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Regional differences in walking frequency and BMI: What role does the built environment play for Blacks and Whites?

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Abstract

Studies have found that urban sprawl explains many regional differences in BMI and walking behavior. Yet, African Americans, who often live in dense, urban neighborhoods with exemplar street connectivity, suffer disproportionately from obesity. This study analyzed walking and BMI among 1124 Whites and 691 Blacks in Los Angeles County and southern Louisiana in relation to neighborhood safety, street connectivity, and walking destinations. While the built environment partly explains regional differences in walking and BMI among Whites, the magnitude of effect was modest. There were no regional differences in outcomes for African Americans; individual rather than neighborhood characteristics served as the best predictors.

Keywords

BMI; walking; African Americans; sprawl; Whites; built environment

Introduction

Because neighborhood design has been associated with physical activity, it may explain why obesity rates vary significantly by state and region over time (Mokdad et al., 1999, Mokdad et al., 2001, Mokdad et al., 2003, Galuska et al., 2006). One study found that states with the highest rates of urban sprawl also suffered the steepest increases in obesity (Vandegrift and Yoked, 2004). Many argue that urban sprawl is unhealthy because it discourages an active lifestyle which includes walking, bicycling, and other forms of exercise. Poor street connectivity and large blocks in sprawling neighborhoods increase trip distances; modern suburban development practices routinely segregate land uses, separating residents from walking destinations like stores and places to exercise like parks (Plantinga and Bernell, 2007). Studies of both metropolitan areas (Lopez, 2004, Ewing et al., 2003) and individuals (Frank et al., 2004) have identified a link between urban sprawl and obesity.

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Paradoxically, African Americans, who have higher obesity rates than non-Hispanic whites, often live in urban neighborhoods that are, in terms of their density, high street connectivity, and many walking destinations, models of healthy design (Lopez and Hynes, 2006). Yet these same neighborhoods also tend to have worse access to parks (Gordon-Larsen et al., 2006, Godbey and Graefe, 1992, Wolch et al., 2005), higher concentrations of poverty (Sampson and Wilson, 1995, Wilson, 1987), and higher rates of violent crime (Shihadeh and Flynn, 1996), factors that may counteract the benefits of good design.

Even when African Americans live in affluent neighborhoods, numerous studies have shown that they benefit less than similarly placed Whites from the opportunities in those neighborhoods for maintaining healthy lifestyle behaviors such as walking (Acevedo-Garcia et al., 2008). The influence of neighborhood characteristics on individuals may be modified by race and ethnicity (Krieger, 2000, Williams, 2005).

This study looked at randomly sampled non-Hispanic whites and African Americans in Los Angeles and southern Louisiana to determine to what extent differences in neighborhood characteristics explain regional differences in walking and BMI by race.

Methods

Data for these analyses come from a study of neighborhoods, marketing and individual health behaviors conducted in Los Angeles County and pre-Katrina Southern Louisiana in 2004–2005. Our sampling approach was multi-staged from densely-populated (>2000 residents per square mile) urban census tracts in Los Angeles county within 17 miles of Drew Medical Center (1328 tracts) and in Louisiana counties within a 2 hour drive of New Orleans (381 tracts). Out of those census tracts, a random sample of 114 urban census tracts in Los Angeles county and 114 urban census tracts in Southeastern Louisiana were selected.

Telephone interviews were conducted with a systematic sample of adults from a geographically referenced telephone-listed households. Participants were offered \$15 to complete a 15–20 minute interview. Procedures were approved by the RAND Institutional Review Board. Calling was halted early in New Orleans due to Hurricane Katrina, resulting in respondents from 106 tracts.

Walking and BMI Measures

To measure utilitarian walking, we asked respondents on how many days a week they engaged in walking to work or to school, to a store or to do an errand, to the bus, or to a neighbor's house for a walk that takes at least 10 minutes. Recreational walking was captured by asking the number of days per week that individuals walked outdoors for at least 10 minutes just for exercise or pleasure, including walking with a dog. Because we do not have information about the duration of each bout of walking, we will refer to these variables in terms of frequency (i.e. times a week). Body mass index was calculated from self-reported height and weight.

