban, Lower-income</p>	<p><b>Representative</b> Not Reported</p> <p><b>Potential Population Reach</b> More Evidence Needed</p> <p>Participation = Not reported</p> <p>Representativeness = Not reported</p> <p><b>Potential High Risk Population Reach</b> More Evidence Needed</p> <p>High-risk population = Not reported</p> <p>Representativeness = Not reported</p>	<p><b>Intervention Components</b> Multi-Component</p> <p>"Romsås in Motion"- community environment changes to increase the accessibility of physical activity arenas in the community, including labeling of walking paths, improved street lighting, snow clearing and gritting of pavements and walking paths during the winter season.</p> <p><b>MULTI-COMPONENT:</b> 1. "Walk the stairs" posters placed at block entrances and in public buildings to encourage people to use the stairs instead of escalators and elevators.</p> <p><b>COMPLEX:</b> 1. Weekly sessions of outdoor walking groups, indoor aerobic exercise programs and a test of physical fitness twice a year. 2. Physical activity, health and program promotion through local TV, radio, newspaper, posters, brochures, mailing and lectures</p> <p><b>Feasibility</b> Intervention Feasibility = Low Policy Components Feasibility = High</p> <p>Intervention activities: A local resource group consisting of lay people in the community was established, and helped to plan and implement the intervention.</p> <p>Implementation: Local political and lay leaders and health and welfare workers assisted in the planning and implementation of the program. The intervention was mainly tailored towards physically inactive groups with low psychosocial readiness for behavior change. Exercise leaders from the community led the weekly physical activity sessions.</p> <p>Specialized expertise: Local political leaders, health and welfare workers, and exercise leaders</p> <p>Resources needed: Media resources, "Walk the Stairs" posters, exercise leaders, committed political and lay leaders, materials for labeling the walking paths and improving street lighting, personnel to remove snow and grit from the pavements, materials for recruitment mailings</p> <p>Costs: Not reported</p> <p><b>Implementation Complexity</b> High</p> <p>Intervention components = Complex</p> <p>Feasibility = High</p>	<p><b>Population Impact</b> More Evidence Needed</p> <p>Effectiveness = Effective for overweight/obesity and physical activity in the study population</p> <p>Potential population reach = More evidence needed</p> <p>Implementation complexity = High</p> <p><b>High-risk Population Impact</b> More Evidence Needed</p> <p>Effectiveness = Net positive</p> <p>Potential high-risk population reach = More evidence needed</p> <p>Implementation complexity = High</p> <p><b>Sustainability</b> Yes</p> <p>The project was incorporated into the strategic plans of the community. More than 5 years after the project period the physical activity groups still meet. The group now consists of both original study participants and newcomers. The project has also led directly or indirectly to several new initiatives in the nearby districts to promote physical activity.</p>	Not Reported	<p>1. A significant interaction effect was found for district/sex and district/age. In men, a net reduction of 1.2 kg (95% CI: 0.6-1.9) was found, while there was no net reduction in weight among women. In participants aged &gt;50 years, the net reduction was 1.0 kg (95% CI: 0.4-1.6; p= 0.001) and in non-Westerners 1.0 kg (95% CI: 0.1-1.9; p=0.04).</p> <p>2. The net proportion quitting smoking was 2.9% (95% CI: 0.1-5.7; p=0.043) in favor of the intervention district, with the largest net change in women aged &lt;50 years (6.8%; p=0.012).</p>

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Giles-Corti, Knuiman (2008);Tudor- Locke, Giles-Corti (2008); Giles- Corti, Timperio (2006); Giles-Corti, Knuiman (2007) Australia	<b>Participation/ Potential Exposure</b> Participation = Not Reported Exposure = Not Reported Anyone buying or developing new property would be exposed to the new urban design codes.  <b>High-Risk Population</b> Not Reported Adults, General population, 25% of households income was <\$50,000	<b>Representative</b> Not Reported <b>Potential Population Reach</b> More Evidence Needed Participation = Not reported Representativeness = Not reported  <b>Potential High Risk Population Reach</b> More Evidence Needed High-risk population = Not reported Representativeness = Not reported	<b>Intervention Components</b> Simple State implemented neighborhood housing development (RESIDE-The Residential Environments Project) with a pedestrian/bicycling friendly street design relating to proximity, access to, and use of local businesses  <u>COMPLEX:</u> 1. Neighborhood self-selection  <b>Feasibility</b> Intervention Feasibility = Low Policy Feasibility = High Intervention activities: In 1998, the Western Australian state government began implementing a new subdivision design code (the Liveable Neighborhood Guidelines), based on new urbanism principles. Housing developments were built following these codes. Specialized expertise: Not reported Resources needed: Supplies, labor, and funding for housing development construction Costs: Not reported  <b>Implementation Complexity</b> Low Intervention components = Simple Feasibility = High	<b>Population Impact</b> More Evidence Needed Effectiveness = More evidence needed Potential population reach = More evidence needed Implementation complexity = Simple  <b>High-risk Population Impact</b> More Evidence Needed Effectiveness for high-risk populations = Not reported Potential high-risk population reach = More evidence needed Implementation complexity = Simple  <b>Sustainability</b> Not Reported	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Those moving into conventional design (CD) neighborhoods remained significantly more likely than those moving into hybrid design (HD) neighborhoods to meet the threshold for both sufficient walking and physical activity (OR 1.41; 95% CI; 1.07-1.86; OR; 1.31 95% CI 1.02-1.69, respectively). 2. The odds of achieving sufficient physical activity were also higher for those moving into liveable design (LD) neighborhoods compared with HDs (OR; 1.32, 95% CI; 1.00-1.75), although for walking, the adjusted difference did not reach statistical significance. 3. There were no differences in perceived access to destinations in their baseline neighborhoods among participants moving into different types of developments. 4. Overall females appeared to be taking more steps per day after moving into neighborhoods affected by new urban design codes (Spearman's r=0.551; $\Delta T1-T2= 34 \pm 3.071$ ). 5. The relative change in steps/day was not significant across age groups in males ( $\chi^2=17.35$ , p=0.137) but was in females ( $\chi^2=50.00$ , p<0.001). (Note: Not all p-values were provided. Conventional Design = CD, Livable Design = LD, and Hybrid Design= HD; Liveable neighborhoods were designed using New Urbanism principles, which seeks to maximized design toward mixed-use, biking/cycling, and access to services like transit. Conventional designs are the complete opposite of liveable with one type of land-use, disconnected street access, and shopping store chain centers. Hybrid neighborhoods are a combination of LD and CD.)	1. Participants moving into CDs remained significantly less likely than those moving into LDs to rate as important a desire to be nearby shops and services (OR; 0.65; 95% CI; 0.52-0.82); ease of walking (OR; 0.76; 95% CI; 0.60-0.95); sense of community (OR; 0.64; 95% CI; 0.51-0.81); the presence of footpaths (OR 0.65; 95% CI; 0.52-0.82); closeness to parks (OR; 0.69; 95% CI; 0.55-0.86); closeness to the beach (OR 0.59; 95% CI; 0.47-0.73); closeness to transit (OR 0.59; 95% CI; 0.47-0.73); and ease of cycling (OR 0.69; 95% CI 0.54-0.87). 2. The only differences in perceived importance between those moving into HDs compared with LDs related to the development's sense of community (OR 0.73; 95% CI 0.55-0.97); access to a variety of parks (OR 0.66; 95% CI 0.50-0.87); and access to beach (OR 0.30; 95% CI; 0.22-0.41).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Humpel, Owen (2004); Humpel, Marshall (2004) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  General, Population (target sample)  Ages ranged from 18 to 71 years of age (mean age 43 years), 49.8% women (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Perceptions of neighborhood aesthetics  <u>MULTI-COMPONENT:</u> 1. Perceptions of traffic safety 2. Access to public transit 3. Accessibility of paths, parks, and other walking opportunities 4. Access to neighborhood shops  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Safety-Traffic</b>  <b>PHYSICAL ACTIVITY</b></p> <ol style="list-style-type: none"> <li>Men who perceived traffic as being less of a problem were found to be less likely to have increased their walking across all three outcome variables (any increase in walking; OR=0.40, 95%CI=0.22-0.72, p&lt;0.01, increase of 30 minutes; OR=0.29, 95%CI=0.15-0.54, p&lt;0.001, increase of 60 minutes; OR=0.39, 95%CI= 0.21-0.73, p&lt;0.01).</li> <li>Increased perceptions that traffic was not a problem were significantly associated with women being 1.76 (95%CI=1.01-3.05, p&lt;0.05) times more likely to have increased their walking for 30 minutes or more.</li> <li>Participants with low baseline scores reporting traffic as a problem had a relative change increase of 1.13 (SD=1.83), whereas those with high initial scores reported a decrease of -0.2 (SD=0.22).</li> </ol> <p><b>Transportation</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Men with the highest scores for access (OR=1.98, 95CI=1.12-3.49, p&lt;0.05) were more likely to walk in their neighborhood than individuals with lower scores.</li> <li>Women with moderate access were more likely to report higher levels of walking (OR=1.92, 95% CI=1.10-3.37, p&lt;0.05) and total physical activity (non-significant, p&gt;0.05).</li> <li>Women with high access scores were 52% less likely (OR=0.48, 95% CI=0.27-0.87, p&lt;0.05) to walk in the neighborhood when compared to those with low scores.</li> </ol> <p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b>  <b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Men with the highest scores for convenience (OR=2.20, 95% CI=1.21-3.99, p&lt;0.01) were more likely to walk in their neighborhood than individuals with lower scores.</li> <li>Women with moderate convenience (OR=3.19, 95% CI=1.81-5.59, p&lt;0.001) were more likely to report higher levels of walking.</li> <li>Women with increased perceptions of convenience were twice as likely to report increased walking (any increase; OR=2.58; 95%CI=1.46-4.56, p&lt;0.001, increase of 30 minutes or more; OR=2.31, 95% CI= 1.29-4.14, p&lt;0.01, increase of 60 minutes or more; OR=2.01, 95%CI= 1.09-3.70, p&lt;0.05) compared to those who did not positively change perceptions.</li> <li>Women with high convenience scores were 3.78 times more likely (95% CI=2.12-6.73, p&lt;0.001) to report the highest levels of neighborhood walking when compared to those with low scores.</li> <li>Men with a high convenience score were 1.82 times more likely to engage in total physical activity than those with a lower score (95%CI= 1.02-3.24, p&lt;0.05).</li> <li>Men who increased their perception of convenience (OR=1.95, 95% CI=1.10-3.45, p&lt;0.05) were more likely to have increased walking and twice as likely to have increased walking more than 30 minutes (convenience; OR=2.02, 95% CI=1.12-3.65, p&lt;0.05) compared to men with no perception change.</li> <li>Men with increased perceptions of convenience were also 1.98 (95%CI 1.08-3.61; p&lt;0.05) times more likely to have increased their walking to more than 60 minutes. (continued next page)</li> </ol>	<ol style="list-style-type: none"> <li>Participants with low initial access scores reported a mean relative change increase of 0.35 (SD=2.14), and a decrease score of -0.24 (SD=0.24) was reported for those with an initial high score.</li> <li>Participants with a low aesthetic scores at baseline reported a mean relative increase of 0.42 (SD=0.46), whereas those with a high initial scores reported a decrease, with a relative change score of -0.16 (SD=0.18).</li> <li>Participants with low baseline convenience scores reported a mean relative change increase of 0.79 (SD=0.87) and those with high baseline scores reported a relative change decrease of -0.21 (SD=0.22).</li> <li>Participants with low aesthetic scores at baseline reported a mean relative change increase of 0.42 (SD=0.46), whereas those with high scores reported a decrease, with a relative change of -0.16 (SD=0.16).</li> <li>Participants with low baseline convenience scores reported a mean relative change increase of 0.79 (SD=0.87), and those with high scores reported a relative change decrease of -0.21 (SD=0.22).</li> <li>Participants with low baseline scores for traffic as a problem reported a relative change increase of 1.13 (SD=1.83), whereas those with high initial scores reported a decrease of -0.2 (SD=0.22).</li> </ol>

