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Rural Latino Youth Park Use: Characteristics, Park Amenities, and Physical Activity

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Abstract

Less than half of youth engage in sufficient physical activity to achieve health benefits. Key environmental factors of park and recreation spaces may influence youth physical activity. We sought to ascertain youth characteristics and behaviors that attract youth to parks with specific amenities and encourage physical activity while at the parks in a rural, predominantly Latino community. We examined the quality of amenities in the 13 parks and recreation spaces that middle school aged youth have access to in their community using the Environmental Assessment of Parks and Recreation Spaces (EAPRS) tool. Middle school students completed surveys in the school classroom (n = 1,102) regarding park use, physical activity, and intrapersonal characteristics (e.g., motivators). We used logistic regression to identify correlates of any park use, use of higher quality field and court parks, and active and sedentary park use. Younger age, participation in an after school activity, and identification of a team as a motivator were positively associated with any park use. Use of higher quality court and field parks was associated with participation in an after school activity and being Latino. The odds of being active in the parks were greater for boys and Latinos. Older age and alcohol use are correlated with being sedentary at the park, while odds of being sedentary at the park were lower for boys and youth who met physical activity guidelines. Organized team activities may encourage active use of higher quality fields and courts parks by Latino youth; thereby, increasing their level of physical activity.

Keywords

Physical activity; Parks; Youth; Rural; Latino

Introduction

Regular physical activity provides multiple health benefits including reducing the risk of obesity, diabetes or heart disease [1]. Sixty minutes of moderate to vigorous physical activity on 5 or more days a week is the recommended level for youth in order to achieve health benefits [2]. Based on accelerometer data collected in the US, 49% of boys aged 6–11 years meet the recommended levels of physical activity, but by age 12–15 this drops to 12%. Among girls, 35% aged 6–11 meet this level and by age 12–15 only 3% report adequate levels of physical activity [3]. Ethnic/racial minority youth are also less active than their

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white counterparts and therefore are at greater risk of experiencing negative health consequences of inactivity [4]. Considerable evidence has accumulated regarding the intra-personal (e.g., efficacy), social, and familial (e.g., parent's physical activity) factors related to adolescent physical activity. However, there is a growing interest in the potential environmental factors, such as safe places to be active, that may impact youth's physical activity [5]. There is some evidence that suggests that availability and access to park and recreation spaces near home is associated with higher levels of physical activity in youth [6,7]. For example, a recent study documented an increase of 17 min of moderate to vigorous physical activity performed out of school by middle school girls in a 6 day period if there was a park within ½ mile of their home and by 7 min if there was a park within 1 mile of their home [6].

It is becoming increasingly clear that there is a need to not only understand the link between environments generically (e.g., size of parks around one's residence) and physical activity, but whether physical activity associated with living near a park is in fact performed in the nearby park. Understanding what factors influence youth's use of parks and their level of physical activity in the parks may provide direction for park and recreation planning to promote active use of parks by youth. In particular, amongst rural and minority youth, understanding what factors impact their park use and in particular active use of parks may begin to address the disparity in physical activity levels and subsequent health risk.

The goal of this study was to examine the relationship between park amenities, youth characteristics and park use in rural Latino youth. The specific aims were to: (1) describe park use, (2) describe park amenities, (3) test associations between individual characteristics and behaviors and park use and being active in parks.

Methods

Design and Setting

As part of a larger research project aimed at promoting physical activity among rural Latino youth we conducted a community assessment of community parks and recreation spaces and youth's use of these parks and recreation spaces. This project used a community-based participatory research (CBPR) approach in which the research was carried out in collaboration with community members [8]. A community–academic partnership was created for this research project, a community advisory board (CAB) was established, and CAB members participated in planning and conducting the research project. Members of the CAB and the researchers collaborated in all aspects of the community assessment. Data for this cross-sectional study are from the youth survey and community park assessment.

This CBPR study took place in a town within a rural agricultural county of Washington State, which has a population density of 52 people per square mile. Seventy-five percent of the nearly 14,000 town residents are Latino, 35% are foreign born, 65% speak a language other than English in the home and 53% have not earned a high school diploma [9]. In 2000 the median family income was $28,000, with 30% of families below the poverty level. In the 2009–2010 school year 100% of middle school students were on the free/reduced lunch program. There are few resources and few opportunities for youth to participate in after school physical activity programs. In the summer of 2008 the city closed the city recreation center and laid off the one full-time and one part-time Parks and Recreation Department staff.