Other respondent measures

The phone survey gathered information on respondents' basic demographics. These variables included age, gender, and a re-code of race/ethnicity broken into 4 categories: 1) non-Hispanic whites, 2) non-Hispanic African Americans, 3) Hispanics, and 4) all other races/ethnicities. Because Hispanics and Others represented only 5% (n=52) and 2% (n=30) of our sample in Louisiana, we excluded them from our analyses and focused on the two ethnic groups that were substantially represented in both sites: non-Hispanic whites and African Americans. Participants also reported their annual household income and whether anyone in their household had access to a car.

Neighborhood safety

In order to gauge possible barriers to outdoor activity like walking, the telephone survey instrument gathered information on how safe respondents perceived their neighborhood to be. Original responses were categorized on a Likert 4 point scale ranging from very safe to very unsafe. For our analyses, we dichotomized this variable into safe or unsafe.

Neighborhood destinations

We defined a one-mile radius around each respondent's home using ArcGIS 9.1 and then subsequently used this buffer to calculate the number of markets and parks. We chose 1 mile as it encompasses the national median walking trip distance [.39 miles (s.d..85)] (Hu and Reuscher, 2004). The park data came from ESRI's national park files which combine federal, state, and local park resources into one layer. Data on markets came from the InfoUSA's geocoded database listings for all retail groceries and markets.

Neighborhood design

We used the street segments available from the Census 2000 TIGER files to derive three different variables to characterize the physical structure of respondents' neighborhoods: the alpha index, median block length, and street density. Theoretically, walking is facilitated where the connectivity of the street network is well-connected—i.e. a grid rather than a network with many cul-de-sacs or dead end streets that limit walkers route-choices and/or destinations. (Saelens et al., 2003) The alpha index is one measure used to characterize the street connectivity. For any given system of street segments, it is the ratio of the number of intersections to the maximum possible number intersections, given by the formula:

$$(\# \text{street segments} - \# \text{intersections} + 1) / (2 * (\# \text{of intersections}) - 5)$$

The values for the alpha index range from 0 to 1, with higher values representing a more connected network.

Other researchers have thought it important to describe the length of blocks in neighborhoods. (Cervero and Kockelman, 1997) Shorter blocks mean more intersections and, therefore, shorter travel distances and a greater number of routes between locations. To diffuse the possible skewing effects of highways or freeways in tracts, we chose to use median block length.

Street density, or the number of street miles contained in a tract per square mile, characterizes the coverage of the network over space. For example, tract with short blocks in perfect grid formation that only covers 10 percent of the total area would provide a limited number of possible destinations.

Neighborhood socioeconomic status

We used the neighborhood socioeconomic status (NSES), created as part of RAND's Center for Population Health and Health Disparities. The index is comprised of six variables: (1) percent of adults older than 25 with less than a high school education; (2) percent male unemployment; (3) percent of households with income below the poverty line; (4) percent of households receiving public assistance; (5) percent of households with children that are headed only by a female; and (6) median household income. Each of the six measures' mean and standard deviation were calculated across all US tracts. For each census tract, a z-score was derived for each variable by subtracting from it the US mean and dividing that number by the US standard deviation. The unnormalized index was calculated by taking the z-score for variable (6) in Step 1 above (median household income), and subtracting from it the z-

scores for each of the other five variables. Thus, for census tract j , the unnormalized index $UNINDEX(j) = Z6-Z1-Z2-Z3-Z4-Z5$. Using the maximum and minimum value of $UNINDEX$, the index measures were rescaled such that the values would fall between 0 and 100, where higher values correspond to higher NSES.

Analyses

In order to make the sample more representative of the sampling frame, we constructed post-stratification weights. The weights were calculated separately for Louisiana and Los Angeles and are based on the tract counts of people stratified by 1) gender, 2) age (<34, 35–44, 45–54, 55–65), 3) race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, and other), and 4) median tract household income (<\$27,000, \$27–40,000, \$40–55,000, >\$55,000). Because of the large variance in weights when we attempted to construct cross-classified weights, we opted to base the weights on the marginals (i.e. each dimension in isolation). In order to facilitate cross-site comparisons, the weights were then standardized to reflect the total number of people in the sample at each site.

In order to better understand within group regional variation in BMI and walking behavior as well as identify group-specific relationships between neighborhood characteristics and our outcomes, we stratified all of our analyses by race/ethnicity. First, using weighted t-test statistics, we tested whether BMI and frequency of walking behaviors varied by site for non-Hispanic whites and African Americans respectively. Then, we utilized weighted chi-square and t-test analyses to evaluate site differences for these two groups in terms of individual socio-demographic characteristics and neighborhood features.