**(Continued from previous study)**

**Community Design**

PHYSICAL ACTIVITY:

1. Men with high scores for convenience (OR=2.20, 95% CI=2.21-3.99, p<0.01) and access (OR=1.98, 95% CI=1.12-3.49, p<0.05) were more likely to walk in their neighborhood than individuals with lower scores.
2. Men who increased their perception of aesthetics (OR=2.25, 95% CI= 1.24-4.05, p<0.01) and convenience (OR=1.95, 95% CI=1.10-3.45, p<0.05) were more likely to have increased walking and twice as likely to have increased walking more than 30 minutes (aesthetics; OR=2.0, 95% CI=1.12-3.79, p<0.05, convenience; OR=2.02, 95% CI=1.12-3.65, p<0.05) compared to men with no perception change. Men with increased perceptions of convenience were also 1.98 (95% CI 1.08-3.61; p<0.05) times more likely to have increased their walking to more than 60 minutes.
3. Men with a high convenience score were 1.82 times more likely to engage in total physical activity than those with a lower score (95% CI= 1.02-3.24, p<0.05).
4. Women with increased perceptions of convenience were twice as likely to report increased walking (any increase; OR=2.58; 95% CI=1.46-4.56, p<0.001, increase of 30 minutes or more; OR=2.31, 95% CI= 1.29-4.14, p<0.01, increase of 60 minutes or more; OR=2.01, 95% CI= 1.09-3.70, p<0.05) compared to those who did not positively change perceptions.
5. Women with moderate convenience (OR=3.19, 95% CI=1.81-5.59, p<0.001) and access (OR=1.92, 95% CI=1.10-3.37, p<0.05) were more likely to report higher levels of walking and higher total physical activity, respectively.
6. Women with a high convenience scores were 3.78 times more likely (95% CI=2.12-6.73, p<0.001) to report the highest levels of neighborhood walking, whereas women with high access scores were 52% less likely (OR=0.48, 95% CI=0.27-0.87, p<0.05) to walk in the neighborhood when compared to those with low scores.

(Note: The composite score for access was comprised of access to shops and public transit. Convenience scores were a composite of the accessibility of paths, parks, and other walking opportunities.)

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<p><b>Author</b> Santos, Silva (2008) Portugal</p> <p><b>Participation/ Potential Exposure</b> Not Applicable</p> <p><b>High-Risk Population</b> Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>Adults (18 years and older)</p> <p>Azorean</p>	<p><b>Representative</b> Not Applicable</p> <p><b>Potential Population Reach</b> Not Applicable</p> <p><b>Potential High Risk Population Reach</b> Not Applicable</p>	<p><b>Intervention Components</b> Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>Aesthetic neighborhood quality</p> <p><b>MULTI-COMPONENT:</b></p> <ol style="list-style-type: none"> <li>Availability of places to be active</li> <li>Access to destinations</li> </ol> <p><b>Feasibility</b> Not Applicable</p> <p><b>Implementation Complexity</b> Not Applicable</p>	<p><b>Population Impact</b> Not Applicable</p> <p><b>High-risk Population Impact</b> Not Applicable</p> <p><b>Sustainability</b> Not Applicable</p>	<p><b>Availability of Playgrounds, Parks, Trails, and Recreation Facilities</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Women with a positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 32.5% (95%CI: 1.150-1.528; p&lt;0.001) more likely to have a moderate physical activity level and 31.9% (95%CI: 1.121-1.551; p&lt;0.001) more likely to have a health enhancing physical activity (HEPA) level.</li> <li>Normal weight women (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 44.5% (95%CI: 1.166-1.791; p&lt;0.001) more likely to have moderate physical activity levels, whereas overweight/obese women (<math>BMI \geq 25 \text{ kg/m}^2</math>) 22% (95%CI: 1.007-1.478; p&lt;0.05) more likely to have moderate physical activity levels and 34.5% (95%CI: 1.3451.080-1.675; p&lt;0.05) more likely to have HEPA levels.</li> <li>Normal weight men (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 51.4% (95% CI: 1.091-2.101; p&lt;0.05) more likely to have moderate physical activity levels.</li> </ol> <p><b>Community Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Women with a positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 32.5% (95%CI: 1.150-1.528; p&lt;0.001) more likely to have a moderate physical activity level and 31.9% (95%CI: 1.121-1.551; p&lt;0.001) more likely to have a health enhancing physical activity (HEPA) level.</li> <li>Normal weight women (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive overall perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 44.5% (95%CI: 1.166-1.791; p&lt;0.001) more likely to have moderate physical activity levels, whereas overweight/obese women (<math>BMI \geq 25 \text{ kg/m}^2</math>) 22% (95%CI: 1.007-1.478; p&lt;0.05) more likely to have moderate physical activity levels and 34.5% (95%CI: 1.3451.080-1.675; p&lt;0.05) more likely to have HEPA levels.</li> <li>Normal weight men (<math>BMI &lt; 25 \text{ kg/m}^2</math>) with a positive perception of the dimension infrastructures; access to destinations, social environment, and aesthetics were 51.4% (95% CI: 1.091-2.101; p&lt;0.05) more likely to have moderate physical activity levels.</li> </ol> <p>(Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	Not Reported	

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<p><b>Author</b> Carnegie, Bauman (2002) Australia</p> <p><b>Population/Potential Exposure</b> Not Applicable</p> <p><b>High-Risk Population</b> Not Applicable Only cross-sectional data was provided.</p> <p>General population, Adults 40-60 years old, 57.4% Female (evaluation sample)</p>	<p><b>Participation/Potential Exposure</b> Not Applicable</p> <p><b>High-Risk Population</b> Not Applicable Only cross-sectional data was provided.</p> <p>General population, Adults 40-60 years old, 57.4% Female (evaluation sample)</p>	<p><b>Representative Reach</b> Not Applicable</p> <p><b>Potential High Risk Population Reach</b> Not Applicable</p> <p>Not Applicable</p>	<p><b>Intervention Components</b> Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>Neighborhood aesthetics</p> <p><b>MULTI-COMPONENT:</b></p> <ol style="list-style-type: none"> <li>Perceptions of neighborhood traffic safety</li> <li>Perceptions of neighborhood perceptions of safety (dogs barking)</li> <li>Access to open spaces (beaches and parks)</li> <li>Neighborhood land-use mix</li> </ol> <p><b>Feasibility</b> Not Applicable</p> <p><b>Implementation Complexity</b> Not Applicable</p>	<p><b>Population Impact</b> Not Applicable</p> <p><b>High-risk Population Impact</b> Not Applicable</p> <p><b>Sustainability</b> Not Applicable</p>	<p><b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Those who walked more than 2 hours per week (<math>M=2.96</math>, <math>SD=1.1</math>) strongly agreed that they perceived traffic to be bothersome more than those who walked less than 20 minutes per week (<math>M=3.15</math>, <math>SD=1.12</math>; <math>F(2, 1.168)=5.19</math>; <math>p=0.006</math>).</p> <p><b>Safety Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. The "dogs barking" variable showed no relationship with walking activity nor did the "safety at night" question. 2. The "feel safe walking at night" question was much more of an issue for women than men (<math>M=3.7</math> for women and <math>2.4</math> for men, <math>p&lt;0.001</math>), showing that women felt much less safe than men walking at night.</p> <p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Those who walked for less than 20 minutes and those who walked for between 20 minutes and 2 hours both reported that shops, parks, and beaches were less near to their home than those who reported walking more than 2 hours per week (<math>F(2, 1.168) = 11.24</math>, <math>p&lt;0.001</math>). 2. There was an independent association between the stage of change variable and the aesthetic environment (<math>F(2, 1.168) = 5.67</math>; <math>p&lt;0.01</math>) and with the practical environment factor (<math>F(2, 1.157) = 12.05</math>; <math>p&lt;0.001</math>).</p> <p><b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. There was an independent association between the stage of change variable and the aesthetic environment (<math>F(2, 1.168) = 5.67</math>; <math>p&lt;0.01</math>) and with the practical environment factor (<math>F(2, 1.157) = 12.05</math>; <math>p&lt;0.001</math>). 2. Those who walked for less than 20 minutes and those who walked for between 20 minutes and 2 hours both reported that shops, parks, and beaches were less near to their home than those who reported walking more than 2 hours per week (<math>F(2, 1.168) = 11.24</math>, <math>p&lt;0.001</math>).</p> <p>(Note: The practical environment is a composite of access to shops, parks and beaches.)</p>	<p>1. There was an independent association between the stage of change variable and the aesthetic environment (<math>F(2, 1.168) = 5.67</math>; <math>p&lt;0.01</math>) and with the practical environment factor (<math>F(2, 1.157) = 12.05</math>; <math>p&lt;0.001</math>).</p>

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Kirby, Levesque (2007) Canada (Moose Factory Island)	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults in an Aboriginal Community  130 women (mean age 35.6 years ±12.3), 133 men (mean age=36.3 years ±12.7) (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Neighborhood aesthetic quality  <u>MULTI-COMPONENT:</u> 1. Perceptions of safety for walking in the community 2. Convenience of neighborhood destinations	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY</u> 1. The square root of safety was significantly related to total weekly walking ( $p<0.05$ ; $\beta=0.130$ ). 2. Hierarchical regressions revealed that perceived environmental variables (e.g., convenience, safety, aesthetics) were not related to the variation in response for all intensity, strenuous, moderate, and light physical activity ( $p>0.05$ ).  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Hierarchical regressions revealed that perceived environmental variables (e.g., convenience, safety, aesthetics) were not related to the variation in response for all intensity, strenuous, moderate, and light physical activity ( $p>0.05$ ).	1. Total weekly physical activity involvement decreased with increasing BMI ( $X^2 (4, N=253)=11.72$ , $p=0.02$ ) and total weekly walking decreased with increasing BMI ( $X^2 (4, N=253)=19.59$ , $p=0.001$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Hume, Salmon (2007) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  10-year-olds, Lower income; 49% boys (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Ease of walking in the neighborhood and perceptions of neighborhood aesthetic quality  <u>MULTI-COMPONENT:</u> 1. Perceptions of neighborhood safety 2. Safety from traffic 3. Land-use mix and distance to neighborhood destinations  <u>COMPLEX:</u> 1. Social support (presence of friends in the area)	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Safety-Traffic</b>  <u>PHYSICAL ACTIVITY:</u></p> <p>1. Among girls, the perceptions of lots of neighborhood graffiti (<math>\beta=2.59</math>, <math>p=0.04</math>) and safety when crossing the road (<math>\beta=1.99</math>, <math>p=0.07</math>) were significantly positively associated with walking frequency.</p> <p>2. Chi square analyses showed that significantly more boys than girls reported access to a walking or cycling track in their neighborhood (94% vs. 85%; <math>\chi^2[1]=5.59</math>, <math>p=0.02</math>), lots of graffiti (27% vs. 15%; <math>\chi^2[1]=5.34</math>, <math>p=0.02</math>), that it is safe to walk or cycle to school (71% vs. 56%; <math>\chi^2[1]=5.79</math>, <math>p=0.02</math>), and that they knew all their neighbors quite well (73% vs. 61%; <math>\chi^2[1]=3.86</math>, <math>p=0.05</math>). In contrast, more girls than boys reported that they were worried about strangers in their neighborhood (45% vs. 30%; <math>\chi^2[1]=6.06</math>, <math>p=0.01</math>).</p> <p><b>Safety-Interpersonal</b>  <u>PHYSICAL ACTIVITY:</u></p> <p>1. Among boys, access to the total number of neighborhood destinations (0.35, <math>p=0.03</math>), knowing their neighbors well (<math>\beta=2.13</math>, <math>p=0.04</math>), and perceiving that it was a safe neighborhood to walk/cycle to school (<math>\beta=-1.92</math>, <math>p=0.07</math>) were positively associated with weekly walking frequency. Total number of accessible destinations score remained significantly positively associated with walking frequency in the multiple regression model (<math>p&lt;0.05</math>).</p> <p>2. Among girls, the perceptions of lots of neighborhood graffiti (<math>\beta=2.59</math>, <math>p=0.04</math>) and safety in the neighborhood for walking/cycling to school (<math>\beta=2.78</math>, <math>p=0.03</math>) were significantly positively associated with walking frequency. Lots of graffiti remained significantly associated with walking frequency in the multiple regression model (both <math>p&lt;0.05</math>).</p> <p>3. Perceiving lots of litter and rubbish in the neighborhood (<math>\beta=51.28</math>, <math>p=0.02</math>), lots of children in the neighborhood to play with (<math>\beta=110.51</math>, <math>p=0.03</math>), friends within walking/cycling distance of home (<math>\beta=104.79</math>, <math>p=0.04</math>), and the overall neighborhood social environment scale (<math>\beta=31.68</math>, <math>p=0.006</math>) were significantly associated with overall physical activity among boys.</p> <p>4. For boys' overall physical activity, having friends living in walking/cycling distance and presence of lots of litter (both <math>p&lt;0.05</math>) remained significantly positively associated in the multiple regression model.</p> <p>5. Chi square analyses showed that significantly more boys than girls reported access to a walking or cycling track in their neighborhood (94% vs. 85%; <math>\chi^2[1]=5.59</math>, <math>p=0.02</math>), lots of graffiti (27% vs. 15%; <math>\chi^2[1]=5.34</math>, <math>p=0.02</math>), that it is safe to walk or cycle to school (71% vs. 56%; <math>\chi^2[1]=5.79</math>, <math>p=0.02</math>), and that they knew all their neighbors quite well (73% vs. 61%; <math>\chi^2[1]=3.86</math>, <math>p=0.05</math>). In contrast, more girls than boys reported that they were worried about strangers in their neighborhood (45% vs. 30%; <math>\chi^2[1]=6.06</math>, <math>p=0.01</math>).</p> <p><b>Community Design</b>  <u>PHYSICAL ACTIVITY:</u></p> <p>1. Among boys, access to the total number of neighborhood destinations (0.35, <math>p=0.03</math>), knowing their neighbors well (<math>\beta=2.13</math>, <math>p=0.04</math>), and perceiving that it was a safe neighborhood to walk/cycle to school (<math>\beta=-1.92</math>, <math>p=0.07</math>) were positively associated with weekly walking frequency. Total number of accessible destinations score remained significantly positively associated with walking frequency in the multiple regression model (<math>p&lt;0.05</math>).</p>	1. Perceiving lots of children in the neighborhood to play with ( $\beta=110.51$ , $p=0.03$ ), friends within walking/cycling distance of home ( $\beta=104.79$ , $p=0.04$ ), and the overall neighborhood social environment scale ( $\beta=31.68$ , $p=0.006$ ) were significantly associated with overall physical activity among boys.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Ball, Bauman (2001) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  General population, Adults  54.2% Females (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Neighborhood aesthetic quality  <u>MULTI-COMPONENT:</u> 1. Convenience of locations within walking distance from residence  <u>COMPLEX:</u> 1. Neighborhood social factors (companionship for walking)  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Those reporting more convenient (both men; $\chi^2=19.1$ , $p<0.05$ ; and women; $\chi^2=11.2$ , $p<0.05$ ) environments had higher proportions of walkers. 2. Compared to those reporting a highly convenient environment, individuals with a moderately convenient environment were 16% less likely to walk for exercise ( $OR=0.84$ , $CI=0.71-1.00$ , $p<0.05$ ), while those with a low environmental convenience were 36% less likely ( $OR=0.64$ , $95\% CI=0.54-0.77$ , $p<0.01$ ) to walk for exercise.  2. Those with poor mental health (MHCS) were comparable with those with good mental health (MHCS), although there was a trend for those with poorer mental health to have slightly weaker associations between walking and both environmental aesthetics (poor MHCS; $OR=0.72$ , $95\% CI=0.54-0.97$ , good MHCS; $OR=0.46$ , $95\% CI=0.33-0.64$ ) and convenience (poor MHCS; $OR=0.68$ , $95\% CI=0.53-0.87$ , good MHCS; $OR=0.61$ , $95\% CI=0.48-0.79$ ). 3. Having company was significantly associated with the likelihood of walking for exercise in the past 2 weeks ( $OR=1.00$ ), individuals without company were 31% less likely to report walking for exercise in the past 2 weeks ( $OR=0.69$ , $CI=0.59-0.80$ , $p<0.01$ ).	1. Individuals with poor physical health component scores (PHCS) and individuals with good physical health component scores (PHCS) with lower environmental aesthetics (poor PHCS; $OR=0.62$ , $95\% CI=0.46-0.85$ , good PHCS; $OR=0.57$ , $95\% CI=0.41-0.79$ ) and convenience ratings (poor PHCS; $OR=0.72$ , $95\% CI=0.56-0.93$ , good PHCS; $OR=0.60$ , $95\% CI=0.46-0.77$ ), and with no company to walk with (poor PHCS; $OR=0.64$ , $95\% CI=0.52-0.78$ , good PHCS; $OR=0.72$ , $95\% CI=0.59-0.89$ ), had a decreased likelihood of walking for exercise. 2. Those with poor mental health (MHCS) were comparable with those with good mental health (MHCS), although there was a trend for those with poorer mental health to have slightly weaker associations between walking and both environmental aesthetics (poor MHCS; $OR=0.72$ , $95\% CI=0.54-0.97$ , good MHCS; $OR=0.46$ , $95\% CI=0.33-0.64$ ) and convenience (poor MHCS; $OR=0.68$ , $95\% CI=0.53-0.87$ , good MHCS; $OR=0.61$ , $95\% CI=0.48-0.79$ ). 3. Having company was significantly associated with the likelihood of walking for exercise in the past 2 weeks ( $OR=1.00$ ), individuals without company were 31% less likely to report walking for exercise in the past 2 weeks ( $OR=0.69$ , $CI=0.59-0.80$ , $p<0.01$ ).

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Fein, Plotnikoff (2004) Canada	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. 14-18 year olds, 62% Female (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood availability of roads and sidewalks  <b>MULTI-COMPONENT:</b> 1. Access to convenient recreational facilities	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b>  <u>PHYSICAL ACTIVITY:</u> 1. The environmental resource scales were positively correlated with energy expenditure (home r=0.16, neighborhood r=0.16, facilities r=0.12, school r=0.15, p<0.01) as were the perceived importance scores (home r=0.22, neighborhood r=0.16, facilities r=0.20m school r=0.27, p<0.01). 2. Perceived importance of the school environment was the only environmental measure showing a significant association ( $\beta=0.14$ , p<0.01) with energy expenditure. 3. Males were strongly associated with energy expenditure ( $\beta=-0.24$ , p<0.05) among respondents reporting high levels of perceived importance in the school environment.  (Note: The environmental resource scales included availability of space (e.g., roads and sidewalks), convenient facilities and equipment.)	1. Boys (r= -0.17, p<0.01), those in lower grades (r= -0.08, p<0.05), and those with higher peer (r=0.31, p<0.01), family (r=0.23, p<0.01) and physical education teacher relationship (r=0.08, p<0.05) scores were significantly correlated with energy expenditure.
<b>Author</b> Mota, Gomes (2007) Portugal	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. 13-18 year old females	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and intersection density  <b>MULTI-COMPONENT:</b> 1. Perceived neighborhood safety	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b>  <u>PHYSICAL ACTIVITY:</u> 1. Neighborhood safety was of borderline statistical significance (p=0.07). 21.8% of active vs. 28.8% of passive travelers agreed that neighborhood crime made it unsafe or unpleasant to walk.	1. No statistically significant differences were seen for screen time between active vs. passive travel groups. 2. No statistically significant differences were found for BMI between active and passive travelers.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> De Bourdequdhuij, Sallis (2003) Belgium	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults, 18-65 year olds (target sample)  41 ± 12.22 (mean) years, 48.3% Female, 70.1% employed, 39.3% urban dwellers, 54.9% suburban, 5.9% countryside (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Quality of and access to sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety from crime 2. Access to shops, residential density, and land use mix 3. Access to public transportation 4. Access to physical activity facilities and bike lanes  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>OVERWEIGHT/OBESITY:</u> 1. Participants with a higher BMI reported less safety from crime (Pearson r=-0.11, p<0.05).  <u>SEDENTARY BEHAVIOR:</u> 2. In males, the amount of sitting was related to higher perceived criminality in the neighborhood (semi-partial correlate: -0.22, p≤0.01), longer distances to shops and businesses (land use mix, diversity) (semi-partial correlate: 0.14, p≤0.05), and more convenience of shopping in local stores (land use mix, access to local shopping) (semi-partial correlate: 0.15, p≤0.01). For females, less emotional satisfaction with the neighborhood was associated with greater amounts of sitting (semi-partial correlate= -0.15, p≤0.05).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>OVERWEIGHT/OBESITY:</u> 1. Participants with a higher BMI reported fewer convenient physical activity facilities (Pearson r=-0.11, p<0.05).  <u>PHYSICAL ACTIVITY:</u> 2. In males, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate: 0.11, p≤0.05). In females, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate: 0.14, p≤0.05) and supportive worksite environment was related to more high intensity activity (semi-partial correlate: 0.12, p≤0.05).  <b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Participants with a higher BMI reported fewer convenient physical activity facilities (Pearson r=-0.11, p<0.05).  <u>PHYSICAL ACTIVITY:</u> 2. In males, moderate intensity activity was related to more satisfaction with neighborhood services (semi-partial correlate: 0.15, p≤0.05). In females, more moderate intensity physical activity was related to better access to shopping in local stores (semi-partial correlate: 0.16, p≤0.05). 3. In males, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate: 0.11, p≤0.05). In females, vigorous intensity physical activity was related to more convenient physical activity facilities (semi-partial correlate: 0.14, p≤0.05) and supportive worksite environment was related to more high intensity activity (semi-partial correlate: 0.12, p≤0.05). 4. In females, more walking was associated with longer distances to shops and businesses (semi-partial correlate: 0.15, p≤0.05).  <u>SEDENTARY ACTIVITY:</u> 5. In males, the amount of sitting was related to higher perceived criminality in the neighborhood (semi-partial correlate: -0.22, p≤0.01), longer distances to shops and businesses (land use mix, diversity) (semi-partial correlate: 0.14, p≤0.05), and more convenience of shopping in local stores (land use mix, access to local shopping) (semi-partial correlate: 0.15, p≤0.01).  <b>Transportation</b> <u>PHYSICAL ACTIVITY:</u> 1. In females, more walking was associated with greater ease of the walk to public transportation stops (semi-partial correlate: 0.16, p≤0.05).  (Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)	1. In males, moderate intensity activity was related to more satisfaction with neighborhood services (semi-partial correlate: 0.15, p≤0.05). 2. In females, more moderate intensity physical activity was related to more emotional satisfaction with the neighborhood (semi-partial correlate: 0.13, p≤0.05) 3. For females, less emotional satisfaction with the neighborhood was associated with greater amounts of sitting (semi-partial correlate= -0.15, p≤0.05). 4. Participants with a higher BMI reported less physical activity equipment in the home (Pearson r= -0.15, p<0.001).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Burton, Turrell (2005) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 18-64 years old	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Presence of footpaths (sidewalks)  <b>MULTI-COMPONENT:</b> 1. Access to recreation facilities 2. Perceptions of neighborhood traffic safety 3. Access to public transportation 4. Access to street lighting and perceived safety	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables contributed the least to vigorous intensity activity (no results shown).  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables contributed the least to vigorous intensity activity (no results shown).  <b>Safety Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables contributed the least to vigorous intensity activity (no results shown).  <b>Transportation</b> <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables contributed the least to vigorous intensity activity (no results shown).  (Note: The environmental scale was developed from a battery of items, which led to the inclusion in multiple strategies. Environmental variables include footpaths [sidewalks], public transport, street lighting, perceived safety, busyness of streets and traffic flow, facilities for activity, cleanliness, and friendliness.)	Not Reported
<b>Author</b> Carver, Timperio (2008) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  8-9 and 11-15 year olds	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Intersection density and street accessibility  <b>MULTI-COMPONENT:</b> 1. Presence of traffic calming features (e.g., speed bumps)	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Traffic Safety</b> <u>PHYSICAL ACTIVITY:</u> 1. The number of traffic/pedestrian lights was negatively associated with younger girls moderate-to-vigorous physical activity on weekends (adjusted $\beta=-0.312$ , $p<0.05$ ). 2. Adolescent girls residing in neighborhoods with two to three traffic/pedestrian lights were more likely to make seven or more walking/cycling trips per week than those whose neighborhoods had fewer traffic lights ( $OR=2.74$ , 95% CI= 1.21-6.19, $p<0.05$ ). 3. Adolescent boys whose neighborhoods contained medium (i.e., two to seven) rather than low numbers of speed humps were less likely to make seven or more walking/cycling trips per week ( $OR=0.31$ , 95% CI= 0.11-0.86, $p<0.05$ ).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Giles-Corti, Donovan (2002); Giles-Corti, Donovan (2002); Giles-Corti, Donovan (2003); Giles-Corti, Macintyre (2003); McCormack, Giles-Corti (2007); McCormack, Giles-Corti (2008) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 18-59 years old (evaluation sample)  The sample was comprised of relatively young, healthy, sedentary workers and homemakers living in high or low SES areas.	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Perceptions of access to sidewalks  <b>MULTI-COMPONENT:</b> 1. Access to transit stations 2. Access to destinations, land-use, and road network distance 3. Access to recreation destinations 4. Neighborhood perceptions of traffic safety 5. Neighborhood perceptions of safety  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Community Design</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Obese individuals were nearly twice as likely as others to perceive that there was no shop within walking distance (<math>OR=1.84</math>, 95%CI: 1.01-3.36).</li> </ol> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> <li>Residing within 1500 m of destinations including schools (<math>OR=1.75</math>, 95% CI: 1.28-2.39, <math>p&lt;0.001</math>), convenience stores (<math>OR=1.89</math>, 95% CI: 1.26-2.84, <math>p&lt;0.001</math>), shopping malls (<math>OR=2.07</math>, 95% CI: 1.43-3.00, <math>p&lt;0.001</math>), newsagents (<math>OR=2.20</math>, 95% CI: 1.60-3.03, <math>p&lt;0.001</math>), and transit stations (<math>OR=2.38</math>, 95% CI: 1.67-3.39, <math>p&lt;0.001</math>) was significantly associated with regular walking for transport.</li> <li>Having a transit station located within 1500 m was positively associated with regular walking for recreation (<math>OR=1.50</math>, 95% CI: 1.09-2.05, <math>p&lt;0.05</math>)</li> <li>Having a beach within 1500 m was positively associated with irregular walking for recreation (<math>OR=1.97</math>, 95% CI: 1.01-3.83, <math>p&lt;0.05</math>) and regular vigorous physical activity (<math>OR=1.93</math>, 95% CI: 1.20-3.13, <math>p&lt;0.01</math>).</li> <li>For each additional different type of destination (including recreational and utilitarian destinations) within 400 and 1500 m, the odds of regular walking for transport increased by 43% (95% CI: 1.27-1.61, <math>p&lt;0.001</math>) and 41% (95% CI: 1.26-1.58, <math>p&lt;0.001</math>) and the odds of irregular walking for transport increased by 27% (95% CI: 1.12-1.44, <math>p&lt;0.001</math>) and 23% (95% CI: 1.12-1.35, <math>p&lt;0.001</math>).</li> <li>For each additional type of destination located within 1500 m the odds of regular walking for recreation increased by 16% (95% CI: 1.06-1.27, <math>p&lt;0.01</math>), while the odds of irregular walking increased by 12% (95% CI: 1.01-1.26, <math>p&lt;0.05</math>).</li> <li>The mix of utilitarian destinations within 1500 m was positively associated with regular walking for recreation (<math>OR=1.17</math>, 95% CI: 1.05-1.29, <math>p&lt;0.01</math>).</li> <li>Destination mix was not associated with time spent walking for recreation or vigorous physical activity.</li> <li>In comparison with those who had no sidewalk and no shop on their street, those who had access to either or both of these attributes were about 25% more likely to achieve recommended levels of walking (combined <math>OR=1.25</math>, 95% CI: 0.90-1.74).</li> <li>Among individuals who frequented pay for use recreational destinations, each additional pay destination (<math>OR=1.51</math>, 95%CI: 1.32-1.73, <math>p&lt;0.001</math>), having access to a motor vehicle (<math>OR=0.51</math>, 95%CI: 0.26-0.99, <math>p&lt;0.05</math>), and having a club membership (<math>OR=6.83</math>, 95%CI: 3.39-13.73, <math>p&lt;0.001</math>) were associated with the use of pay-destinations located in the neighborhood.</li> <li>Respondents were more likely to walk for transport if they were in the top quartile for access to attractive public open space (<math>OR=1.35</math>, 95%CI: 1.05-1.73, <math>p=0.02</math>) and if they had a shop within walking distance (<math>OR=3</math>, 95%CI: 2.04-4.4, <math>p&lt;0.0001</math>).</li> </ol> <p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><u>OVERWEIGHT/OBESITY:</u></p> <ol style="list-style-type: none"> <li>Overweight individuals were more likely to perceive no paths within walking distance (<math>OR=1.42</math>; 95% CI: 1.08-1.86).</li> <li>Having a beach within 1500 m was positively associated with irregular walking for recreation (<math>OR=1.97</math>, 95% CI: 1.01-3.83, <math>p&lt;0.05</math>) and regular vigorous physical activity (<math>OR=1.93</math>, 95% CI: 1.20-3.13, <math>p&lt;0.01</math>).</li> </ol> <p>(continued next page)</p>	<ol style="list-style-type: none"> <li>Walking at recommended levels was significantly associated with perceived behavioral control, frequency of a behavioral skill used in past month, intention to be active (high vs. low, <math>OR=1.83</math>, 95%CI: 1.14-2.94, <math>p=0.13</math>), having a club membership (<math>OR=0.53</math>, 95%CI: 0.39-0.74, <math>p&lt;0.001</math>), owning a dog (<math>OR=1.58</math>, 95%CI: 1.19-2.09), social support for physical activity in the past 3 months, and being in the top quartile of access to attractive public open space (<math>OR=1.47</math>, 95%CI: 1.21-1.55, <math>p=0.048</math>).</li> <li>Those who always had access to a motor vehicle were about half as likely to be obese as those who never had access to a motor vehicle (<math>OR=0.56</math>, 95%CI: 0.32-0.99).</li> <li>Relative to respondents in the lowest determinant score categories, the odds of achieving recommended levels of walking were 3.1 times higher among those in the high individual determinant score category (95%CI: 2.2-4.37, <math>p&lt;0.0001</math>), 2.79 times higher among those in the high social environmental determinant score category (95%CI: 2.3-3.9, <math>p&lt;0.0001</math>), and 2.13 times higher among those in the high physical environmental determinant score category (95%CI: 1.54-2.94, <math>p&lt;0.0001</math>).</li> <li>The greater the number of significant others who exercised weekly with the respondent, the more likely recommended levels of activity were achieved (four or more vs. none, <math>OR=1.37</math> 95%CI: 0.83-2.25) test for trend <math>p&lt;0.001</math>. (continued next page)</li> </ol>

