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Associations between Neighborhood Resources and Physical Activity in Inner City Minority Children

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Abstract

Objective—The role of neighborhood physical activity resources on childhood physical activity level is increasingly examined in pediatric obesity research. We describe how availability of physical activity resources varies by individual and block characteristics and then examine its associations with physical activity levels of Latino and black children in East Harlem, New York City.

Methods—Physical activity resource availability by individual and block characteristics were assessed in 324 children. Availability was measured against four physical activity measures: average weekly hours of outdoor unscheduled physical activity, average weekly metabolic hours of scheduled physical activity, daily hours of sedentary behavior and daily steps.

Results—Physical activity resource availability differed by race/ethnicity, caregiver education and income. Presence of one or more playgrounds on a child's block was positively associated with outdoor unscheduled physical activity (OR=1.95, 95% confidence interval 1.11–3.43). Presence of an afterschool program on a child's block was associated with increased hours of scheduled physical activity (OR=3.25, 95% confidence interval 1.41–7.50) and decreased sedentary behavior (OR=3.24, 95% confidence interval 1.30–8.07). The more resources a child had available, the greater the level of outdoor unscheduled physical activity (p for linear trend=. 026).

Conclusions—Neighborhood physical activity resource availability differs by demographic factors, potentially placing certain groups at risk for low physical activity level. Availability of

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select physical activity resources was associated with reported physical activity levels of East Harlem children but not with objective measures of physical activity.

Keywords

Childhood Obesity; Inner City Neighborhood; Built Environment; Physical Activity Resource Availability; Physical Activity

INTRODUCTION

Though the cause of the childhood obesity epidemic in the US is multi-factorial, physical inactivity is widely recognized as a significant contributor to body mass index (BMI) and percent body fat in children.[1, 2] In 2003–2004, only 42% of 6–11 year-olds and 8% of 12–19 year-olds in the nation achieved the CDC recommended 60 minutes of physical activity per day for at least 5 days per week.[3] Physical activity level is lower[4, 5] and screen time (time spent in front of a TV, computer or video game) higher among minority children and children of low socioeconomic status (SES),[6] the very same children with the highest rates of obesity.

Emerging research is now examining factors at the community level that either support or act as barriers to healthy behaviors. Factors including availability and use of parks,[7–9] playgrounds,[10] and recreation centers,[11] have been shown to increase physical activity level in children. Yet, there are fewer physical activity resources and more safety concerns in minority and low SES neighborhoods all of which may account for chronic health disparities prevalent in these communities.[12]

This study examined the role of neighborhood physical activity resource availability on children's physical activity levels in East Harlem, NY, a predominantly minority, low SES community. Forty percent (40%) of children in this East Harlem cohort were overweight (>85th percentile). While several studies on the effect of the neighborhood on childhood obesity have focused on availability of a single resource, this study examined availability of a variety of block-level resources all within a single at risk community and how availability influenced physical activity measures that capture unique features of children's activity.

METHODS

Baseline questionnaire data from Growing Up Healthy in East Harlem (GUHIEH) were used in this analysis.[13] As previously described, GUHIEH is a study of 6- to 8-year old East Harlem, NY boys and girls (n = 323) recruited year round from East Harlem schools, community centers and health centers and from the Mount Sinai pediatrics practice. Girls are overrepresented due to a parallel study of pubertal development in girls. Enrollment, eligibility and study protocol for these girls was identical to the GUHIEH study except for an additional pubertal staging assessment. Children were eligible if they were English or Spanish speaking.

Dependent Variables

Four types of physical activity measures were collected by interviewer administered questionnaires: hours/week outside in unscheduled physical activity, metabolic (MET)-hours/week of scheduled physical activity and mean hours/day of sedentary behaviors. They were collected at each child's baseline visit. Average steps/day was obtained from pedometer data collected over a 4–7 day period.

Hours Outside in Unscheduled Physical Activity per Week—Caregiver and child were asked the series of questions: '*During the past week, did (Child) spend time doing activities such as jumping rope, rollerblading, riding a bike or playing at a playground outside of regular school hours or scheduled practices, games or classes?'. During the past week, that is Monday through Friday, how many hours did (Child) spend doing these activities? Of those how many were spent outdoors?* The same was asked for weekend activities. The portion of the reported hours that was spent outdoors both during the week and the weekend was used as the child's average time outdoors.

MET-hours of Scheduled Physical Activity per Week—Caregiver and child were asked to list the scheduled activities the child took part in over the course of a year such as *'sports teams (like basketball) with practices and games or classes (like dance lessons) that were scheduled on a regular basis – that is at least once a week for one month or more'.* The number of months in the past year and number of hours per week the child took part in the activity were recorded for each of the activities listed. Quantitative measures in these activities were calculated as MET-hours per week using the standard metabolic equivalent values of Ainsworth et al.[14]

Hours of Sedentary Activity / Day—Caregiver and child were asked '*yesterday, how many hours did (child) spend in, school, watching TV and/or playing video games or going to the movies, playing video games including hand-helds such as X-box, Playstation or Gameboy, sitting and playing or performing other activities such as using the computer or doing homework and napping?*'. The total hours spent in these activities was summed for each child to determine their average hours of sedentary activity per day.

Steps per Day—Children were asked to wear an SW-200 Yamax pedometer for a week as per a standardized protocol and training to ensure compliance. Children with 4 or more days of pedometer data were included (n=259). Average steps was calculated over the 4–7 day period.

Independent Variable

Counts of physical activity resources widely available to early school aged children in East Harlem, NY were recorded by a walking survey of the two East Harlem zip codes 10029 and 10035 by two research assistants. ArcGIS software version 8.3 (Environmental Systems Research Institute, Inc., Redlands Ca.) was used to geocode the resources and match to Census blocks where the child resides. The physical activity resources were categorized into eight types— playgrounds, community gardens, sports fields, summer camps, afterschool

programs, recreation centers, parks and pools. Summer camp was asked in a time frame of the past year so that interview in the winter for example would still capture this information.

Potential Confounders/Mediators—Potential sociodemographic correlates of both resource availability and physical activity levels reviewed were child's age at baseline exam, gender, race/ethnicity (Hispanic or black), age and sex-specific BMI percentile[15] (< 85th or ≥85th percentile), caregiver's education (high school diploma, some college), family income (< $25,000, ≥ $25,000), racially mixed block (blocks where no single racial/ethnic group made up more than 75% of the population as per Census 2000 were considered racially mixed),[16] and parent's perceived safety of the neighborhood (yes, no). Season that the questionnaire was answered was included in the models because of its association with physical activity in this population. Similarly, day of the interview was included in the models because physical activity measures differ depending on whether interview took place on a school day.

Statistical Analysis

This study was interested in the association between the presence of physical activity resources and favorable levels of physical activity in children living in an urban environment. Because none of these data were normally distributed and because we wanted to compare recommended levels where available, each outcome measure was dichotomized at cut-points appropriate for the outcome and/or the data. Equal to or above the cut-point was defined as a "favorable" level of physical activity, below the cut-point was classified as "unfavorable". Hours outside was dichotomized at the median for our models. Due to very low MET-hours per week in this population, the cut point used was at least one MET-hour per week. Average hours of sedentary activity per day was dichotomized at 6 hours, the average time for 6–11 year olds in the US during 2003–2004 and[17] the steps per day cut-point was set at the American Academy of Pediatrics recommendation of 11,000 steps per day.[18]

Bivariate associations between child and family characteristics with Census block physical activity resources and physical activity levels were assessed using chi-square test (significance of $p < 0.05$). Variables that had a significant association with the outcome and exposure or were known to be associated with physical activity levels were included in the models to control for confounding. These included child's age, gender, ethnicity and BMI percentile, caregiver's education, perceived safety of block, and the season and day of week the questions were asked. Caregiver education was collinear with family income so we chose to only include caregiver education in the final models.

In the primary analysis, exposure to each type of physical activity resource was dichotomized to at least one resource per Census block versus none and analyzed by demographic characteristics. Secondary analyses were performed to assess if there was an increasing association between more physical activity resources on a child's Census block and favorable physical activity levels. To accomplish this, the total count of resources on each Census block was categorized as follows: 0, 1, 2–4 and 5–11. Significance ($p<0.05$) was determined by chi square analysis after adjustment. To assess trend, the median count of

resources was used in the models as a continuous variable to test the null hypothesis of beta=0. A significant chi-square p-value of < 0.05 for this variable was an indication that the probability of being in one physical activity group changes as count of physical activity resource changes. The LOGISTIC procedure was used for all models. All statistical analyses were carried out using SAS version 9.2 (SAS Institute, Inc., Cary, North Carolina).