Sample

Participants were recruited from the 1,370 students (grades 6, 7, and 8) who attended one of the two public middle schools in the town. A letter from the school explaining the study was

mailed to each parent. An opt-out form was included that parents could return to the school if they did not want their child to participate. Youth present on the day the survey was administered who chose to complete the survey constituted the sample. The University Institutional Review Board approved this study.

Instruments and Variables

Student Survey—We developed a two-part student survey to collect data on park use, physical activity, and health and risk behaviors. The first part of the survey asked about use of specific local parks and schoolyards. To prompt recognition, we included the name and two photos of all of the 13 parks or schoolyards available for public use in the town. For each of the park/schoolyards, respondents were first asked if they used the park after school or on weekends if they answered no they were prompted to skip the rest of the questions and go to the next page. If they answered yes then they were prompted to answer 5 questions regarding use of the park. First they were asked to indicate the frequency they went to the parks from a list of answers ranging from once a month to everyday. Next they were asked to indicate from a list of choices how they get to the park. Some respondents checked more than one mode of transport for a particular park. Next they were asked how long they spent with choices ranging from less than 20 min to greater than 90 min. Respondents were asked to indicate with whom they went to the park from a list that included friends and family; some respondents checked more than one response. Finally, respondents were asked the question “what do you do here,” with a list of activities, such as baseball, running, sitting. Many respondents checked more than one activity on the list.

The second part of the survey included questions about physical activity preferences, engagement, and motivators and barriers and were not specific to any park/schoolyard. Level of physical activity was determined from the following question; “on how many days in the past 7 days were you physically active for a total of at least 60 min per day (Add up all the time you spent in any kind of physical activity that increases your heart rate or make you breather hard some of the time)?” Those who answered 5, 6 or 7 days were classified as meeting current physical activity guidelines. We asked respondents to identify motivators for physical activity from a list of motivators and barriers from a list of barriers. Respondents could check all that pertained to them. There also were questions about risk behaviors (e.g., ever use alcohol, ever a member of a gang) and protective factors. Respondents were asked to report their height and weight. Most items included in the second part of the survey were drawn from the Washington State Healthy Youth Survey, which is administered every other year to 6, 8, 10, and 12 grade students, and has a moderate to high level of internal consistency [10], and from the CDC Youth Risk Behavior Surveillance (YRBS), which is conducted yearly among a random sample nationwide, with item test–retest reliability values 61–100% [11]. A few questions were developed by the researchers and CAB in order to provide specific information to assist in planning an after school physical activity program. Finally, we collected demographic information (age, gender, and race/ethnicity).

Environmental Assessment of Public Recreation Spaces (EAPRS)—We used the EAPRS [12] to assess the presence and quality of amenities in the 13 parks and schoolyards included on the student survey. For example, the presence/absence of courts was determined and when present an evaluation of the quality of a basketball court included assessing levelness of the surface, presence of cracks, court size (full or half), presence and condition of line markings, nets, and available seating as well as the proximity to restrooms that are open, clean, and functioning. Park amenities and features are organized into 7 sections: trails, paths, water areas, surrounding neighborhood and sidewalks, play structures, other play components (e.g., swings), and athletic fields, athletic courts and skate areas. A score is

derived for each section based on presence and quality of the amenities in that section. The section scores are summed to derive a park score. The EAPRS has acceptable inter rater reliability, especially regarding the presence and quality of elements of play equipment and field and courts [12].

Dependent Variables

Park Use: We aggregated each respondent's responses regarding use of each park into a sum total across the parks. Then park use was dichotomized into never used any park or used any park at least once a month.

Active and Sedentary in Park: Activities performed in the parks (the aggregated total across all parks) were categorized into active (e.g., basketball, soccer) and sedentary (e.g., sitting, watching sports). Respondents could select more than one activity per park used; therefore, a respondent could indicate performing both active sports, such as baseball or basketball and sedentary activities, such as sitting or watching sports at any one park. A respondent was categorized as an active user if she/he indicated performing an active activity and a sedentary user if she/he indicated performing a sedentary activity. A respondent could be both an active and sedentary user of a particular park because active and sedentary are two separate behaviors that a respondent could do while at a park. Therefore these outcomes (active and sedentary) are 2 separate variables rather than a single dichotomous variable.