We then modeled the frequency of recreational and utilitarian walking separately for non-Hispanic whites and African Americans. We used 2-level weighted hierarchical linear models with respondents clustered in census tracts to model the number of times a week participants reported engaging in walking for 1) utilitarian and 2) recreational purposes. Level-one (individual-level) predictors for these models included site, BMI, age, gender, household income, access to a car, the number of markets and parks within 1 mile of respondents' residences, and respondents' perception of neighborhood safety. Level-two (tract-level) predictors included neighborhood SES, the alpha index, median block length, and street density.

Finally, we modeled the BMI of non-Hispanic whites and African Americans. We ran models with all same level-one and level-two variables utilized in the earlier models. However, in the BMI models, we added in the two continuous variables for frequency of utilitarian and recreational walking.

In order to make the intercepts more meaningful, we centered respondent BMI, walking frequency, age, neighborhood SES, and all the street network measures around their grand means. Because the first-level residuals were not normally distributed, we also log-transformed the walking frequency and BMI variables making the coefficient estimates the percent difference in frequency for each unit change in the covariate.

Results

Regional differences in built environment

Regional differences in non-Hispanic whites' neighborhood were substantial (Table 1). Respondents in Los Angeles had better access to parks ($p < .0001$) and lived less than a mile away from more than twice as many markets as respondents in Southern Louisiana ($p < .0001$). Their neighborhoods also differed structurally. The street-networks in Louisiana

tracts were significantly better connected than in Los Angeles ($\alpha=0.25$ versus 0.23 , $p<.0001$) and median block length was shorter. Neighborhood SES and perception of neighborhood safety did not vary by site.

African Americans neighborhoods had fewer regional differences than white neighborhoods. Although African American had more markets in a mile radius and lived in neighborhoods with significantly longer blocks and higher street density than those sampled in Louisiana, they had a similar number of parks and similar street connectivity and neighborhood SES. African Americans in Los Angeles also viewed their neighborhoods as unsafe more frequently than their counterparts in southern Louisiana (25.8% versus 17.4% , $p=0.03$).

Regional differences in walking behavior, BMI, and respondent characteristics

The walking behaviors and BMI of whites differed substantially by geographic location (Table 1). Whites in Los Angeles County walked for utilitarian purposes an average of 0.7 times more a week (about 3 more occasions per month) than White residents of Louisiana ($p<.0001$). White Angelenos had BMIs almost 4 percent lower than their southern counterparts ($p=0.02$) (nearly 4 lbs for 5'11 male).

In contrast, neither walking behavior nor BMI differed by region among African Americans, despite notable differences in the built environment and individual characteristics. Respondents in Louisiana were an average of 3 years younger than those in Los Angeles ($p=0.01$) and lived in households reporting lower annual income ($p=0.0003$).

Predicting the frequency of utilitarian walking

As shown in Table 2, being a resident of Los Angeles corresponded to walking 24% more times a week ($p=.001$) for Whites. Age, gender, and low household income were associated with utilitarian walking behavior, while access to a car was not. Each additional market within a mile of respondents' homes was associated with 1% more utilitarian walking.¹ For an average white respondent walking to work 1.7 times a week, living in a neighborhood with the average number of markets (7.0) would correspond to one more walking trip every two months.

Site had no relationship with utilitarian walking among African Americans and neither did any of the measures of neighborhood accessibility and design. However, those respondents who perceived their neighborhood to be unsafe walked 23% less utilitarian purposes. This translated to 0.60 fewer times a week or about 5 fewer walking trips every two months. Those with no access to car tended to walk more (43%: an estimated 1.1 more times a week), as did those who lived in households earning less than \$25,000 (66%: 1.7 more times a week) and between \$25,000 and \$50,000 (31%: 0.8 more times a week).

Predicting the frequency of recreational walking

There were no differences by site in recreational walking for whites or African Americans (Table 3). Among non-Hispanic whites, the only neighborhood characteristic related to recreational walking was median block length. The average respondent walking 2.8 times a week would walk 14% less or 3 fewer trips every two months for every 1000 feet longer the median block in her tract measured. Household income under \$25,000 a year and high BMI were also associated with less frequent recreational walking.

