KC Parks

Kansas City, Missouri

Parks and Physical Activity Project

Kansas State University

University of Missouri

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Physical inactivity is widely acknowledged as an important public health concern. Researchers and professionals in public health, parks and recreation, and other fields increasingly understand that the design of our neighborhoods and communities has a significant impact on residents' health behaviors and outcomes. Within this new paradigm, parks – given their low cost of service provision and availability throughout communities – are recognized as important resources for promoting population-level physical activity and health.

Since 2008, researchers from Kansas State University and the University of Missouri have collaborated with the Kansas City, Missouri (KCMO) Parks and Recreation Department on multiple studies comprising the Kansas City Parks and Physical Activity Project (KCPAPAP). The purpose of the KCPAPAP is to better understand and improve the way parks promote youth and adult physical activity in the Kansas City area. The following paragraphs provide an overview of the three components of the KCPAPAP and a summary of key project findings to date.

Investigating Park Environments and Physical Activity

This study occurred in four KCMO parks – Budd, Loose, Penn Valley, and Roanoke – and involved audits of the park environment, systematic observations of park users' physical activity levels, and surveys of adult park visitors. A total of 8,885 users were observed and 475 adults surveyed over the study period. Just over half of park users (52.7%) were observed being sedentary, while 41.2% and 6.1% were engaged in moderate and vigorous activity, respectively. Numerous differences in users' activity levels were observed by gender, age, and race/ethnicity. As well, there were differences in energy expenditure across park activity areas, with adults more active on trails and tennis courts and youth more active on playgrounds.

When surveyed, adult visitors reported an average park visit length of 1 hour and 40 minutes and 87% said they engaged in at least some physical activity while there. Relaxing and walking/hiking were the two most common park activities. Health reasons were the strongest motives for visiting the park, followed by enjoying nature, and social interaction. When asked about park site attributes that were important for physical activity, feeling safe from crime, beauty, maintenance of facilities, and several access-related items were all rated highly. