IMPACT AND EFFECTIVENESS TABLE 48

Transportation

EFFECTIVENESS TABLES

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
United States				
Author Brown, Werner (2007) Utah **Design** Intervention Evaluation Before and after study **Duration** Low Light rail stop installed in fall 2005. Pre- and post-tests conducted in summer 2005 and summer 2005.	**Measures** *Neighborhood accessibility* (access to a convenient stop) **Outcome(s) Affected** Ridership/active transportation (accelerometer and survey)	**Net Positive for Physical Activity in the Study Population (Transportation)** **Transportation** PHYSICAL ACTIVITY: 1. Pre-and-post-test measures revealed that rail ridership is significantly related to more accelerometer measured bouts of moderate activity (Time 1, F [5,42] =3.12, p=0.018; Time 2, F [5,40]=4.71, p=0.002). 2. The addition of a convenient stop related to a significantly increased ridership of 68.75% at post-test (paired t [47]=-2.65, p=0.011). New rail riders did not simply switch from bus to rail use (reported bus ridership in previous 2 weeks; pre-test=1.90, post-test=1.85 rides).	**Somewhat Effective for Physical Activity in the Study Population** Study design = Intervention evaluation Intervention duration = Low Effect size = Net positive for physical activity in the study population	**Maintenance** Not Reported **Sampling / Representativeness** High Gender, ethnicity, and home ownership were comparable to Salt Lake City census statistics. (description of evaluation sample)
Author Li, Harmer (2009), Li, Harmer (2008), Li Harmer (2009) Oregon **Design** Association One prospective cohort study and two cross-sectional studies In the 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. **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (density of public transit stations, street connectivity, and land-use mix) **Outcome(s) Affected** Overweight/obesity (height and weight [BMI]) and physical activity (survey)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumptions: Individuals in neighborhoods with greater land-use mix and transportation accessibility will participate in greater levels of physical activity, which will lead to decreased overweight/obesity.)** **Transportation** PHYSICAL ACTIVITY: 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).	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
Author Chen, Gong (2008) New York, New Jersey, Connecticut **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (locations of transit stops, travel time from transit stop to destination) **Outcome(s) Affected** Physical activity (1997/1998 Household Interview Survey) and transit use	**Not Reported (for desired health outcomes)** **Positive Association for Transit Use in the Study Population** **(Assumptions: Accessibility to public transportation will lead to more engagement in active transportation rather than reliance on automobile.)** **Transportation** TRANSIT USE: 1. Longer distance to public transit stations will increase the propensity to use auto in home-based work tours (β=0.25E-04; p<0.05 for distance between the nearest transit stop and home and β=0.28E-04; p<0.05 for distance between the nearest transit stop and work). 2. Higher job accessibility at work by transit will significantly deter people from using auto in home-based work tours (β=-0.00026; p<0.05). (Note: In some studies distance to a location and access to that location may fall into overlapping strategies.) (Definitions: Higher job accessibility at work was defined as increased access to mass transit and areas near the CBD [area south of 60th street over 2 million individuals work in this area]. Employment density examined how many individuals were working in the same area or populating the space during the work day. Home based worked tours were defined as trips that started and ended at home, had at least one work related activity between start and finish, were not exclusively conducted by non-motorized mode of travel, and were conducted by individuals with at least one household vehicle.)	**More Evidence Needed** Study design = Association Effect size = Not reported	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported
Author Chatman (2003) United States **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (availability of subways or streetcars) **Outcome(s) Affected** Travel behavior and active transit (1995 Nationwide Personal Transportation Survey)	**Not Reported (for desired health outcomes)** **Positive Association for Transit Use in the Study Population** **(Assumptions: Increased density and access to mass transit leads to increased active transportation.)** **Transportation** TRAVEL BEHAVIOR: 1. Using a joint logit regression showed that subway/streetcar availability significantly decreases the likelihood (coefficient= -0.305, 95%CI= -0.504- -0.107, p=0.003) of driving to work, whereas having to pay to park is significantly associated with an increased likelihood of driving to work (coefficient= 0.422, 95%CI= 0.174-0.669, p=0.001).	**More Evidence Needed** Study design = Association Effect size = Not reported	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported
Author Rodriguez, Aytur (2008) Minnesota and Maryland **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (distance to bus stops) **Outcome(s) Affected** Transport walking (International Physical Activity Questionnaire-IPAQ)	**No Association for Physical Activity in the Study Population (Transportation)** **(Assumption: More walking for transportation is positively related to having access to transit and shopping areas with difficulty parking.)** **Transportation** PHYSICAL ACTIVITY: 1. The interaction effect of high transit access in the presence of high access to destinations is related to higher walking levels for transport (OR=1.23; 95%CI: 1.01, 1.30). 2. Self-reported ease of walking to a transit stop was negatively associated with transport walking (OR=0.86; 95%CI: 0.76, 0.97) and to non-occupational walking (OR=0.85; 95%CI: 0.73, 0.99).	**No Association for Physical Activity in the Study Population** Study design = Association Effect size = No association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