¹Other analyses using smaller quarter-mile and half-mile network radii showed coefficients of a similar magnitude. However they were not statistically significant.

Among African Americans, perception of safety was the strongest correlate of recreational walking, though the direction of the effect depended on the site where respondents lived. Blacks in Louisiana who perceived their neighborhood to be unsafe walked for fun or exercise 25% less often—an estimated 3 fewer times per month—than those who viewed it a safe place. However, the effect was in the opposite direction for African Americans living in Los Angeles, who tended to walk for recreational purposes a net 12% more if they lived in unsafe neighborhoods. As was the case for non-Hispanic whites, African Americans with higher BMI tended to walk less, but their household income was unrelated. In contrast, gender and age were more closely associated with recreational walking. African American women and older people tended to walk more for recreational purposes.

Predicting BMI

With the exception of age, different factors were associated with BMI among whites and African Americans (Table 4). For whites, each additional park within a mile was associated with 1% lower BMI.² For the average 5'11" non-Hispanic white male, this would mean approximately 1.9 pounds less per park or 5 lbs less for Los Angeles males and 3.8 lbs less for Louisiana males. In addition, whites who lived in neighborhoods with better street connectivity and higher SES also tended to have a lower BMI. Of the walking behaviors, only the frequency of recreational walking translated to lower BMI. The average white male walking for fun or exercise 2.8 times a week would weigh 5.4 pounds less than if he chose not to walk at all. Regional differences in BMI among non-Hispanic whites were not identifiable in the fully adjusted model.

Among African Americans, the only factors associated with BMI were age and utilitarian walking behavior. Each additional time a week that they reported walking to run errands or for transportation was related to BMI that was 1% lower, or roughly 2.0 pounds less for the average 5'10" African American male.

Discussion

The theory that good urban design (i.e. better access to parks and shopping destinations, shorter block lengths, etc.) leads to improved health behaviors and outcomes best applies to whites, who lived in neighborhoods with significantly higher SES ($p < .0001$) than African Americans' neighborhoods. While more parks were associated with lower BMI, they were not related to walking behaviors in contrast to other studies (Wen et al., 2007). However, it is possible that we are just unable to detect an effect because we analyzed utilitarian and recreational walking separately and did not account for the duration of walking bouts.

Regional differences in the built environment mitigated the initial place-based disparities in BMI for non-Hispanic whites. However, despite the strong relationship between nearby markets and utilitarian walking, neighborhood factors as a group were not sufficient enough to explain why whites in Los Angeles walked more frequently for utilitarian purposes than those in Louisiana. Weather may explain this persistent regional difference. For example, New Orleans averages 62 inches of precipitation and 114 rainy days a year, while Los Angeles averages only 14 inches and 35 rainy days a year. In this light, it is not surprising that people in Louisiana might forgo walking more frequently than their counterparts in Los Angeles, especially to do things that they might not see as pleasurable.

Our finding that walking behaviors and BMI did not vary by region among African Americans may reflect that the quality of their neighborhoods, regardless of the social class,

²Other analyses using a quarter-mile and half-mile network radii also detected a negative relationship of similar magnitude between the number of parks in whites' neighborhoods and their BMI. Results became more statistically significant with increasing distance.

tends to be uniformly inferior to that of white neighborhoods (Harris, 1999). This quality differential may trump the benefits of classical new urbanist design. To some degree, this is evidenced by the relationship we saw between perception of neighborhood safety and walking behaviors. A higher percentage of African Americans than whites perceived their neighborhoods to be unsafe and it was the neighborhood factor most strongly related to less frequent utilitarian walking among Blacks.

The amount of green space in a neighborhood could also be considered a marker of neighborhood quality. Conspicuously, park access was the one feature of the built environment that did not vary regionally for African Americans and the one feature of the built environment that associated with lower BMI in whites. Research points to inferior access to parks in many minority neighborhoods (Gordon-Larsen et al., 2006, Godbey and Graefe, 1992, Wolch et al., 2005). Even in minority neighborhoods which have good park access, issues with safety, park maintenance, staffing and programming may make the parks less inviting.