**(Continued from previous study)**

3. Among individuals who frequented pay for use recreational destinations, each additional pay destination ( $OR=1.51$ , 95%CI: 1.32-1.73,  $p<0.001$ ) was associated with the use of pay-destinations located in the neighborhood.
4. Those who used a pay destination located within or outside ( $OR=8.46$ , 95%CI: 3.98-18.00,  $p<0.001$  and  $OR=3.48$ , 95%CI: 2.59-4.66,  $p<0.001$ , respectively) the neighborhood were more likely than those who did not use a pay destination to achieve sufficient vigorous-intensity physical activity.
5. Respondents using free destinations within and outside ( $OR=1.56$ , 95%CI: 1.00-2.33,  $p<0.05$  and  $OR=2.13$ , 95%CI: 1.56-2.89,  $p<0.001$ , respectively) the neighborhood were more likely to achieve sufficient levels of vigorous-intensity physical activity than those not using a free recreational destination.
6. The likelihood of walking for recreation was higher in residents in the top quartile of access to the beach ( $OR=1.49$ , 95%CI: 1.14-1.93,  $p=0.003$ ).
7. Respondents were more likely to walk as recommended if they were in top quartile of access to public open space ( $OR=1.43$ , 95%CI: 1.07-1.91,  $p=0.015$ ).
8. Those who exercised vigorously were more likely to be in the top quartile of access to the beach ( $OR=1.38$ , 95%CI: 1.07-1.79,  $p=0.013$ ).
9. Individuals with poor access to 4 or more recreational facilities were 68% more likely to be obese compared with others (95%CI: 1.11-2.55).
- Transportation**
- PHYSICAL ACTIVITY:**
- Residing within 1500 m of transit stations ( $OR=2.38$ , 95% CI: 1.67-3.39,  $p<0.001$ ) was significantly associated with regular walking for transport.
  - Having a transit station located within 1500 m was positively associated with regular walking for recreation ( $OR=1.50$ , 95% Cl: 1.09-2.05,  $p<0.05$ ).
- Safety-Interpersonal**
- PHYSICAL ACTIVITY:**
- The likelihood of walking for recreation was higher in residents who perceived their neighborhood as being attractive, safe and interesting ( $OR=1.49$ , 95%CI: 1.14-1.95,  $p=0.003$ ).
  - Respondents were more likely to walk as recommended if they perceived their neighborhood as being attractive, safe, and interesting ( $OR=1.50$ , 95%CI: 1.08-2.09,  $p=0.017$ ).
  - Those who exercised vigorously were more likely perceive their neighborhood as being attractive, safe, and interesting ( $OR=1.39$ , 95%CI: 1.08-1.79;  $p=0.01$ ).
  - The likelihood of walking for recreation was higher in residents who perceived their neighborhood as being attractive, safe and interesting ( $OR=1.49$ , 95%CI: 1.14-1.95,  $p=0.003$ ), and that there was support for walking locally ( $OR=1.8$ , 95%CI: 1.36-2.4,  $p<0.0001$ ).
  - Respondents were more likely to walk as recommended if they perceived their neighborhood as being attractive, safe, and interesting ( $OR=1.50$ , 95%CI: 1.08-2.09,  $p=0.017$ ), and supportive of walking locally ( $OR=1.52$ , 95%CI: 1.09-2.11,  $p=0.014$ ).
  - Those who exercised vigorously were more likely to live in high SES areas ( $OR=1.00$ ), to be in the top quartile of access to the beach ( $OR=1.38$ , 95%CI: 1.07-1.79,  $p=0.013$ ), to perceive their neighborhood as being attractive, safe, and interesting ( $OR=1.39$ , 95%CI: 1.08-1.79;  $p=0.01$ ); and to claim that there were sidewalks in the neighborhood ( $OR=1.52$ , 95%CI: 1.05-2.21,  $p=0.027$ ).
- Safety-Traffic**
- PHYSICAL ACTIVITY:**
- Respondents were more likely to walk for transport if they perceived more traffic and busy roads ( $OR=1.26$ , 95%CI: 1.01-1.56,  $p=0.038$ ).
  - In comparison with those who had major traffic and no trees on their street, the odds of achieving recommended levels of walking were nearly 50% higher among those who lived on a street with one or both of these features (combined) ( $OR=1.49$ , 95%CI: 0.96-2.33).
5. The likelihood of walking for recreation was higher in residents that stated there was support for walking locally ( $OR=1.8$ , 95%CI: 1.36-2.4,  $p<0.0001$ )
6. Respondents were more likely to walk as recommended if they were in neighborhoods that were supportive of walking locally ( $OR=1.52$ , 95%CI: 1.09-2.11,  $p=0.014$ ).

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
<b>Author</b> Lee, Kawakubo (2007) Japan	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults, 56% Female (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Street connectivity (alternate routes to locations) and neighborhood aesthetics  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety from crime 2. Access to parks and trails 3. Neighborhood perceptions of traffic safety 4. Distance to destinations in the community  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. In the low walkable region, those who had high scores for "It is easy to cross streets" (low perception mean [sd]: 145.1[162.7] vs. high perception mean [sd]: 214.6[270.2], p<0.05) spent significantly more time walking.  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. In the high walkable region, those who had high scores for "There is a park nearby that is suitable for taking a walk in" (low perception mean [sd]: 190.8[195.0] vs. high perception mean [sd] 300.2[279.5], p<0.05) and "There is a river (or a beach) within walking distance" (low perception mean [sd]: 217.2[211.7] vs. high perception mean [sd] 299.1[283.6], p<0.05) spent significantly more walking time.  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. In the high walkable region, those who had high scores for "There is a park nearby that is suitable for taking a walk in" (low perception mean [sd]: 190.8[195.0] vs. high perception mean [sd] 300.2[279.5], p<0.05) and "There is a river (or a beach) within walking distance" (low perception mean [sd]: 217.2[211.7] vs. high perception mean [sd] 299.1[283.6], p<0.05) spent significantly more walking time.  (Note: Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)	1. Those who had high scores for "Residents in the neighborhood are friendly" spent significantly more walking time in both regions (high walkable: low perception mean [sd]: 234.2[212.2] vs. high perception mean [sd] 381.0[254.5], p<0.01) (low walkable: low perception mean [sd]: 135.9[157.1] vs. high perception mean [sd]: 228.3[271.0], p<0.05). 2. In the convenience category, the score for "The sidewalks are wide enough to walk on" was significantly higher in the low walkable region (high; mean [sd]; 2.54[1.50] vs. low; 3.04[1.50], p<0.01), whereas that for "The walking map of the neighborhood is useful" was significantly higher in the high walkable region (high; mean [sd]; 3.58[1.29], vs. low; 2.45[1.64], p<0.01). 3. In the safety category, the score for "Vehicular traffic does not hinder taking a walk" was significantly higher in the low walkable region (high; mean [sd]; 2.49[1.48], vs. low; 3.08[1.55], p<0.01) 4. In the safety category the variable, "The sidewalk is well-lit even at night", showed significantly higher scores in the high walkable region (high; mean [sd]; 2.97[1.32] vs. low; 2.11[1.42], p<0.01).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Owen, Cerin (2007) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  General population, Adults, Urban	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Land-use mix and net retail area ratio  <u>COMPLEX:</u> 1. Neighborhood self-selection  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Living in areas with a walkability index that was one standard deviation above the average was associated with 37 minutes more walking than living in areas with a walkability index that was one standard deviation below the average. 2. Neighborhood walkability was associated with more walking for transport in residents for whom access to services was an important reason for living in a specific neighborhood (data not shown). 3. Weekly frequency of walking for transport was independently related to neighborhood walkability (Model 1: B=0.02; Wald test=37.6, df=1; p<0.001 and Model 2: B=0.01; Wald test=29.1, df=1; p<0.001). 4. There was no significant effect of neighborhood walkability on weekly minutes of walking for transport observed among residents for whom access to services was not an important reason for living in their neighborhood. 5. No statistically significant relationships between neighborhood walkability and walking for recreation were found. 6. No statistically significant moderators of the relationship between neighborhood walkability and walking for recreation were found.  (Note: Walkability index = dwelling density, street connectivity, land-use mix, and net retail area)	1. Neighborhood self-selection was a significant independent predictor of weekly minutes of walking for transport (B=29.8; Wald Test=25.8, df=1; p<0.001). 2. Weekly minutes and weekly frequency of walking for recreation were independently associated with neighborhood self-selection (p<0.05, no other results shown). 3. Choosing to live in a specific neighborhood because of its access to services was predictive of more weekly minutes of walking for transport. 4. Neighborhood self-selection was the only significant moderator of the relationship between neighborhood walkability and weekly minutes of walking for transport (B=1.59; SE=0.73; Wald test: $\chi^2(1)=4.78$ ; p=0.029). 5. Weekly frequency of walking for transport was independently related neighborhood self-selection (Model 2: B=0.13; Wald test=109.9, df=1; p<0.001). 6. For weekly minutes of walking for transport, there were no significant effects of objective walkability and neighborhood SES.