RESULTS

The walking survey of all 248 Census blocks of East Harlem was completed in 2004 and identified 102 playgrounds, 54 community gardens, 47 sports fields, 27 summer camps, 19 afterschool programs, 13 recreation centers, and 18 parks. The GUHIEH children lived on 105 Census blocks in East Harlem when enrolled in 2004–2007.

Thirty seven percent (n=119) of the cohort had zero physical activity resources on their Census block (Table 1). Children on blocks with zero physical activity resources differed ($p < 0.01$) by race/ethnicity, caregiver education, and family income in comparison to children on blocks with at least one resource. Families with lower income (less than $25,000) and with lower caregiver education were more likely to have no resources on their block. In contrast, mixed race blocks had significantly more resources. Individual age, gender, BMI and neighborhood perceived safety did not differ between children with or without resources on their blocks. Children had a median 2 hours/week on average of unscheduled outdoor physical activity (Interquartile range IQR 2 – 6.5), median of 0.0 MET-hours/week of scheduled physical activity (IQR 0 – 1.6) and a median 8.5 hours of sedentary activity per day (IQR 5 – 10.5). They had an average step count of 10,350 steps/day (IQR 7,270 – 12,981). For sedentary activities, this population of children spent a median of 6 hours/day in school (IQR 0–7), a median of 1 hour/day (IQR 0.5–2) sitting working or playing, and a median of 2 hours/day (IQR 1 – 3.5) in front of a computer or television screen.

Higher caregiver education was significantly associated with more hours/week of unscheduled physical activity (Table 2). Children of families with higher SES (income >25,000) and higher caretaker education, had significantly more MET-hours of scheduled physical activity; though the majority of the cohort (72%) had 0 MET-hours/week of scheduled physical activity and the median for each demographic was 0 hours/week. Age was associated with sedentary behavior; older children reported fewer sedentary hours/day. Step counts were significantly different amongst Hispanics with boys having higher steps per day as compared to girls (11,504 median steps/day vs 9,604).

The relationship between availability of physical activity resources and physical activity levels is shown in Table 3. Playgrounds were found to have a significant association with higher levels of outdoor unscheduled physical activity (OR=1.95, 95% confidence interval 1.11–3.43). Recreation centers and sports fields likewise showed an association with higher levels of unscheduled physical activity, but these findings were not significant. The presence of an afterschool program on a child's block showed a significant association with favorable levels of MET-hours of scheduled physical activity (OR=3.25, 95% confidence interval 1.41–7.50) and less sedentary behaviors (OR=3.24, 95% confidence interval 1.30–8.07). For combined physical activity resources on a child's Census block (Table 4), we found that

increasing counts of physical activity resources showed an increasing trend with hours outside in unscheduled physical activity (p for trend = 0.026).

DISCUSSION

We found that availability of physical activity resources differed greatly by SES, even in a single, low SES neighborhood. We found that low SES families defined as either low income or with low caregiver educational status, were more likely to have no resources available on their block. Furthermore, predominantly Hispanic or black blocks had significantly less resources than mixed race blocks. This supports existing literature demonstrating disparities in availability of resources by SES demographics.[12, 19] Similar results have been found for food stores and restaurants in East Harlem, where availability differs by racial/ethnic characteristics of the block.[16]

Socio-demographic characteristics were also associated with physical activity. Children with higher family income or educational status were more likely to participate in scheduled physical activity. Scheduled physical activity is particularly low for this inner city, minority cohort: a startling 72% reported 0.0 hours per week. The majority of children do not participate in organized sports. This is a concern for this at risk population given that time spent in scheduled activities, in particular organized sports, has shown a strong association with overall physical activity in other studies.[4, 20, 21] While median reported screen time was 2 hours/day, median sedentary behaviors ranged from 8–9 hours per day depending on age and was significantly higher in younger children.

The average daily steps taken by this cohort fell below the AAP's recommended 11,000–12,000 steps for girls and 13,000–15,000 steps for boys.[18] One study of 6–12 year olds suggests a step cutpoint of 12,000 for girls and 15,000 for boys, as children below these guidelines were more likely to be overweight or obese. Overall the data suggests that the majority of the children fall well short of the CDC recommendation of a total of 60 minutes of physical activity daily for children.[21] These data provide additional evidence of health disparities in inner city, minority communities.