Author Forsyth, Hearst (2008), Forsyth, Oakes (2007), Oakes, Forsyth (2007) Minnesota **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (access to transit stops) **Outcome(s) Affected** Walking behavior and total physical activity (International Physical Activity Questionnaire and 7-day travel and walking diary)	**No Association for Physical Activity in the Study Population (Transportation)** **(Assumption: Improved street design and access to destinations will increase physical activity)** **Transportation** PHYSICAL ACTIVITY: 1. Travel walking measured both by survey and diary was positively correlated with transit (IPAQ; CE; 0.3716, Diary; CE; 0.4652, p<0.05). 2. Leisure walking was negatively correlated with transit stop density (IPAQ CE; -0.4882; Diary CE; -0.3360; p<0.05 for both).	**No Association for Physical Activity in the Study Population** Study design = Association Effect size = No association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported
Author Hoehner, Brennan (2005) Missouri and Georgia **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood walkability* (access to places to be active, land-use mix, street segments, sidewalks) **Outcome(s) Affected** Transportation activity, meeting physical activity recommendations (telephone survey)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumption: Individuals with greater access to places to be physically active will participate in increased transportation and/or recreational physical activity.)** **Transportation** PHYSICAL ACTIVITY: 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 (p<0.05 for trend).	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported The sample was diverse with respect to age, ethnicity, and educational attainment, and slightly under-represented men.
Author Coogan, Karash (2007) United States **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Opportunities for active transport* (access to transit station, car ownership, neighborhood compactness and form) **Outcome(s) Affected** Walking behavior (survey)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumptions: Individuals in environments with increased residential density, mixed land-use, access to transit, and decreased access to automobiles will participate in increased walking.)** **Transportation** PHYSICAL ACTIVITY: 1. Individuals living in a compact neighborhood have approximately a 20% walk mode share, while those not living in such a neighborhood have less than a 9% mode share. 2. For individuals living in a compact neighborhood, the high values group has a 24% walk mode share, while the low values group has only 10% (p<0.01). 3. Individuals with high values in a non-compact neighborhood have a 12% walk mode share and those with low values in a non-compact neighborhood with a 6% walk mode share (p<0.01). (Note: Neighborhood form consists of housing type, land use mix, and transit availability. Compact neighborhoods refer to mixed housing developments, access to commerical district, and access to transit services.)	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activit in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
Author Zhu, Lee (2009) Texas **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood walkability* (sidewalk availability and quality, maintenance and condition of neighborhood amenities, presence of tree shade and street lighting, bus stops, land use mix) **Outcome(s) Affected** Physical activity questionnaire (PedsQL)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(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.)** **Transportation** PHYSICAL ACTIVITY: 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.	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activit in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported
International				
Author Rabin, Boehmer (2007) Europe **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (cars, paved roads, price of gasoline) **Outcome(s) Affected** Overweight/obesity (national level surveys and databases [height and weight])	**Positive Association for Overweight/obesity in the Study Population (Transportation)** **(Assumptions: Increased access to paved roads and vehicles and decreased price of gasoline will lead to less physical activity for active transport, which will lead to increased levels of overweight/obesity.)** **Transportation** OVERWEIGHT/OBESITY: 1. Overall obesity prevalence was inversely associated with transportation (total passenger cars: β=-0.017, $p<0.001$, new passenger cars: β=-0.081, p=0.018, price of gasoline: β=-0.095, p=0.042, paved roads: β=-0.064, p=0.033, motorways: β=-0.224, p=0.022). 2. Female obesity prevalence was inversely associated with transportation (passenger cars: β=-0.020, $p<0.001$, new passenger cars: β=-0.087, p=0.028, price of gasoline: β=-0.096, p=0.041, paved roads: β=-0.073, p=0.032, density of motorways: β=-0.227, p=0.030).	**Positive Association for Overweight/ obesity in the Study Population** Study design = Association Effect size = Positive association for overweight/ obesity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** 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.