High Quality Field and Court Use: We used the median EAPRS score for fields, courts and skate areas (67 of a maximum possible score of 385) included in this study as the cut-off to classify parks as relatively higher versus lower quality. Then, the aggregate use of higher quality field and court parks of each respondent was dichotomized into use of any of the higher quality field and court parks at least once a month versus no use of any of the higher quality field and court parks at least once a month.

Independent Variables—Youth characteristics and behaviors that are associated with physical activity were drawn from the literature [13–18] and the concerns of the CAB (for example, although ever being a member of a gang has not been shown to be associated with physical activity the community was interested ascertaining if this risk behavior influenced park use). We included the following variables in our models: age, gender, Latino, meeting physical activity recommendations (60 min moderate to vigorous physical activity on 5 or more days a week), obesity, ever involved in a gang, ever using alcohol, participated in after school activities, and identified coach, team, friend, or family as motivators to physical activity. We calculated BMI from self reported height and weight. We categorized participants into obese, overweight, and normal weight based on BMI using the CDC growth charts for age and gender. We dichotomized the responses regarding race/ethnicity into Latino and non-Latino.

Procedures—The 25-page surveys were administered in the fall of 2008. Teachers administered the surveys during the first period class of the school day. Word games were included at the end of the survey for students to do during the time surveys were administered if they chose not to complete the survey. Surveys were completed anonymously.

All 13 local parks and schoolyards in the town were evaluated using the EAPRS. There were two high school/middle schools (with courts and fields available for public use when school not in session), three elementary schools (with courts and fields and playground equipment available for public use when school not in session), three large parks (range 6.9–32 acres)

and five small neighborhood parks (range 1–3.5 acres). The EAPRS assessment was completed over a period of 4 days during July 2009 by the first author (who was blind to the survey results).

Data Analysis—For each park or schoolyard, we calculated frequencies for use, duration of use, activities performed, active or sedentary use, gender of user, and type of transportation. Cross tabulations by park and by gender were used to determine frequency and duration of park use, number who used a particular park, mode of transport to and from park, with whom the respondent went to the park, age of users, and the activities performed at each park. Chi Square (χ^2) tests were used to examine differences in these variables by park and by gender.

We developed 4 multivariable logistic regression models to test associations of the independent variables and our study outcomes—use of any park, use of any park with higher quality fields and courts (relative to all parks in the community as the overall quality of parks in this community was low), being active while at a park, and being sedentary while at a park. We included all of the independent variables, described above, in each model.

Results

A total of 1,102 middle school students completed the survey (sample characteristics see Table 1). Eighty-eighty percent of the respondents reported using at least one park at least once a month. The average frequency respondents reported using any of the parks ranged from once a week to 2–3 times per week. Respondents reported on average staying at the parks 20–60 min. The most reported activities being performed while at the parks were soccer, basketball, and skateboard; however, 63% of girls and 42% of boys reported being non-active at least some of the time while in the parks. Students often checked more than one activity per park. The most frequent write-in activities were watch sports events/games and swimming (the large community park in the center of town had an outdoor pool open in the summer).

At least half of the trips to the majority of parks were by active transport (walk or bike) (see Table 2 for park use characteristics). A greater percentage of trips to the large community parks were with family and a greater percentage of trips to the middle/high schoolyards were with friends. Among the parks with higher quality field and court scores, the elementary schoolyards had lower use than the middle schoolyards and community parks. The small neighborhood parks had lower use than the community parks or the middle/high schoolyards.

In general the middle/high schools had courts and fields and no play structures or swings, the elementary schools had a mix of play structures, fields and courts, the neighborhood parks had play structures and swings with few courts or fields, and the large parks had a variety of amenities depending on the park (see Table 3 for details on park amenities). Most parks and schoolyards had open spaces as well. None of the parks had paved or unpaved trails or natural wooded areas. Although there were fields and/or courts at most of the parks and schoolyards, their quality was poor with a mean field score of 40 (maximum possible score is 123) and a mean court score of 29 (maximum possible score is 124). For example, none of the basketball courts were full size, most had cracks in the surface and most did not have nets. The one skateboard area was of very poor quality with a score of 21 (maximum score is 138). The majority of the parks were rated as safe and in safe neighborhoods.

Table 4 depicts results from our 4 logistic regression models. Based on the full model, factors significantly related to park use (use of any park at least once a month) were

participation in an after school activity and identification of team as a motivator; older age youth were less likely to use a park. Youth were more likely to use higher quality court parks and higher quality field parks if they were Latino and participated in an after school activity.