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<b>Author</b> Spence, Cutumisu (2008) Canada	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  3-4 year olds and 5-10 year olds	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity  <u>MULTI-COMPONENT:</u> 1. Density and land use mix  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. The odds of girls being overweight were lower if they lived in walkable neighborhoods (CDC OR=0.78, 95% CI, 0.66-0.91; IOTF OR=0.73, 95% CI, 0.61-0.88) with more intersections (CDC OR=0.57, 95% CI, 0.39-0.86; IOTF OR=0.48, 95% CI, 0.30-0.76).	1. Significant interactions were found between sex and intersection density for both Center for Disease Control and Prevention, $\chi^2$ (2, N=501)=9.01, p=0.011, and International Obesity Task Force criteria, $\chi^2$ (2, N=501)=11.76, p=0.003) when examining components of walkability.  2. Neither physical activity nor junk food consumption was associated with overall bodyweight status.

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<b>Author</b> Panter, Jones (2008) England	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Street connectivity and neighborhood aesthetics  <b>MULTI-COMPONENT:</b> 1. Access to indoor and outdoor facilities for physical activity, access to green space and biking and walking facilities for physical activity 2. Residential density 3. Neighborhood traffic safety  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Participants that reported 5 sessions of activity per week, lived closer to sports facilities (mean distance [standard error] = 1268.9 [104.99], p&lt;0.05) and had higher neighborhood walkability scores (mean= 48.10 [0.79]. p&lt;0.01) than their less active counterparts (mean distance= 1479.9 [34.25] and mean walkability scores= 44.46 [0.37]).</li> <li>Individuals that reported 5 or more weekly aerobic activity sessions gave a higher neighborhood walkability score (mean= 46.05 [0.48]) than individuals who did not (mean =43.79 [0.54]), although this association was not apparent when walking alone was considered (p&lt;0.01).</li> <li>Respondents rating their neighborhood as having intermediate or good walkability were over 3 times as likely to report 5 or more sessions of physical activity per week compared to those who gave the lowest rating (OR= 3.14, p=0.02; and OR= 3.04, p=0.03 respectively).</li> <li>Those who lived in the closest tertile to a park or green space were over twice as likely to report five or more sessions of physical activity (OR=2.17, 95% CI= 1.00-4.78, p≤0.05).</li> <li>None of the associations with access to leisure facilities were statistically significant and were generally in a contrary direction to that expected; those living nearest to the facilities generally reported lower levels of activity than those farther away.</li> </ol> <p><b>Safety Traffic</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Individuals that reported 5 or more weekly aerobic activity sessions gave a higher neighborhood walkability score (mean= 46.05 [0.48]) than individuals who did not (mean =43.79 [0.54]), although this association was not apparent when walking alone was considered (p&lt;0.01).</li> <li>Respondents rating their neighborhood as having intermediate or good walkability were over 3 times as likely to report 5 or more sessions of physical activity per week compared to those who gave the lowest rating (OR= 3.14, p=0.02; and OR= 3.04, p=0.03 respectively).</li> </ol> <p><b>Community Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>Participants that reported 5 sessions of activity per week, lived closer to sports facilities (mean distance [standard error] = 1268.9 [104.99], p&lt;0.05) and had higher neighborhood walkability scores (mean= 48.10 [0.79]. p&lt;0.01) than their less active counterparts (mean distance= 1479.9 [34.25] and mean walkability scores= 44.46 [0.37]).</li> <li>Individuals that reported 5 or more weekly aerobic activity sessions gave a higher neighborhood walkability score (mean= 46.05 [0.48]) than individuals who did not (mean =43.79 [0.54]), although this association was not apparent when walking alone was considered (p&lt;0.01).</li> <li>Respondents rating their neighborhood as having intermediate or good walkability were over 3 times as likely to report 5 or more sessions of physical activity per week compared to those who gave the lowest rating (OR= 3.14, p=0.02; and OR= 3.04, p=0.03 respectively).</li> <li>Those who lived in the closest tertile to a park or green space were over twice as likely to report five or more sessions of physical activity (OR=2.17, 95% CI= 1.00-4.78, p≤0.05).</li> <li>None of the associations with access to leisure facilities were statistically significant and were generally in a contrary direction to that expected; those living nearest to the facilities generally reported lower levels of activity than those farther away.</li> </ol> <p>(Note: Walkability was a composite score using mulitple variables like residential density, street connectivity, access to PA facilities, access to sidewalks and pavement, aesthetics, and traffic safety. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	Not Reported