Author 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 **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (distance to nearest public transit stations, access to motor vehicle) **Outcome(s) Affected** Overweight/obesity (height and weight [body mass index]) and walking behavior (survey)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumption: Individuals with greater access to places for physical activity and public transportation will be more likely to participate in greater amounts of physical activity, which will lead to decreased levels of overweight/obesity.)** **Transportation** PHYSICAL ACTIVITY: 1. Residing within 1500 meters (m) of transit stations (OR=2.38, 95% CI: 1.67-3.39, $p<0.001$) was significantly associated with regular walking for transport. 2. Having a transit station located within 1500 m was positively associated with regular walking for recreation (OR=1.50, 95% CI: 1.09-2.05, $p<0.05$).	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
Author Hume, Timperio (2009); Timperio, Crawford (2004) Australia **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (perceptions of public transportation, traffic safety, safety from crime, and access to sports facilities) **Outcome(s) Affected** Cycling or walking (parental questionnaire)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumptions: Positive neighborhood perceptions of traffic, safety, social support and access to public transportation lead to increased active commuting.)** **Transportation** PHYSICAL ACTIVITY: *Baseline* 1. Five to six year old girls whose parents believed that public transport was limited in their area were 60% less likely (95% CI=0.2, 0.9) than other children to walk or cycle at least three times per week (p<0.05). 2. A lower likelihood of walking or cycling among older girls, was associated with parent's belief that there was limited public transport in the area (OR= 0.7, 95% CI=0.4, 0.97, p<0.05).	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported
Author Humpel, Owen (2004); Humpel, Marshall (2004) Australia **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood walkability* (perceptions of access to aesthetically pleasing and convenient places to be active, safety from traffic and crime) **Outcome(s) Affected** 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)	**Positive Association for Physical Activity in Men (Transportation)** **No Association for Physical Activity in Women (Transportation)** **(Assumption: Perceiving the environment as aesthetically pleasing, convenient, and perceiving traffic as not being a problem increases individual physical activity levels.)** **Transportation** PHYSICAL ACTIVITY: 1. Men with high 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. Women with moderate 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, than women with low access. 3. 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.)	**Positive Association for Physical Activity in Men** **No Association for Physical Activity in Women** Study design = Association Effect size = Positive association for physical activity in men and no association for physical activity in women	**Maintenance** Not Applicable **Sampling / Representativeness** 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
Author De Bourdequdhuij, Sallis (2003) Belgium **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (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) **Outcome(s) Affected** Moderate and vigorous intensity physical activity, walking, and sedentary behavior (International Physical Activity Questionnaire-short form [IPAQ] and seven-page questionnaire) and Overweight/obesity (Height and weight [body mass index])	**Positive Association for Physical Activity in Females (Transportation)** **(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].)** **Transportation** PHYSICAL ACTIVITY: 1. In females, more walking was associated with greater ease of the walk to public transportation stops (semi-partial correlate; 0.16, $p \leq 0.05$).	**Positive Association for Physical Activity in Females** Study design = Association Effect size = Positive association for physical activity in females	**Maintenance** Not Applicable **Sampling / Representativeness** Low Respondents appear to have better jobs, have a higher education, are more often employed, and underrepresent the number of individuals living alone compared with the Flemish reference population.
Author Craig, Brownson (2002) Canada **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *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) **Outcome(s) Affected** Physical activity (1996 Canadian Census self-administered questionnaire)	**Positive Association for Physical Activity in the Study Population (Transportation)** **(Assumption: Access to walkable routes for pedestrians and positive perceptions of neighborhood safety and the social environment lead to increased levels of physical activity.)** **Transportation Policies** PHYSICAL ACTIVITY: 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%. (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.)	**Positive Association for Physical Activity in the Study Population** Study design = Association Effect size = Positive association for physical activity in the study population	**Maintenance** Not Applicable **Sampling / Representativeness** 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
Author Burton, Turrell (2005) Australia **Design** Association Cross-sectional study **Duration** Not Applicable	**Measures** *Neighborhood accessibility* (access to places to be active, safety, aesthetic quality, traffic, street lights, transit) **Outcome(s) Affected** Moderate and vigorous intensity physical activity and walking (questionnaire)	**More Evidence Needed-Data Not Provided (Transportation)** **(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.)** **Transportation Policies** PHYSICAL ACTIVITY: 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)	**More Evidence Needed** Study design = Association Effect size = More evidence needed	**Maintenance** Not Applicable **Sampling / Representativeness** Not Reported

IMPACT TABLES

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
United States						
Author Brown, Werner (2007) Utah	**Participation/ Potential Exposure** Participation = Not Reported Exposure = High Site visits yielded 529 addresses (similar to Census 2000 reports) able to access the rail stop easily. **High-Risk Population** Not Reported Consistent with city revitalization designation, the neighborhood was substantially poorer, and household incomes averaged $24,000 compared to $43,367 for Salt Lake City (after Consumer Price Index inflation adjustments to the year 2005). 