Similar to other research, this study found that playgrounds were associated with outdoor unscheduled physical activity.[10, 23, 24] Inclusion of afterschool programs on a child's block was significantly related to higher MET-hours of scheduled physical activity and lowered sedentary behavior, suggesting that availability of afterschool programs may influence the number of children engaging in scheduled physical activity.

Of note, availability of resources was associated with reported measures of physical activity but not with objective measures of activity. According to Welk et al and others, no single measure of PA is ideal for all purposes.[25, 26] To accurately assess all types of physical activity, researchers recommend the use of both subjective and objective PA measures.[26] Colley et al demonstrated that associations with health varied between parent-reported and directly measured physical activity and sedentary behaviors in children, highlighting the importance of examining both subjective and objective measures.[27]

In keeping with these recommendations, our study used both reported physical activity and pedometers. Self-report questionnaires are the most frequently used means of assessing physical activity in epidemiologic research because they are relatively inexpensive and hence more feasible for large studies.[26, 28] However, accuracy of self-report surveys is a well-recognized limitation.[26, 29, 30] Social desirability may influence reporting as well.[31] Pedometers are inexpensive and readily available objective measures of physical activity though they may measure different constructs than those measured by self report. Pedometers, when used as a sole measure of activity, do not provide information on scheduled activity, unscheduled activity or time spent outdoors. These unique features of physical activity are better captured by questionnaire. Pedometers are also less accurate for measuring lower levels of activity in normal and overweight children.[32]

In a recent review of the built environment literature, mode of measurement greatly influenced the consistency of associations between environmental attributes and youth physical activity. Ding et al found that for both children and adolescents, the most consistent associations involved objectively measured environmental attributes and reported physical activity.[33] They conclude that because the area of the built environment and physical activity is still young, more studies with improved conceptualization and measures are needed to expand the current knowledge base. Given that associations with the built environment in general have been found more commonly with reported physical activity than with objective measures, our findings highlight the need for careful attention to a variety of measurements with respect to both independent and dependent variables, in order to further shed light on this emerging area of research.

Access to parks has been found to be associated with use and thus with childhood physical activity. However, parks were not found to be associated with outdoor unscheduled physical activity in this cohort. This was most likely a consequence of the way in which resource availability was defined. We included resources present on a child's block and hence those resources in closest proximity to a child's home, as described in our prior paper examining the local food environment and child health.[13] This definition does not account for resources that are nearby a child's home, but outside of their Census block. In addition, this study did not examine use of the resource by the individual child, nor did it account for cost concerns that may influence use of certain physical activity resources. Furthermore, this study is limited in its generalizability, given the cohort is predominantly Hispanic and black, of low SES, and from a single inner city neighborhood. However, children in these populations are at greater risk for obesity and related health issues. We are unable to infer causality from these results given the studies' cross sectional design. Nor we can we exclude the possibility that families who are more active choose to live closer to neighborhood resources. Lastly, although our findings were hypothesis driven, we cannot eliminate the possibility of chance associations among the multiple comparisons undertaken.

In conclusion, we found that physical activity resource availability and physical activity outcomes differ by individual and block race/ethnicity, caregiver education status and income, highlighting the groups at particular risk for low physical activity. We also found that the presence of select neighborhood resources is associated with reported physical activity levels but not with objective measures of physical activity. This suggests a potential

role for neighborhood factors in influencing physical activity and a need to examine a variety of physical activity measures in this emerging area of research. In particular, playgrounds were associated with increased unscheduled activity and afterschool programs were associated with greater scheduled activity and lower sedentary behavior. Finally, the presence of more resources on a child's block was associated with increased unscheduled outside play. By examining resource availability, this study has the potential to bring clarity to the role of neighborhood level interventions targeting childhood obesity disparities seen in urban minority communities.

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WHAT'S NEW

Neighborhood resource availability is associated with reported physical activity levels but not with objective measures of physical activity for minority children in East Harlem, NY, providing support that neighborhood factors may play a role in influencing physical activity. This study can inform obesity interventions targeting inner-city minority neighborhoods.

Table 1

Study participants characteristics (n=324) by neighborhood resource availability (none or 1+ physical activity resources on child's block). Significant associations are shown in bold (p<.05).