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<b>Author</b> De Vries, Bakker (2007) The Netherlands	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  8.3 ± 1.4 year olds (mean), 6-11 years old (range)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood intersection density  <u>MULTI-COMPONENT:</u> 1. Access to neighborhood recreation spaces 2. Residential density and land-use mix 3. Neighborhood traffic safety  <u>COMPLEX:</u> 1. Neighborhood social structure  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Children's physical activity was positively associated with the residential density ( $\beta=0.009$ ; 95% CI= 0.001, 0.017, $p<0.05$ ). 2. Children's physical activity was negatively associated with the frequency of staircase entrance flats (3-4 stories without elevator) ( $\beta= -1.472$ ; 95% CI= -1.992, -0.953), unoccupied (boarded up) houses ( $\beta= -3.080$ ; 95% CI= -4.625, -1.535), dog waste ( $\beta= -1.182$ ; 95% CI= -2.104, -0.260) ( $p<0.05$ for all). 3. Children's physical activity was positively associated with the frequency of terrace houses ( $\beta=1.508$ ; 95% CI=0.726, 2.290) and blocks of flats with fewer than 6 stores ( $\beta= -1.472$ ; 95% CI= -1.992, -0.953) in the neighborhood ( $p<0.05$ for all). 4. Children's physical activity was negatively associated with the frequency of paved playgrounds ( $\beta= -1.372$ ; 95% CI= -2.549, -0.195). 5. Children's physical activity was also positively associated with the frequency of parking lots ( $\beta=3.169$ ; 95% CI=2.055, 4.284, $p<0.05$ ).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. No significant associations were found for sports and recreation facilities, except for sports fields ( $p<0.05$ ). 2. Children's physical activity was negatively associated with the frequency of paved playgrounds ( $\beta= -1.372$ ; 95% CI= -2.549, -0.195). 3. Children's physical activity was positively associated with the proportion of green space ( $\beta=0.865$ ; 95% CI= -0.494, 2.225) and cycle tracks ( $\beta=2.445$ ; 95% CI= 0.439, 4.451) in the neighborhood ( $p<0.05$ for both).  <b>Safety Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Children's physical activity was negatively associated with the frequency of heavy traffic (lorry and bus) ( $\beta= -2.356$ ; 95% CI= -3.587, -1.125) and the frequency of striped crossings ( $\beta= -1.815$ ; 95% CI= -2.854, -0.776) ( $p<0.05$ for all). 2. Children's physical activity was positively associated with the proportion of 30-km speed zones ( $\beta=1.815$ ; 95% CI=0.700, 2.929, $p<0.05$ ) in the neighborhood.	1. Children's physical activity was positively associated with the general rating of activity-friendliness of neighborhood ( $\beta=1.990$ ; 95% CI= 1.255, 2.724) ( $p<0.05$ ).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Kondo, Lee (2009) Japan	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  Adults, 30-69 years old (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Street connectivity  <b>MULTI-COMPONENT:</b> 1. Residential density and land use mix-diversity 2. Perceptions of neighborhood safety from crime 3. Perceptions of neighborhood traffic safety 4. Access to neighborhood recreational facilities  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>For females, mean total walking steps was significantly higher in the high scoring group than in the low scoring group for the walking places score (mean± standard error: <math>9488 \pm 511</math> vs. <math>7957 \pm 538</math>; <math>p&lt;0.05</math>).</li> <li>For males, mean walking time for leisure was significantly longer in the high scoring group than in the low scoring group for the aesthetics score (mean ± standard error: <math>20.6 \pm 6.0</math> vs. <math>0.6 \pm 6.7</math>; <math>p&lt;0.05</math>) and for individuals with parks in the area compared to those without (<math>26.2 \pm 6.4</math> vs. <math>2.7 \pm 6.9</math>; <math>p&lt;0.05</math>).</li> <li>For males, mean cycling time for transport was significantly longer in the high scoring group than in the low scoring group for the number of land use types (mean ± standard error: <math>11.9 \pm 3.0</math> vs. <math>0.8 \pm 4.4</math>; <math>p&lt;0.05</math>) including post offices (<math>12.1 \pm 3.1</math> vs. <math>1.5 \pm 4.2</math>; <math>p&lt;0.05</math>), banks/credit unions (<math>15.4 \pm 3.8</math> vs. <math>3.1 \pm 3.3</math>; <math>p&lt;0.05</math>), gymsnasiums/fitness facilities (<math>31.9 \pm 7.8</math> vs. <math>5.8 \pm 2.5</math>; <math>p&lt;0.01</math>), and/or amusement facilities (<math>16.4 \pm 4.6</math> vs. <math>4.8 \pm 3.0</math>; <math>p&lt;0.05</math>) in the area when compared to subjects without these facilities.</li> </ol> <p><b>Community Design</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>There were no significant differences in walking steps related to land use type, length of streets or sidewalks, number of intersections, and width of streets between the high and low scoring groups.</li> <li>Mean total walking steps was significantly higher for subjects with bookstores (<math>10568 \pm 898</math> vs. <math>6983 \pm 881</math>; <math>p&lt;0.01</math>) or rental video stores (<math>10336 \pm 962</math> vs. <math>7422 \pm 873</math>; <math>p&lt;0.05</math>) in the area (within 10-minute walk) than for subjects without these facilities.</li> <li>For females, mean cycling time for transport was significantly longer in the high scoring group than in the low scoring group for the number of land use types (mean ± standard error: <math>11.9 \pm 3.0</math> vs. <math>0.8 \pm 4.4</math>; <math>p&lt;0.05</math>) including post offices (<math>12.1 \pm 3.1</math> vs. <math>1.5 \pm 4.2</math>; <math>p&lt;0.05</math>), banks/credit unions (<math>15.4 \pm 3.8</math> vs. <math>3.1 \pm 3.3</math>; <math>p&lt;0.05</math>), gymsnasiums/fitness facilities (<math>31.9 \pm 7.8</math> vs. <math>5.8 \pm 2.5</math>; <math>p&lt;0.01</math>), and/or amusement facilities (<math>16.4 \pm 4.6</math> vs. <math>4.8 \pm 3.0</math>; <math>p&lt;0.05</math>) in the area when compared to subjects without these facilities.</li> <li>There were no differences in walking steps between the high scoring group and the low scoring group for residential density, land use mix-diversity, land use mix-access, street connectivity, and safety.</li> <li>For females, mean total walking steps was significantly higher in the high scoring group than in the low scoring group for the walking places score (mean± standard error: <math>9488 \pm 511</math> vs. <math>7957 \pm 538</math>; <math>p&lt;0.05</math>).</li> </ol> <p><b>Safety Traffic</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>There were no differences in mean walking time for transport or cycling time for transport related to neighborhood environment perception scores between the high and low scoring groups.</li> <li>For males, there were no differences in walking steps between the high scoring group and the low scoring group for residential density, land use mix-diversity, land use mix-access, street connectivity, and safety.</li> <li>For females, mean total walking steps was significantly higher in the high scoring group than in the low scoring group for the walking places score (mean± standard error: <math>9488 \pm 511</math> vs. <math>7957 \pm 538</math>; <math>p&lt;0.05</math>).</li> </ol> <p><b>Safety-Interpersonal</b></p> <p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>For males, there were no differences in walking steps between the high scoring group and the low scoring group for safety.</li> </ol> <p>(Note: Multiple GIS and perception measures were used to determine respondent's walkability score.)</p>	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Craig, Brownson (2002) Canada	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided.  General Population (target population)  The observed neighborhoods were known for diversity of urban design, social class, and economic status.	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided.  Access to walkable routes for pedestrians  <u>MULTI-COMPONENT:</u> 1. Perceptions of safety from crime 2. Access to different transportation modes 3. Perceptions of traffic safety 4. Level of neighborhood urbanization  <u>COMPLEX:</u> 1. Social support in the environment	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. The degree of urbanization altered the relationship between the environment score and walking to work (no statistical data). 2. The predicted environment score was lower in both small urban ( $T\text{-ratio } (23)=-3.61, p=0.002$ ; Coefficient: -0.77) and suburban neighborhoods ( $T\text{-ratio } (23)=-4.42, p<0.0001$ ; Coefficient=-0.12) than in urban neighborhoods.  <b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. The degree of urbanization altered the relationship between the environment score and walking to work (no statistical data). 2. The predicted environment score was lower in both small urban ( $T\text{-ratio } (23)=-3.61, p=0.002$ ; Coefficient: -0.77) and suburban neighborhoods ( $T\text{-ratio } (23)=-4.42, p<0.0001$ ; Coefficient=-0.12) than in urban neighborhoods. 3. Walking to work was significantly related to the environment score ( $T\text{-ratio } (25)=3.32, p=0.003$ ), with a one-unit increase in the score being associated with a 25-percentage-point increase in the percentage walking to work. 4. The environment score was related to the percentage walking to work, controlling for degree of urbanization ( $T\text{-ratio } (23)=2.03, p=0.054$ ; Coefficient=0.02).  <b>Safety-Traffic</b> <u>PHYSICAL ACTIVITY:</u> 1. Walking to work was significantly related to the environment score ( $T\text{-ratio } (25)=3.32, p=0.003$ ), with a one-unit increase in the score being associated with a 25-percentage-point increase in the percentage walking to work. 2. The environment score was related to the percentage walking to work, controlling for degree of urbanization ( $T\text{-ratio } (23)=2.03, p=0.054$ ; Coefficient=0.02).  <b>Transportation</b> <u>PHYSICAL ACTIVITY:</u> 1. Walking to work was significantly related to the environment score ( $T\text{-ratio } (25)=3.32, p=0.003$ ), with a one-unit increase in the score being associated with a 25-percentage-point increase in the percentage walking to work. 2. The environment score was related to the percentage walking to work, controlling for degree of urbanization ( $T\text{-ratio } (23)=2.03, p=0.054$ ; Coefficient=0.02).  (Note: An environment score based on 18 neighborhood characteristics [e.g., variety of destinations, visual aesthetics, accessibility, transportation systems and safety from traffic and crime] was developed with a higher score indicating a more walkable environment. This score was a composite of many different characteristics incorporating multiple strategies.)	1. The environmental factor coefficients ranged from -1.82 to 2.20. Each factor was a significant contributor to the variation of the environment score (mean $p=0.10$ for "transportation system" and $p<0.05$ for other factors), except for visual interest and aesthetics. The inclusion of environmental factors (destinations, social dynamics, transportation system, and traffic) reduced the variation in the score by 46%.  2. The predicted environment score was lower in both small urban ( $T\text{-ratio } (23)=-3.61, p=0.002$ ; Coefficient: -0.77) and suburban neighborhoods ( $T\text{-ratio } (23)=-4.42, p<0.0001$ ; Coefficient=-0.12) than in urban neighborhoods.