The odds of being active while in the park was greater for boys (AOR = 1.62; $P = .039$) and Latinos (AOR = 1.89; $P = .021$). The likelihood of being sedentary while in the park was positively associated with age and alcohol use, while having met physical activity guidelines and male gender were protective against sedentary park use. The likelihood of using a park or a higher quality field park was decreased if youth identified family as a motivator for physical activity; this was an unexpected finding.

Discussion

In this study park use by youth was associated with participation in an organized after school activity and identification of team as a source of motivation to be active. Organized team activities likely attracted these rural predominantly Latino youth to parks. A relationship between organized activities and park use also was found in two recent studies with youth. In one, teens reported that an opportunity for organized activities was important factor in their park use [19]. In another the number of organized activities as well as park size had the strongest association with park use and being active while at the park [20]. Thus organized programming is an important driver of park use in youth, particularly Latino youth.

Organized programming also may influence active use of parks. In our sample of rural youth, being Latino was associated with being active while at a park. Among the youth in our sample, those who participated in an after school activity were more likely to meet physical activity guidelines [21]. Team sports are one type of organized after school activity. It is likely that the Latino youth who were active in the parks were participating in organized team sports. This suggests that organized programming influence active park use. In a recent study, participation in after school activities and perception of higher quality facilities was associated with greater levels of vigorous physical activity among low income and Latino teens [16]. Therefore, promoting being active in parks through organized programming in the parks may likely increase the likelihood of Latino youth going to the parks and increasing level of physical activity.

Higher quality fields and courts in the parks are important to teens. In this rural community youth used the parks with higher quality field and courts more than those parks with just playground equipment, which is geared toward younger children. In particular, Latino youth were more likely to use parks with higher quality fields and courts compared with their non-Latino counterparts. Similarly, in a recent study urban African American high school teens ($n = 48$) reported that the presence of quality courts and fields rather than equipment geared toward younger children, such as play structures, influenced their use of parks [19]. Similar results were found in another study among urban teens in which greater perceived park quality was associated with park use by high school aged youth ($n = 329$) [22]. Thus parks with higher quality fields and courts appear to attract youth to parks, particularly Latino youth.

There are differences in active use of parks by gender. In this local community, boys were much more likely to be active in the parks compared with girls, although a similar percentage of boys and girls used the parks. In our rural community the parks offered minimal or no organized programming. It is possible that the boys engaged in informal or impromptu physical activities, such as soccer or basketball and didn't necessarily need the structure of an organized program to be active. This was the case among urban African

American boys who reported feeling comfortable going to a park alone and informally joining other boys for a game of basketball; whereas, girls reported that they were not comfortable with this approach [19]. A study evaluating the impact of field improvements and increased programming on park use in 2 urban parks found different responses based on gender [23]. Results indicated that the park with field improvements and increased programming had an increase in both male and female teen use; however, the park with just field improvements had only an increase among males. Increasing the offerings of organized programming in the parks may increase active use of parks by girls.

Rural park users have been found to be less active users than urban users even when similar park amenities are present. In our study 63% of girls and 42% of boys reported being sedentary at least some of the time while in the parks. In a recent study examining factors associated with rural and urban active park usage through direct observations found that park users in rural areas went more frequently to the parks, but they were more sedentary than users in urban areas even if amenities such as courts or fields were present [24]. Specifically, they found that in two-thirds of visits to rural parks with fields and courts users were engaged in sedentary activities compared with 33% of visits to urban parks [24]. Additional research is needed to understand why there appear to be high rates of non-active park use by rural residents, especially girls.

In this rural community being sedentary while at the parks was positively associated with being older and ever having used alcohol and negatively associated with meeting physical activity guidelines or being boys. Latino ethnicity was associated with being active while at the park. Our results support previous research on factors associated with level of physical activity in diverse populations of youth. National studies have found a lower level of physical activity with older youth and girls [3] and a negative association between substance use and physical activity [18,25]. However, contrary to findings from national studies, in which Latinos have lower levels of physical activity compared to whites [4], in our primarily Latino sample (81% Latino), being active while at the parks was associated with being Latino.

Most of the 13 parks and schoolyards in this rural community had more than one type of park amenity; however, these amenities scored low on the EAPRS tool indicating lower quality. There is an inequitable distribution of physical activity resources in the U.S.; neighborhoods with a high proportion of ethnic minority and low educated residents having fewer recreational and physical activity facilities compared to high income and low ethnic minority neighborhoods [26]. This disparity seems to hold for the rural area of the current study, in which there are low quality fields and courts in a community whose residents have low levels of education, low-income levels, and are predominantly Latino.