41 ± 13.82 years old (average age Time 2 sample), 79% White (Time 2 sample),16% Hispanic (Time 2 sample), 55% Single-family detached housing (Time 2 sample) [evaluation sample]	**Representative** Not Applicable **Potential Population Reach** More Evidence Needed Exposure = High Representativeness = Not reported Participation = Not reported **Potential High Risk Popluation Reach** More Evidence Needed High risk population = High Representativeness = Not reported	**Intervention Components** Simple The addition of a convenient rail stop to increase access to transport and ridership rates in the community **Feasibility** Intervention Feasibility = Low Policy Feasibility = High Intervention activities: The new rail stop was added between two existing stops and paid for by Salt Lake City. Special expertise: Not reported Resources needed: Labor and materials to build the rail stop, land to convert to rail area, labor and personnel to operate rail Costs : Not reported **Implementation Complexity** High Intervention components = Simple Feasibility =High	**Population Impact** More Evidence Needed Effectiveness =Somewhat effective for physical activity in the study population Potential population reach =More evidence needed Implementation complexity = High **High-risk Population Impact** More Evidence Needed Effectiveness for high-risk populations = Not reported Potential high-risk population reach = More evidence needed Implementation complexity = High **Sustainability** Not Reported	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Li, Harmer (2009); Li, Harmer (2008); Li, Harmer (2009) Oregon	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data provided Adults aged 50-75 27% Lower income 92% White 57% Male (evaluation sample)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Density and access to public transit stations MULTI-COMPONENT: 1. Density of neighborhood fast food outlets 2. Land-use mix and total number of neighborhood destinations 3. Neighborhood walkability (street connectivity) **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Street Design** PHYSICAL ACTIVITY: 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 (β=2.98, p=0.003) and having an easily walkable/cyclable neighborhood (β=2.75, p=0.0001) was significantly positively associated with walking frequency. Easy to walk/cycle remained significantly associated with walking frequency in the multiple regression model (p<0.05). **Neighborhood Availability of Restaurants** OVERWEIGHT/OBESITY: 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). **Community Design** OVERWEIGHT/OBESITY: 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). PHYSICAL ACTIVITY: 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=0.011) 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.)	1. Knowing lots of people in the area (β=2.61, p=0.05); and having lots of friends in the area (p=0.08) were significantly positively associated with walking frequency.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Chen, Gong (2008) New York, New Jersey, Connecticut	**Participation/ Potential Exposure** Not Applicable. **High-Risk Population** Not Applicable Only cross-sectional data provided General Population About 70% of the sample in the 1997/1998 survey lived outside of New York City, where the main mode of transportation is auto.	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross sectional data provided Access to public transit **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	Not Reported	1. Employment density at work is a significant barrier to the auto mode (coefficients; -0.10 E-05, $p<0.05$).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Chatman (2003) United States	**Participation/ Potential Exposure** Not Applicable. **High-Risk Population** Not Applicable Only cross-sectional data was provided Adults, General population	**Representative** Not Applicable Only cross-sectional data provided Respondents missing data on workplace land use and household income, systematically differed from the rest of the sample **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross sectional data provided Access to transit **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	Not Reported	1. Using a joint logit regression analysis revealed that workplace employment density is associated with a lower likelihood of car commuting (coefficient=-0.032, 95%CI= -0.036- -0.027, p<0.001). For every addition of 1.5 employees per gross acre at work the probability of using a vehicle decreases by 3%. 2. Using a joint logit regression revealed that workplace employment density is associated with reduced personal commercial vehicle miles traveled regardless of whether a car was used to commute to work (coefficient= -0.025, 95% CI= -0.048- -0.002, p=0.030). 3. Using a joint logit regression revealed that for every additional 1.5 residential housing units per gross acre there is a 12% lower likelihood of car commuting (coefficient=-0.125, 95%CI= -0.170 to -0.080, p<0.001). The direct effect of residential density on personal commercial vehicles miles traveled is statistically indistinguishable from zero.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Rodriguez, Aytur (2008) Minnesota and Maryland	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data provided Adults	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to public transit MULTI-COMPONENT: 1. Land-use mix diversity **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** PHYSICAL ACTIVITY: 1. The interaction effect of high transit access in the presence of high access to destinations is related to higher walking levels for transport (OR=1.23; 95%CI: 1.01, 1.30). 2. The results confirmed the association between parking difficulty and transport walking (OR=1.40; 95% CI: 1.17, 1.67) and the association between parking difficulty and overall walking (OR=1.17; 95% CI: 1.02, 1.35). 3. Higher perceived parking difficulty in local shopping areas is positively related to more transport walking (OR=1.41; 95% CI: 1.18, 1.69) and overall walking (OR=1.18; 95% CI: 1.02, 1.37).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Forsyth, Hearst (2008); Forsyth, Oakes (2007); Oakes, Forsyth (2007) Minnesota	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data provided Adults, 65% Female, 81% Caucasian (evaluation sample)	**Representative** 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. **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to neighborhood transit <u>MULTI-COMPONENT:</u> 1. Street connectivity 2. Access to pedestrian and bicycle paths 3. Residential density and land-use mix 4. Perceptions of neighborhood safety from crime <u>COMPLEX:</u> 1. Social environment **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Street Design** <u>PHYSICAL ACTIVITY:</u> 1. Larger blocks seem to increase odds ratios for leisure walking by about 40% (OR=1.40; 95%CI 0.96, 2.05, p-value not reported). 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) (p<0.05). 3. 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) 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). 4. Leisure walking was negatively correlated with sidewalks (length/road IPAQ CE; -0.3318, p<0.05) and street lights and connected street patterns (IPAQ # access points CE; -0.3349; IPAQ connected nodes CE; -0.3643, p<0.05). **Availability of Parks, Playgrounds, Trails, and Recreation Centers** <u>PHYSICAL ACTIVITY:</u> 1. Using Spearman's correlations there was a 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). **Safety-Interpersonal** <u>PHYSICAL ACTIVITY:</u> 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/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<0.05). **Community Design** <u>PHYSICAL ACTIVITY:</u> 1. 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<0.10. 2. 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). 3. Park distance was negatively correlated with accelerometer readings, however while the values were significant they were low (results not shown). *(continued next page)*	1. Using Spearman's correlations there were significant positive associations 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).