<b>Study Description</b>	<b>Population</b>	<b>Reach</b>	<b>Intervention</b>	<b>Impact &amp; Sustainability</b>	<b>Other Results</b>	<b>Related Benefits &amp; Consequences</b>
Duncan, Mummery (2005) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable Only cross-sectional data provided. General population, Ages 18 and older	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided. Street connectivity and neighborhood aesthetics  <u>MULTI-COMPONENT:</u> 1. Neighborhood safety 2. Distance to park space in the area 3. Access to physical activity opportunities  <u>COMPLEX:</u> 1. Social support and self-efficacy  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. People not agreeing that their neighborhood was clean and tidy (physical disorder) were 2.67 times more likely to attain sufficient levels of activity than those people who agreed with the statement (OR=2.67, CI=1.28-5.55). 2. People whose home was classed as being in the middle tertile of registered dog numbers within 0.8 km were 66% more likely to have reported some recreational walking than those people living in a residence with the lowest tertile of registered dog numbers (OR=1.66, CI=1.13-2.43).  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. People with the most proximal parkland beyond a network distance of 0.6 k, were 41% more likely to achieve recommended levels of activity than those with parkland within this distance (OR=1.41, CI=1.01-1.97). 2. Individuals with a euclidian distance of 0.4 km from their home to a path were 69% less likely to walk in the previous week than those who had a footpath within that distance from their place of residence (OR=0.31, CI=0.18-0.55).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. People with the most proximal parkland beyond a network distance of 0.6 k, were 41% more likely to achieve recommended levels of activity than those with parkland within this distance (OR=1.41, CI=1.01-1.97).  (Note: Footpaths are equivalent to trails. Registered dog owners were examined as a proxy for unattended dogs. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories. Not all p-values were provided.)	1. People reporting high levels of self-efficacy were 93% more likely to attain sufficient activity than those people reporting low levels of self-efficacy (OR=1.93, CI=1.40-2.64). 2. People reporting high levels of social support for activity were 65% more likely to participate in recreational walking than those people who reported low levels of social support [OR=1.65, CI=(1.17-2.34)].
Mota, Gomes (2007) Portugal	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable General population, Urban, 11-18 year olds, average age: 14.7 ( $\pm 1.6$ ) years, (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided. Aesthetically pleasing environments  <u>MULTI-COMPONENT:</u> 1. Access to recreation facilities 2. Perceptions of neighborhood safety  <u>COMPLEX:</u> 1. Social environment  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. In girls, personal safety (crime rate) was significantly and negatively ( $\rho = -0.10$ , $p \leq 0.02$ ) associated with leisure time physical activity. 2. Logistic regression analysis showed that girls who agreed that "the crime rate in my neighborhood makes it unsafe or unpleasant to walk in my neighborhood" were more likely to be non-leisure time physically active (OR = 0.60, 95% CI = 0.39-0.91, $p=.02$ ).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. In girls, access to recreational facilities ( $\rho = 0.10$ , $p \leq 0.02$ ) was positively associated with leisure time physical activity.	1. In girls, screen time (TV watching: $\rho = -0.09$ , $p \leq 0.05$ , $p=.007$ ; computer use: $\rho = -0.10$ , $p \leq 0.05$ , $p=.006$ ) was negative and significantly associated with leisure time physical activity (LTPA). 2. Social environment for boys ( $\rho = 0.11$ , $p \leq 0.05$ ) and girls ( $\rho = 0.08$ , $p \leq 0.02$ ) showed to be significantly associated with LTPA.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Li, Dibley (2006) Chinaa	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  11-17 year olds	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Popluation Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Access to sidewalks  <b>MULTI-COMPONENT:</b> 1. Perceptions of safety 2. Access to recreational facilities (playgrounds, gyms, sports equipment, and public open spaces) 3. Access to physical activity during recess  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> <i>Community Level</i> 1. Concerns about neighborhood safety (OR= 2.1, 95% CI=1.1-4.1, p=0.03) was positively associated with inactivity. 2. Perceived unsafe neighborhoods were associated with a higher percentage of inactive adolescents, but the difference was not statistically significant (p=0.08).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. Access to public physical activity facilities (OR= 1.4, 95% CI=1.0-1.9, p=0.03 for moderate access and OR= 1.7, 95% CI=1.2-2.4, p<0.01 for difficult access) was positively associated with inactivity. 2. Lack of recreational facilities was associated with a higher percentage of inactivity in girls (OR=2.4, 95%CI= 1.6-3.5, p<0.001). 3. Adolescent boys living in surroundings without vacant fields were 1.7 times (95% CI= 1.2-2.5, p=0.01) more likely to be inactive.  <b>Community Design</b> <u>PHYSICAL ACTIVITY:</u> 1. Unavailability of video game shops around the home was associated with a higher percentage of inactive boys (OR=1.5, 95% CI= 1.1-2.1, p=0.02).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Humpel, Owen (2004) Australia	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  Adults, 57% Female	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Aesthetic perceptions of the neighborhood  <b>MULTI-COMPONENT:</b> 1. Perceptions of neighborhood safety 2. Access to areas for physical activity (beach, lake, facilities) 3. Distance to facilities  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<p><b>Safety-Interpersonal</b>  <u>PHYSICAL ACTIVITY:</u>  1. No evidence of a relationship between safety and neighborhood walking was found for men or women.  2. Men who perceived their environment as highly safe for walking were less likely to walk for pleasure (OR=0.22; 95% CI 0.06-0.78; p&lt;0.05).  3. A higher proportion of those with the most positive perceptions for all four environmental perception categories reported more neighborhood walking (data not shown).  4. Significantly higher proportions of those walking for exercise were found among those with the most positive perceptions for all four environmental perception categories (results not shown).</p> <p><b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b>  <u>PHYSICAL ACTIVITY:</u>  1. A higher proportion of those with the most positive perceptions for accessibility reported more walking for pleasure (45.2%; <math>\chi^2=7.28</math>, p&lt;0.05).  2. Participants reporting that a beach/lake was within easy walking distance reported significantly more neighborhood walking minutes (<math>M=224</math>) than did those reporting a beach/lake was not within walking distance (<math>M=139</math>; <math>F(2,379)=11.0</math>, p&lt;0.001); significantly more exercise walking (<math>M=163</math> compared to <math>M=100</math> minutes; <math>F(2,382)=9.72</math>, p&lt;0.01); and significantly more walking for pleasure compared to those perceiving that a beach/lake is not within walking distance (<math>M=33</math> and <math>M=21</math>, respectively; <math>F(2,380)=3.88</math>, p&lt;0.02).  3. For men, accessibility of facilities for walking demonstrated a negative relationship with neighborhood walking (for high walkers: OR=0.30; 95% CI 0.09-0.91; p&lt;0.05).  4. Women with moderately positive perceptions about accessibility were more than three times more likely to walk for pleasure (OR=3.51; 95% CI 1.64-9.15, p&lt;0.01).  5. A higher proportion of those with the most positive perceptions for all four environmental perception categories reported more neighborhood walking (data not shown).  6. Significantly higher proportions of those walking for exercise were found among those with the most positive perceptions for all four environmental perception categories (results not shown).</p> <p><b>Community Design</b>  <u>PHYSICAL ACTIVITY:</u>  1. Participants reporting that a beach/lake was within easy walking distance reported significantly more neighborhood walking minutes (<math>M=224</math>) than did those reporting a beach/lake was not within walking distance (<math>M=139</math>; <math>F(2,379)=11.0</math>, p&lt;0.001); significantly more exercise walking (<math>M=163</math> compared to <math>M=100</math> minutes; <math>F(2,382)=9.72</math>, p&lt;0.01); and significantly more walking for pleasure compared to those perceiving that a beach/lake is not within walking distance (<math>M=33</math> and <math>M=21</math>, respectively; <math>F(2,380)=3.88</math>, p&lt;0.02).</p> <p>(Notes: Environmental perceptions were based on aesthetics, accessibility, safety, and weather. Distance to nearest PA resource and access to nearest PA resources may overlap in their designated strategy categories.)</p>	Not Reported

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<b>Author</b> Kamphuis, Van Lenthe (2008) The Netherlands	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided. Adults, 25-75 years old  Compared with higher educational groups, people in the lowest education group were more likely to be female, and to be born in a country other than the Netherlands. (evaluation sample)	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided. Neighborhood aesthetics and density  <b>MULTI-COMPONENT:</b> 1. Neighborhood safety 2. Access to places for physical activity  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety-Interpersonal</b>  <b>PHYSICAL ACTIVITY:</b> 1. Unsafe neighborhood (OR=1.77, 95%CI: 1.18-2.65, p=0.005) increased the likelihood of not participating in sports. 2. In the full model, two neighborhood factors (safety and social cohesion), three household factors (material deprivation [crowding] and social deprivation [going out fortnightly and going on holiday yearly], and nine individual factors (six outcome expectancies, social support modeling, self-efficacy, and intention) remained statistically significant. Compared with the basic model, all factors together reduced the odds of doing no sports among the lowest educational group by 57% (OR=2.29, 95%CI: 1.7-3.07), for the second-lowest by 48% (OR=1.62, 95%CI: 1.34-1.96), and for the second-highest by 26% (OR=1.48, 95%CI: 1.23-1.78).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b>  <b>PHYSICAL ACTIVITY:</b> 1. Having insufficient places to go (OR=1.16, not significant) increased the likelihood of not participating in sports.	Not Reported
<b>Author</b> Maas, Verheij (2008) Netherlands	<b>Participation/ Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data was provided. General Population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data was provided. Access to neighborhood green space  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<b>Author</b> Timperio, Giles-Corti (2008) Australia	<b>Participation/Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided.  5-18 year olds	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided.  Neighborhood aesthetics  <b>MULTI-COMPONENT:</b> 1. Perceptions of safety from unguarded dogs 2. Access to public open spaces and recreational facilities near the home  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Safety Interpersonal</b> <u>PHYSICAL ACTIVITY:</u> 1. Adolescent girls had more moderate-to-vigorous physical activity after school if their closest public open space had signage regarding dogs ( $\beta=6.8$ min/day, $p<0.05$ ) compared with other girls. 2. Lighting along paths was inversely associated with weekend moderate-to-vigorous physical activity ( $\beta= -54.9$ min/day, $p<0.05$ ).  <b>Availability of Parks, Playgrounds, Trails, and Recreation Centers</b> <u>PHYSICAL ACTIVITY:</u> 1. There were no associations between any features of the child's closest public open space and younger boys' moderate-to-vigorous physical activity after school. 2. The presence of playgrounds was positively associated with younger boys' weekend moderate-to-vigorous physical activity ( $\beta=24.9$ min/day; $p<0.05$ ). 3. The number of recreational facilities was inversely associated with younger girls' moderate-to-vigorous physical activity after school ( $\beta= -2.6$ min/day, $p<0.05$ ) and on the weekend ( $\beta= -8.7$ min/day, $p<0.05$ ). 4. There were no associations between any features of the closest public open space and adolescent boys' moderate-to-vigorous physical activity after school. 5. There were no significant associations between public open space features and adolescents boys' or girls' moderate-to-vigorous physical activity on the weekend.	Not Reported
<b>Author</b> Rabin, Boehmer (2007) Europe	<b>Participation/Potential Exposure</b> Not Applicable  <b>High-Risk Population</b> Not Applicable  Only cross-sectional data provided  General population	<b>Representative</b> Not Applicable  <b>Potential Population Reach</b> Not Applicable  <b>Potential High Risk Population Reach</b> Not Applicable	<b>Intervention Components</b> Not Applicable  Only cross-sectional data provided  Density of motorways  <b>MULTI-COMPONENT:</b> 1. Urbanization (urban population density) 2. Public transportation 3. Neighborhood availability of fruits and vegetables in food stores  <b>Feasibility</b> Not Applicable  <b>Implementation Complexity</b> Not Applicable	<b>Population Impact</b> Not Applicable  <b>High-risk Population Impact</b> Not Applicable  <b>Sustainability</b> Not Applicable	<b>Community Design</b> <u>OVERWEIGHT/OBESITY:</u> 1. Overall obesity prevalence was inversely associated with urbanization (urban population: $\beta=-0.095$ , $p=0.080$ ).  <b>Transportation</b> <u>OVERWEIGHT/OBESITY:</u> 2. Overall obesity prevalence was inversely associated with transportation (total passenger cars: $\beta=-0.017$ , $p<0.0001$ , new passenger cars: $\beta= 0.081$ , $p=0.018$ , price of gasoline: $\beta=-0.095$ , $p=0.042$ , paved roads: $\beta=-0.064$ , $p=0.033$ , motorways: $\beta= 0.224$ , $p=0.022$ ). 3. Female obesity prevalence was inversely associated with transportation (passenger cars: $\beta=-0.020$ , $p<0.0001$ , new passenger cars: $\beta= -0.087$ , $p=0.028$ , price of gasoline: $\beta=-0.096$ , $p=0.041$ , paved roads: $\beta= -0.073$ , $p=0.032$ , density of motorways: $\beta= -0.227$ , $p=0.030$ ).  <b>Neighborhood Availability of Food Stores</b> <u>OVERWEIGHT/OBESITY:</u> 4. Overall obesity prevalence was inversely associated with food availability (available fat: $\beta=-0.323$ , $p=0.010$ , available fruits/vegetables: $\beta=-0.019$ , $p=0.049$ ). 5. Female obesity prevalence was inversely associated with food availability (available fat: $\beta=-0.399$ , $p=0.004$ ). 6. Male obesity prevalence was inversely associated with available fruits/vegetables ( $\beta=-0.022$ , $p=0.028$ ).  (Note: Light rail and public transit is often referred to as a passenger car in Europe.)	1. Overall obesity prevalence was inversely associated with economic variables (real domestic product: $\beta=-0.175$ , $p=0.002$ ; gross domestic product: $\beta=-0.168$ , $p<0.0001$ ) and policy (governance indicator: $\beta= 2.528$ , $p=0.007$ ).