A strength of this study was our ability to collect data on park use from rural Latino youth, an underserved and hard to reach population. We used self-report measures for park use and physical activity; as in all survey research, recall or social desirability bias are potential threats to validity. In addition, the high percentage of youth reporting using a park in this sample may have limited our ability to determine covariates of park use (limited variation in our outcome). Use of cross sectional data limit our ability to make causal inferences; however, understanding the significant associations will assist in informing ways to change parks to increase active use of parks by rural and Latino youth. Finally, we collected survey data from students in November and the parks were evaluated the following July. It is possible that park amenities or conditions changed during this time.

Conclusion

The results from our study indicate that Latino youth are more likely to use higher quality field and court parks. We also found that Latino youth are more active in parks compared with non-Latino youth. Since Latino youth, in particular rural Latino youth are less active than their white counterparts ensuring that there are parks with higher quality fields and courts that they can use may begin to address this disparity by providing a space for Latino youth to be active. Additionally, participation in organized activities was associated with park use. Offering organized programming at parks may increase the number of youth who use parks and potentially increase the number who are active while at the park, particularly girls. During the teen years the level of physical activity declines and this decline is more precipitously in girls than boys [3]. Providing increased opportunities for organized physical activity at parks with quality fields and courts may begin to change this downward trend in physical activity during the teen years for both boys and girls. Parks are an overlooked resource for promoting physical activity in youth [27]. Coordination between parks and schools in running organized recreational physical activity programs may promote physical activity among youth. Future research should evaluate whether increasing organized programming with coordination between park departments and school districts as well as improving the quality of the courts and fields can increase the percent of youth who actively use parks and whether increasing the number of youth who actively use parks will in turn increase the number of youth who meet the recommended level of physical activity.

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Table 1

Sample characteristics, *N* = 1,102

Characteristic	Number (percent)
Gender	
Girls	487 (50)
Boys	497 (50)
Age	
11	203 (21)
12	277 (29)
13	307 (32)
14	179 (19)
Ethnicity/Race	
Hispanic/Latino	780 (81)
Non Latino	180 (19)
Obese (>95th BMI percentile)[§]	142 (21)
Overweight (85th–95th BMI percentile)[§]	123 (18)
Engaged in 20 min hard exercise/day	300 (28)
Engaged in 30 min moderate exercise/day	187 (18)
Engage in 60 min moderate-vigorous exercise/day	214 (20)
Park use (any use at least once a month)	975 (88)

Note Non-Latino includes African American (3%), American Indian/Alaska Native (2%), White (10%), Asian American (1%), Mixed (2%)

[§]Percentages are based on valid responses for height and weight

Table 2
Park use characteristics for the 13 parks and schoolyards

Park	Use park[a] (%)	Active transport to park[b] (%)	Go with family[b,c] (%)	Go with friends[b,c] (%)
Middle/High School	47	47	41	56
Middle School	34	30	19	50
Elementary School	20	63	43	43
Large Community Park (3 miles out of town)	37	20	69	45
Elementary School	15	50	51	40
Large Community Park (in town)	39	44	65	50
Elementary School	19	38	45	44
Small Neighborhood Park	22	62	52	60
Small Neighborhood Park	14	61	40	56
Large Community Park (in Center of Town)	64	53	70	60
Small Neighborhood Park	12	60	48	57
Small neighborhood Park	7	40	41	40
Small Neighborhood Park	18	50	63	43

[a] percent based on total sample of 1,102

[b] percent based on number who use the specific park

[c] percent can add up to greater than 100% because respondents could indicate multiple responses to question, “who do you go to the park with?”