(Continued from previous study)						
					4. 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). 5. 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). 6. 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) ($p<0.05$). 7. Notably absent were any positive correlations with mixed use-apart from a modest one with miscellaneous retail (CE; 0.3505, $p<0.05$). 8. Travel walking measured both by survey and diary was positively correlated with social land uses (IPAQ; CE; 0.4166; Diary; CE; 0.3379, $p<0.05$). 9. Leisure walking was negatively correlated with tax exempt land uses (IPAQ CE; -0.4214, $p<0.05$). (Note: Social land uses includes measures of land-use mix. Tax exempt land-uses include community facilities that are tax exempt.)	

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Hoehner, Brennan (2005) Missouri and Georgia	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data provided Adults, 18 to 96 years old, 63.6% White, 32.6% Black, 3.8% other minority (sample)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Proximity to public transportation <u>MULTI-COMPONENT:</u> 1. Land-use, access to locations, and neighborhood features 2. Presence or absence of sidewalks 3. Access to recreational areas 4. Neighborhood physical disorder **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** <u>PHYSICAL ACTIVITY:</u> 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 (OR=3.5, 95%CI: 2.3-5.5) or meet recommendations (OR=3.3, 95%CI: 2.0-5.4) through transportation activity than respondents in the lowest quartile ($p<0.05$ for trend). **Availability of Parks, Playgrounds, Trails, and Recreation Centers** <u>PHYSICAL ACTIVITY:</u> 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). **Safety-Interpersonal** <u>PHYSICAL ACTIVITY:</u> 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 ($p<0.05$ 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 ($p<0.05$ for trend). **Street Design** <u>PHYSICAL ACTIVITY:</u> 1. 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 ($p<0.05$ for trend).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Coogan, Karash (2007) United States	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data provided Adults, 36% < 30 years of age, 33% 30-40 years of age, 67% Female, 81% White, 19% Minority (evaluation sample)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to transit <u>MULTI-COMPONENT:</u> 1. Neighborhood density **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** <u>PHYSICAL ACTIVITY:</u> 1. Using a regression analysis, all 3 variables were associated with walking; neighborhood form; (beta= -.23, t= -6.91, p<0.001), auto availability; (beta= -0.21, t=-6.22, p<0.001), urban values; (beta= -0.18, t=-5.39, p<0.001). 2. For urban and environmental values, the high values group had a 16% mode share to walking, while the low values group has a 6% mode share. 3. Individuals living in a compact neighborhood have approx. a 20% walk mode share; while those not living in such a neighborhood have less than a 9% mode share. 4. For individuals living in a compact neighborhood, the high values group has a 24% walk mode share, while the low values group has only 10% (p<0.01). 5. Individuals with high values in a non-compact neighborhood have a 12% walk mode share and those with low values in a non-compact neighborhood with a 6% walk mode share (p<0.01). 6. When there is a combination of the three supportive (environment/neighborhood form, auto use, and demographics) conditions there is a range from 28% walk share while with three non-supportive conditions there is a 5% walk mode share (p<0.01). (Note: Compact neighborhoods refer to mixed housing developments, access to commerical district, and access to transit services.)	1. Car ownership changed the amount of people walking for transportation; those with one car per adult had a walk share of 19%; those from households with at least one car per adult have a walk share of 8%. For individuals with low levels of auto availability, the high value groups had a 21% walk share, compared with the low values groups at 11% (p<0.01). 2. Individuals with high levels of auto availability in the high values group had a walk share of 12% walk compared with low values at 5% (p<0.01). Individuals with a high auto availability in a compact neighborhood had a 13% walk share compared with 7% living outside such a neighborhood (p<0.01). Individuals living in a compact neighborhood with low auto availability showed a 27% walk share compared with only 13% for those with high auto-availability (p<0.01).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Zhu, Lee (2007) Europe	**Participation/ Potential Exposure** Not Applicable. **High-Risk Population** 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)	**Representative** Not Applicable Only cross-sectional data provided **Potential Population Reach** Not Applicable **Potential High Risk Population Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to public transit MULTI-COMPONENT: 1. Perceptions of neighborhood traffic safety 2. Access to land use mix 3. Availability and quality of sidewalks **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** PHYSICAL ACTIVITY: 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. **Safety-Traffic** PHYSICAL ACTIVITY: 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). **Street Design** PHYSICAL ACTIVITY: 1. Sidewalk availability and quality (maintenance, width, buffers from traffic, and no obstructions) was not significantly associated with children's walking behaviors. 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<0.1).	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.