	Physical Activity Resources Available	
	None	**1+**
Age (n=324)		
6.0–6.9 years	31% (37)	41% (84)
7.0–7.9 years	32% (38)	31% (63)
>=8.0 years	37% (44)	28% (58)
Gender (n=324)		
Girl	66% (79)	74% (151)
Boy	34% (40)	26% (54)
Race/ethnicity (n=324)		
Black	**21% (25)**	**41% (84)**
Hispanic	**79% (94)**	**59% (121)**
BMI percentile (n=323)		
<85th %ile	58% (69)	57% (116)
>= 85th %ile	42% (50)	43% (88)
Parent or guardian education (n=318)		
High school diploma	**79% (94)**	**58% (118)**
At least some college	**18% (22)**	**41% (84)**
Family income (n=323)		
< 25K	**69% (82)**	**52% (106)**
>= 25K	**31% (37)**	**48% (98)**
Census block race (n=324)		
> 75% Black	**1.7% (2)**	**1.0% (2)**
> 75% Hispanic	**51% (61)**	**7.8% (16)**
Racially Mixed	**47% (56)**	**91% (187)**
Caregiver feel child is safe walking in neighborhood (n=292)		
No	47% (56)	40% (81)
Yes	46% (55)	49% (100)
Live in a neighborhood safe from crime (n=289)		
No	**58% (69)**	**69% (142)**
Yes	**34% (40)**	**19% (38)**

Table 2

Physical activity measures by demographic factors of participants. Significant associations ($p<0.01$) are shown in bold.

	Unscheduled PA (hrs/week) n=315			Scheduled PA (hrs/week) n=323			Sedentary (hrs/day) n=320			Daily Steps N=259		
	Median	**IQR**	**n**	**Median**	**IQR**	**n**	**Median**	**IQR**	**n**	**Median**	**IQR**	**n**
Income												
<$25,000 (n=188)	2.0	6.3	183	**0.0**	**0.0**	**187**	8.3	5.5	186	10346	5112	153
>=$25,000 (135)	2.5	6.0	131	**0.0**	**3.2**	**135**	8.9	5.7	133	9788	6269	106
Gender												
Girl (230)	2.0	6.0	221	0.0	1.6	229	8.5	5.5	227	10046	5407	181
Boy (94)	3.0	7.0	94	0.0	1.2	94	8.5	5.0	93	10922	6852	78
Age (years)												
6.0–6.9 (121)	3.0	6.6	116	0.0	0.3	121	**9.0**	**5.0**	**120**	9645	5796	95
7.0–7.9 (101)	1.8	7.0	100	0.0	3.8	100	**8.5**	**6.5**	**101**	10860	6904	83
>=8.0 (102)	3.0	6.0	99	0.0	0.7	102	**8.0**	**5.4**	**99**	10220	4180	81
Caregiver Education												
Some college (106)	**3.5**	**6.9**	**102**	**0.0**	**5.5**	**106**	8.0	5.0	104	10061	5536	83
HS diploma (212)	**1.3**	**6.0**	**207**	**0.0**	**0.0**	**211**	9.0	5.7	210	10455	5924	173
Race/Ethnicity												
Black (109)	3.0	7.3	0	**0.0**	**4.8**	**0**	9.0	5.0	0	10331	6042	80
Hispanic (215)	2.0	6.0	211	**0.0**	**0.0**	**214**	8.3	5.5	213	10276	5412	179
Race/Ethnicity by Gender												
Black Girls (77)	3.0	7.0	0	**0.0**	**5.0**	**0**	9.1	5.1	0	10843	5955	58
Black Boys (32)	3.5	9.2	0	**0.0**	**0.0**	**0**	8.0	5.4	0	9437	6668	22
Hispanic Girls (153)	1.0	6.0	149	**0.0**	**0.0**	**152**	8.2	5.5	151	**9604**	**5293**	**123**
Hispanic Boys (62)	3.0	5.8	62	0.0	1.7	62	8.6	4.3	62	**11504**	**6865**	**56**

Table 3

Physical activity levels by types of physical activity resources present on a child's block. Significant associations ($p<0.05$) are shown in bold. *adjusted for child's age, gender, race/ethnicity and BMI, caregiver's education, perceived block safety, and season and day the questions were asked.