This study is also subject to a number of limitations. First of all, it does not account for recreational walking that may take place indoors at recreational facilities, commercial shopping malls, or other locations. Second, because we are only examining the frequency of walking behaviors, recreational walking and functional walking are essentially weighted the same, even though recreational walking bouts, though less frequent, tend to be longer than bouts of walking for transportation (Tudor-Locke et al., 2005).

The accuracy of the InfoUSA database is also somewhat questionable. One study found that InfoUSA captured 60% of the businesses which appeared in an industry-specific database (Cates et al., 2000). Another study found that InfoUSA correctly identified between 47–63% of alcohol outlets identified in block by block neighborhood observations, but that 55–60% of its listings did not have a match on the ground (Schonlau et al., 2009). The authors also found that the match rate varied by type of establishment as well as geography. For example, match rates for supermarket and grocery stores were much higher than for drug stores and gas station convenience stores, and the odds of correctly identifying businesses were generally higher in California than in Los Angeles. This suggests that error in InfoUSA may not be normally distributed.

Conclusions

While the built environment partly explains regional differences in walking and BMI among whites, the magnitude of effect is quite modest. Un-modifiable individual characteristics factors like age and gender play a large role in walking behavior and BMI. This is particularly true for African Americans, whose walking behaviors and BMI were the same in both sites despite pronounced differences in the built environment. Alternative paradigms for conceptualizing and creating environmental conditions that would necessitate physical activity as part of daily routines are needed.

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Table 1
Site differences in walking behavior, BMI, built environment, and individual characteristics by race/ethnicity

	Non-Hispanic Whites			Prob	African Americans			Prob
	Total (n=1124)	Los Angeles (n=546)	Louisiana (n=578)		Total (n=691)	Los Angeles (n=252)	Louisiana (n=439)	
Number of parks within 1 mile	2.2 (1.9)	2.6 (1.7)	2.0 (1.9)	<.0001	1.9 (1.7)	1.9 (1.1)	2.0 (1.8)	0.65
Number of markets within 1 mile	7.0 (9.3)	10.8 (12.6)	4.7 (5.2)	<.0001	9.0 (11.0)	17.2 (17.1)	6.2 (5.8)	<.0001
Alpha index	0.24 (0.09)	0.23 (0.08)	0.25 (0.09)	<.0001	0.25 (0.08)	0.25 (0.07)	0.25 (0.08)	0.69
Street density (miles of street/square mile)	117.7 (43.1)	125.9 (29.3)	112.6 (49.0)	<.0001	113.4 (42.9)	124.3 (28.0)	109.5 (46.4)	<.0001
Median block length (feet)	2082 (672)	2265 (708)	1969 (624)	<.0001	1980 (607)	2279 (600)	1876 (574)	<.0001
Neighborhood SES Index (1–100)	77.3 (8.1)	77.5 (9.4)	77.3 (7.2)	0.62	68.1 (9.3)	67.3 (8.3)	68.4 (77.3)	0.15
Age	41.2 (12.5)	41.8 (12.7)	40.8 (12.4)	0.18	38.4 (13.1)	40.8 (12.8)	37.6 (13.1)	0.01
Gender				0.23				0.56
Female	50.3	47.8	51.8		53.0	55.1	52.3	
Male	49.7	52.2	48.2		47.0	44.9	47.7	
Income				0.08				0.0003
< \$25,000	22.7	22.3	22.94		60.5	46.5	65.29	
\$25–0,000	24.3	20.6	26.48		21.7	27.0	19.84	
\$50–75,000	18.5	17.9	18.84		9.5	12.3	8.45	
>\$75,000	34.6	39.2	31.74		8.4	14.2	6.41	
Any access to a car in the household	95.7	95	96.1	0.41	78.0	80.5	77.1	0.39
BMI	26.0 (5.4)	25.5 (5.0)	26.4 (5.6)	0.02	28.2 (6.0)	28.2 (5.6)	28.2 (6.1)	0.79
Frequency of Utilitarian Walking	1.7 (2.3)	2.2 (2.4)	1.5 (2.2)	<.0001	2.6 (2.6)	2.6 (2.6)	2.6 (2.5)	0.91
Frequency of Recreational Walking	2.8 (2.6)	2.8 (2.6)	2.8 (2.5)	0.89	3.4 (2.7)	3.3 (2.7)	3.5 (2.7)	0.25
How safe feels outdoors in neighborhood				0.94				0.03
Unsafe	13.7	13.8	13.6		19.6	25.8	17.4	