International						
Author Rabin, Boehmer (2007) Europe	**Participation/ Potential Exposure** Not Applicable. **High-Risk Population** Not Applicable Only cross-sectional data provided General population	**Representative** Not Applicable Only cross-sectional data provided As part of the selection criteria only studies that were nationally representative were used. **Potential Population Reach** Not Applicable **Potential High Risk Population Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to public transportation MULTI-COMPONENT: 1. Availability of fruits and vegetables 2. Urbanization (urban population density) **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** OVERWEIGHT/OBESITY: 1. Overall obesity prevalence was inversely associated with urbanization (urban population: β=-0.095, p=0.080). **Neighborhood Availability of Food Stores** OVERWEIGHT/OBESITY: 1. Overall obesity prevalence was inversely associated with food availability (available fat: β=-0.323, p=0.010, available fruits/vegetables: β=-0.019, p=0.049). 2. Female obesity prevalence was inversely associated with food availability (available fat: β=-0.399, p=0.004). 3. Male obesity prevalence was inversely associated with available fruits/vegetables (β=-0.022, p=0.028).	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author 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	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** 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.	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to transit stations MULTI-COMPONENT: 1. Land-use mix and urbanization 2. Access to sidewalks, tree-lined streets, and paths 3. Access to recreation destinations 4. Neighborhood perceptions of traffic safety 5. Neighborhood perceptions of safety from crime. **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Street Design** OVERWEIGHT/OBESITY: 1. Male obesity prevalence was inversely associated with density of motorways (β=-0.197, p=0.067). 2. Overweight individuals were more likely to live on highways (OR=4.24; 95%CI: 1.62-11.09), streets with no sidewalks (OR=1.4, 95%CI: 1.01-1.95), streets with sidewalks on one side only (OR=1.32; 95%CI: 0.98-1.79) and perceive no paths within walking distance (OR=1.42; 95% CI: 1.08-1.86). PHYSICAL ACTIVITY: 3. 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 OR=1.25, 95%CI: 0.90-1.74). 4. Respondents were more likely to walk for transport if they perceived that their neighborhood had sidewalks (OR=1.65, 95%CI: 1.12-2.41, p=0.011). 5. 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)R=1.49, 95%CI: 0.96-2.33). **Availability of Parks, Playgrounds, Trails, and Recreation Centers** PHYSICAL ACTIVITY: 1. Having a beach within 1500 m was positively associated with irregular walking for recreation (OR=1.97, 95% CI: 1.01-3.83, p<0.05) and regular vigorous physical activity (OR=1.93, 95% CI: 1.20-3.13, p<0.01). 2. 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), having access to a motor vehicle (OR=0.51, 95%CI: 0.26-0.99, p<0.05), and having a club membership (OR=6.83, 95%CI: 3.39-13.73, p<0.001) were associated with the use of pay-destinations located in the neighborhood. 3. 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. 4. 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. 5. 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). 6. 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). 7. 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). **Safety-Interpersonal** PHYSICAL ACTIVITY: 1. 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). 2. 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). 3. 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). *(continued next page)*	Not Reported

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					Safety-Traffic PHYSICAL ACTIVITY: 1. 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). 2. 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). **Community Design** OVERWEIGHT/OBESITY: 1. Overall obesity prevalence was inversely associated with urbanization (urban population: β=-0.095, p=0.080). PHYSICAL ACTIVITY: 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 OR=1.25, 95%CI: 0.90-1.74).	