Table 3

Quantity and quality of park amenities in 13 local parks and schoolyards

Park	Open spaces Number	Open spaces Size	Fields & courts (Type & Number)	EAPRS Field and court score Max score = 385	Play structures & swings Number	EAPRS Play structures & swings score Max score = 483	EAPRS Park score Max score = 1,906
Middle School/High School	0	N/A	3 Baseball 3 Soccer 3 Football 8 Tennis 8 Basketball 3 Track	153	None	0	204
Middle School	1	>10,000 sq. ft.	3 Baseball 1 Soccer 1 Football 3 Basketball 1 Track	151	None	0	178
Elementary School	3	>10,000 sq. ft.	4 Baseball 2 Soccer 1 Football 5 Basketball	123	4 Play structures 6 Swings	181	178
Large Community Park (3 miles out of town)	4	>10,000 sq. ft.	4 Baseball 1 Soccer 1 Skate area	117	2 Play structures 0 Swings	111	280
Elementary School	2	>5,000 sq. ft.	3 Baseball 4 Basketball	116	2 Play structures 4 Swings	191	412
Large Community Park (in Town)	3	>5,000 sq. ft.	4 Baseball 4 Tennis 2 Basketball	113	1 Play structures 24 Swings	160	417
Elementary School	2	>5,000 sq. ft.	6 Soccer 1 Basketball	97	1 Play structures 3 Swings	197	417
Small Neighborhood Park	2	>10,000 sq. ft.	1 Basketball	36	1 Play structures 3 Swings	223	312

Park	Open spaces Number	Open spaces Size	Fields & courts (Type & Number)	EAPRS Field and court score Max score = 385	Play structures & swings Number	EAPRS Play structures & swings score Max score = 483	EAPRS Park score Max score = 1,906
Small Neighborhood Park	2	>10,000 sq. ft.	1 Basketball	36	1 Play structures 3 Swings	223	312
Small Neighborhood Park	2	>5,000 sq. ft.	1 Basketball	31	0 Play structures 5 Swings	34	205
Small Neighborhood Park	2	>5,000 sq. ft.	2 Basketball	29	None	0	241
Large Community Park (in center of town)	2	>5,000 sq. ft.	None	0	2 Play structures 6 Swings	269	466
Small Neighborhood Park	1	2,500 sq. ft.	None	0	0 Play structures 2 Swings	36	161
Small Neighborhood Park	1	25,000 sq. ft.	None	0	None	0	72

Table 4

Logistic regression results for s of park use and activity (adjusted odds ratios and 95% CIs)

Covariates	Outcomes			
	Park use	Higher quality field & court park use	Active while at park	Sedentary while at park
Age	**0.76 (0.59, 0.98)***	0.85 (0.68, 1.05)	**0.81 (0.65, 1.02)+**	**1.30 (1.08, 1.57)****
Male gender	1.04 (0.63, 1.72)	.99 (0.65, 1.52)	**1.62 (1.02, 2.56)***	**0.34 (0.24, 0.50)*****
Latino	0.92 (0.46, 1.83)	**1.57 (0.92, 2.69)+**	**1.89 (1.10, 3.25)***	.94 (0.58, 1.52)
Meet physical activity guidelines	1.13 (0.66, 1.94)	1.24 (0.79, 1.96)	1.49 (0.91, 2.42)	**0.57 (0.39, 0.85)****
Obesity	1.07 (0.79. 1.46)	1.12 (0.86, 1.46)	1.14 (0.86, 1.52)	1.0 7(0.85, 1.33)
Ever involved in a gang	1.67 (0.82, 3.39)	1.02 (0.58, 1.80)	.86 (0.48, 1.54)	1.23 (.77, 1.96)
Ever drank alcohol	0.81 (0.48, 1.37)	1.15 (0.73, 1.81)	1.34 (0.86, 2.25)	**1.44 (0.98, 2.12)+**
Involved in after school activities	**1.56 (1.21, 2.01)*****	**1.51 (1.23, 1.85)*****	1.15 (0.95, 1.38)	0.98 (0.85, 1.14)
Identify coach as motivator for physical activity	0.89 (0.51, 1.54)	1.14 (0.71, 1.84)	1.16 (0.71, 1.88)	1.33 (0.89, 1.97)
Identify team as motivator for physical activity	**2.01 (0.92, 4.34)+**	1.39 (0.75, 2.57)	.78 (0.43, 1.40)	.90 (0.55, 1.46)
Identify friends as motivator for physical activity	1.50 (0.86, 2.63)	1.39 (0.88, 2.21)	1.26 (0.78, 2.04)	1.41 (.96, 2.07)
Identify family as motivator for physical activity	**0.51 (0.30, 0.85)***	**0.64 (0.41, 0.99)***	1.42 (0.872, 2.29)	1.22 (0.83, 1.80)

Key

$^{+}P < .10$;

$^{*}P < .05$;

$^{**}P < .01$;

$^{***}P < .001$

Bold values indicate statistically significant ORs