Table 2

Explaining differences in utilitarian walking by racial/ethnic group

	Non-Hispanic Whites		African Americans	
	Estimate	Prob	Estimate	Prob
Intercept	0.73	<.0001	0.72	0.00
BMI	−0.01	0.18	−0.01	0.00
Age	−0.004	0.02	−0.01	0.02
Gender				
Female	−0.12	0.004	−0.17	0.00
Male	0.00		0.00	
Income				
< \$25,000	0.14	0.04	0.66	0.00
\$25–50,000	−0.03	0.63	0.31	0.03
\$50–75,000	−0.03	0.64	0.01	0.95
>\$75,000	0.00		0.00	
No access to a car in the household	0.22	0.09	0.43	0.00
Number of parks within 1 mile	0.002	0.91	0.00	0.90
Number of markets within 1 mile	0.01	0.03	0.01	0.08
Alpha index	0.08	0.10	0.03	0.58
Street density	0.001	0.22	0.00	0.97
Median block length	−0.0001	0.40	0.00	0.20
Neighborhood SES Index (1–100)	−0.002	0.66	0.00	0.78
How safe feels outdoors in neighborhood				
Unsafe	−0.04	0.49	−0.23	0.00
Safe	0.00		0.00	
Site				
Los Angeles	0.24	0.001	0.11	0.25
Louisiana	0.00		0.00	

Table 3

Explaining site differences in recreational walking by racial/ethnic group

	Non-Hispanic whites		African Americans	
	Estimate	Prob	Estimate	Prob
Intercept	1.99	<.0001	3.01	<.0001
BMI	−0.01	0.00	−0.01	0.01
Age	0.00	0.07	0.00	0.04
Gender				
Female	0.07	0.14	−0.23	<.0001
Male	0.00			
Income				
< \$25,000	−0.14	0.02	0.09	0.48
\$25–50,000	−0.02	0.75	−0.14	0.20
\$50–75,000	−0.11	0.08	−0.11	0.39
>\$75,000	0.00		0.00	
No access to a car in the household	0.13	0.33	0.10	0.22
Number of parks within 1 mile	0.01	0.70	0.01	0.71
Number of markets within 1 mile	−0.001	0.72	0.002	0.61
Alpha index	−0.01	0.86	−0.10	0.05
Street density	0.0001	0.92	−0.001	0.19
Median block length (in 1000s of feet)	−0.14	0.02	−0.0002	0.05
Neighborhood SES Index (1–100)	−0.01	0.20	−0.003	0.47
How safe feels outdoors in neighborhood				
Unsafe	−0.09	0.17	−0.25	0.00
Safe	0.00		0.00	
Site				
Los Angeles	−0.01	0.85	−0.05	0.56
Louisiana	0.00		0.00	
Unsafe*Los Angeles	-	-	0.37	0.05

Table 4

Explaining site differences in BMI by racial/ethnic group

	Non-Hispanic Whites		African Americans	
	Estimate	Prob	Estimate	Prob
Intercept	28.45	<.0001	27.18	<.0001
Site				
Los Angeles	−0.02	0.15	−0.005	0.84
Louisiana	0.00		0.00	
Frequency of Recreational Walking	−0.01	0.005	−0.004	0.16
Frequency of Functional Walking	0.0002	0.94	−0.01	0.05
Age	0.003	<.0001	0.002	<.0001
Gender				
Female	−0.08	<.0001	0.01	0.65
Male	0.00		0.00	
Income				
< \$25,000	0.00	0.80	0.04	0.14
\$25–50,000	−0.01	0.38	0.06	0.05
\$50–75,000	0.01	0.60	0.01	0.79
>\$75,000	0.00		0.00	
No access to a car in the household	−0.01	0.66	0.03	0.12
Number of parks within 1 mile	−0.01	0.04	0.01	0.17
Number of markets within 1 mile	−0.0005	0.58	−0.0004	0.71
Alpha index	−0.03	0.004	0.003	0.86
Street density	−0.0003	0.11	0.0002	0.51
Median block length	−0.00002	0.08	0.00002	0.41
Neighborhood SES Index (1–100)	−0.003	0.002	0.0002	0.85
How safe feels outdoors in neighborhood				
Unsafe	−0.02	0.22	0.00	0.83
Safe	0.00		0.00	