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Hume, Timperio (2009); Timperio, Crawford (2004) Australia	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** Not Applicable Only cross-sectional data was provided 5-18 year olds; mean age=9.1±0.3 years (younger children), mean age= 14.5±0.6 years (adolescents), 47% Male (2004 evaluation sample)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data was provided Access to public transportation MULTI-COMPONENT: 1. Neighborhood perceptions of traffic safety 2. Access to facilities for physical activity **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Safety-Traffic** PHYSICAL ACTIVITY: *Baseline* 1. Five to six year old boys whose parents believed that there was heavy traffic in their area were 2.8 times more likely (95% CI=1.1, 6.8, p<0.05) to walk or cycle at least three times per week than other children. 2. Ten to twelve year old boys whose parents believed that there were no lights or crossings for their child to use were 60% less likely to walk or cycle (OR=0.4, 95% CI=0.2, 0.7, p<0.01). 3. A lower likelihood of walking or cycling among older girls was associated with parent's belief that their child needed to cross several roads to reach play areas (OR=0.4, 95% CI=0.2, 0.8, p<0.01). *Follow-up* 4. Adolescents whose parents reported that there were no traffic lights or crossings available were only half as likely (OR=0.4; CI=0.2, 0.8; p=0.01) to increase their active commuting, while those whose parents were satisfied with the number of pedestrian crossings in their neighborhood were twice as likely (OR=2.4; CI=1.1, 5.4; p=0.03) to increase their active commuting. **Availability of Parks, Playgrounds, Trails, and Recreation Centers** PHYSICAL ACTIVITY: *Baseline* 1. A lower likelihood of walking or cycling among older girls, was associated with child's belief that there were no parks or sports grounds near home (OR=0.5, 95% CI= 0.3, 0.8, p<0.01).	BASELINE 1. Five to six year old girls whose parents owned more than one car were 70% (95% CI=0.1, 0.8) less likely than other children to walk or cycle at least three times per week (p<0.05 for both). *Follow-up* 2. Active commuting significantly increased between 2004 and 2006 among children (Mean increase=1.04 trips/week, SD=3.15, p=0.0004) and adolescents (mean increase=0.65 trips/ week, SD=3.66, p=0.02). 3. Children whose parents knew many people in their neighborhood were more likely to increase their active commuting (OR=2.6, CI=1.2, 5.9; p=0.02) compared with other children. 4. Active commuting significantly increased between 2004 and 2006 among children (Mean increase=1.04 trips/week, SD=3.15, p=0.0004) and adolescents (mean increase=0.65 trips/ week, SD=3.66, p=0.02).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Humpel, Owen (2004); Humpel, Marshall (2004) Australia	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** 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)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to public transit MULTI-COMPONENT: 1. Perceptions of traffic safety 2. Accessibility of paths, parks, and other walking opportunities 3. Perceptions of community convenience to facilities 4. Neighborhood aesthetic quality **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Safety-Traffic** PHYSICAL ACTIVITY: 1. 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<0.01, increase of 30 minutes; OR=0.29, 95%CI=0.15-0.54, p<0.001, increase of 60 minutes; OR=0.39, 95%CI= 0.21-0.73, p<0.01). 2. Increased perceptions that traffic was not a problem were significantly associated with women being 1.76 (95%CI=1.01-3.05, p<0.05) times more likely to have increased their walking for 30 minutes or more. 3. 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). **Availability of Parks, Playgrounds, Trails, and Recreation Centers** PHYSICAL ACTIVITY: 1. Men with the highest scores for convenience (OR=2.20, 95% CI=2.21-3.99, p<0.01) were more likely to walk in their neighborhood than individuals with lower scores. 2. Women with moderate convenience (OR=3.19, 95% CI=1.81-5.59, p<0.001) were more likely to report higher levels of walking and higher total physical activity. 3. 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. 4. 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). 5. 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). 6. 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). 7. Men who increased their perception of 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 (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. 8. 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 in the neighborhood when compared to those with low scores. **Community Design** PHYSICAL ACTIVITY: 1. Men with high scores for 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. Women with moderate 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. 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. 3. 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. *(continued next page)*	1. 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. 2. 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). 3. 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). 4. 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). 5. 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). *(continued next page)*

(Continued from previous study)						
					Street Design PHYSICAL ACTIVITY: 1. Men with moderate (OR=1.77, 95% CI=1.06-2.97, p<0.05) and high aesthetic scores (OR=1.91, 95% CI=1.08-3.37, 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) 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) compared to men with no perception change. (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.)	6. 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).