	≥2 hours/week of unscheduled outdoor physical activity n=315	**≥1 MET-hour/week of scheduled physical activity n=323**	**≤6 daily hours of sedentary behavior n=320**	**≥11,000 daily steps N=259**
Totals				
None	38% (44/117)	28% (33/119)	31% (36/117)	44% (44/111)
1+	57% (112/198))	28% (58/204)	29% (58/203)	56% (57/148)
Playgrounds				
None	**41% (75/181)**	26% (46/180)	29% (53/180)	42% (67/160)
1+	**60% (81/134)**	28% (39/137)	29% (41/140)	44% (44/99)
Pr> Chi-Squared	**0.021**	0.659	0.688	0.73
Odds Ratio (CI)	**1.95 (1.11, 3.43)**	0.88 (0.51, 1.53)	0.88 (0.47, 1.65)	1.10 (0.63, 1.94)
Community Gardens				
None	49% (130/264)	25% (67/266)	29% (79/269)	46% (97/212)
1+	51% (26/51)	35% (18/51)	29% (15/51)	30% (14/47)
Pr> Chi-Squared	0.356	0.14	0.909	0.113
Odds Ratio (CI)	1.40 (0.69, 2.84)	1.67 (0.84, 3.32)	0.95 (.043, 2.14)	0.55 (0.27, 1.15)
Sports Fields				
None	45% (103/228)	28% (65/229)	28% (64/230)	42% (82/193)
1+	61% (53/87)	23% (20/88)	33% (30/90)	44% (29/66)
Pr> Chi-Squared	0.083	0.136	0.359	0.939
Odds Ratio (CI)	1.69 (.93, 3.06)	0.61 (0.35, 1.16)	1.35 (0.71, 2.57)	0.98 (0.53, 1.79)
Summer Camps				
None	47% (111/235)	25% (59/236)	28% (67/239)	41% (80/197)
1+	56% (45/80)	32% (26/81)	33% (27/81)	50% (31/62)
Pr> Chi-Squared	0.863	0.37	0.466	0.312
Odds Ratio (CI)	0.95 (.51, 1.75)	1.31 (0.73, 2.34)	1.28 (0.66, 2.48)	1.37 (0.74, 2.55)
Afterschool Programs				
None	48% (140/289)	**25% (73/292)**	**27% (79/292)**	43% (102/237)
1+	62% (16/26)	**48% (12/25)**	**54% (15/28)**	41% (9/22)
Pr> Chi-Squared	.923	**.006**	**0.012**	0.815
Odds Ratio (CI)	1.05 (.39, 2.80)	**3.25 (1.41, 7.50)**	**3.24 (1.30, 8.07)**	0.89 (0.35, 2.28)
Recreation Centers				
None	48% (133/278)	26% (73/280)	31% (87/282)	43% (97/227)
1+	62% (23/37)	32% (12/37)	18% (7/38)	44% (14/32)
Pr> Chi-Squared	0.068	0.373	0.152	0.966
Odds Ratio (CI)	2.09 (.95, 4.64)	1.41 (0.66, 3.03)	0.48 (0.17, 1.31)	0.98 (0.44, 2.18)

	≥2 hours/week of unscheduled outdoor physical activity n=315	≥1 MET-hour/week of scheduled physical activity n=323	≤6 daily hours of sedentary behavior n=320	≥11,000 daily steps N=259
Parks				
None	49% (146/300)	27% (82/302)	29% (89/305)	42% (106/250)
1+	67% (10/15)	20% (3/15)	33% (5/15)	56% (5/9)
Pr> Chi-Squared	0.113	0.547	0.138	0.474
Odds Ratio (CI)	2.61 (0.80, 8.53)	0.66 (0.17, 2.54)	2.67 (0.73, 9.76)	1.70 (0.40, 7.22)

Table 4

Association between hours of outdoor unscheduled physical activity and increasing counts of physical activity resources. Significant associations ($p<0.05$) are shown in bold. P for linear trend=0.026.

Total Counts of physical activity resources on block	Children with < 2 hours/week of unscheduled outdoor physical activity	Children with ≥2 hours/week of unscheduled physical activity	Odds Ratio (CI) Adjusted* (N=308)
0	73	44	1.00
1	24	20	1.56 (0.67–3.65)
2–4	37	47	**2.39 (1.22–4.70)**
5–11	25	45	**2.44 (1.14–5.20)**

* adjusted for child's age, gender, race/ethnicity and BMI, caregiver's education, perceived block safety, and season and day the questions were asked.