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author De Bourdequdhuij, Sallis (2003) Belgium	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** 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)	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data was provided Access to public transportation MULTI-COMPONENT: 1. Quality of and access to sidewalks and bike lanes 2. Access to shops, residential density, land use mix, connectivity 3. Access to physical activity facilities 4. Perceptions of neighborhood safety from crime **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Street Design** PHYSICAL ACTIVITY: 1. Greater availability of sidewalks in the neighborhood was associated with walking in males (semi-partial correlate; 0.14, p≤0.05). **Community Design** OVERWEIGHT/OBESITY: 1. Participants with a higher body mass index [BMI] reported fewer convenient physical activity facilities (Pearson r=-0.11, p<0.05). PHYSICAL ACTIVITY: 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). SEDENTARY BEHAVIOR: 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). **Safety-Interpersonal** OVERWEIGHT/OBESITY: 1. Participants with a higher BMI reported less safety from crime (Pearson r= -0.11, p<0.05). SEDENTARY BEHAVIOR: 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). **Availability of Parks, Playgrounds, Trails, and Recreation Centers** OVERWEIGHT/OBESITY: 1. Participants with a higher BMI reported fewer convenient physical activity facilities (Pearson r=-0.11, p<0.05). PHYSICAL ACTIVITY: 2. In males, vigorous intensity physical activity was related to more convenient physical activity facilities (semipartial 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).	1. For females, less emotional satisfaction with the neighborhood was associated with greater amounts of sitting (semi-partial correlate= -0.15, p≤0.05). 2. In males, moderate intensity activity was related to more satisfaction with neighborhood services (semi-partial correlate; 0.15, p≤0.05). 3. 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
Author Craig, Brownson (2002) Canada	**Participation/ Potential Exposure** Not Applicable **High-Risk Population** 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.	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data was provided Access to different transportation modes MULTI-COMPONENT: 1. Perceptions of safety from crime 2. Access to walkable routes for pedestrians 3. Neighborhood aesthetics 4. Perceptions of traffic safety COMPLEX: 1. Social support in the environment **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Community Design** PHYSICAL ACTIVITY: 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-ratio (23)=-3.61, p=0.002; Coefficient; -0.77) and suburban neighborhoods (T-ratio (23)=-4.42, p=0.0001; Coefficient=-0.12) than in urban neighborhoods. **Street Design** PHYSICAL ACTIVITY: 1. Walking to work was significantly related to the environment score (T-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 degree of urbanization altered the relationship between the environment score and walking to work (no statistical data) 3. The predicted environment score was lower in both small urban (T-ratio (23)=-3.61, p=0.002; Coefficient; -0.77) and suburban neighborhoods (T-ratio (23)=-4.42, p=0.0001; Coefficient=-0.12) than in urban neighborhoods. 4. The environment score was related to the percentage walking to work, controlling for degree of urbanization (T-ratio (23)=2.03, p=0.054; Coefficient=0.02). **Safety-Interpersonal** PHYSICAL ACTIVITY: 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-ratio (23)=-3.61, p=0.002; Coefficient; -0.77) and suburban neighborhoods (T-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-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-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%.

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
Author Burton, Turrell (2005) Australia	**Participation/ Potential Exposure** Not Applicable. **High-Risk Population** Not Applicable Only cross-sectional data provided Adults, 18-64 years old	**Representative** Not Applicable **Potential Population Reach** Not Applicable **Potential High Risk Popluation Reach** Not Applicable	**Intervention Components** Not Applicable Only cross-sectional data provided Access to public transit <u>MULTI-COMPONENT:</u> 1. Neighborhood aesthetics 2. Access to places for physical activity 3. Access to streetlights (safety) 4. Perceptions of neighborhood traffic safety <u>COMPLEX:</u> 1. Social support in the neighborhood 2. Self-efficacy for physical activity **Feasibility** Not Applicable **Implementation Complexity** Not Applicable	**Population Impact** Not Applicable **High-risk Population Impact** Not Applicable **Sustainability** Not Applicable	**Safety Interpersonal** <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables contributed the least to vigorous intensity activity (no results shown). **Street Design** <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables (physical features, aesthetic features, facilities) contributed the least to vigorous intensity activity. 2. The proportion of unique variation (Nagelkerke R^2) accounted for in walking, moderate-intensity, vigorous-intensity activity, and total physical activity by the environmental correlate group is 0.6, 1.1, 0.4, and 1.2, respectively. 3. Neighborhood aesthetics contributed more to walking (Nagelkerke R^2=0.4%), and the barrier of family obligations contributed more to total and moderate-intensity activity. **Availability of Parks, Playgrounds, Trails, and Recreation Centers** <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables (facilities) contributed the least to vigorous intensity activity. **Safety-Traffic** <u>PHYSICAL ACTIVITY:</u> 1. Environmental variables (traffic) contributed the least to vigorous intensity activity. 2. The proportion of unique variation (Nagelkerke R^2) accounted for in walking, moderate-intensity, vigorous-intensity activity, and total physical activity by the environmental correlate group is 0.6, 1.1, 0.4, and 1.2, respectively. (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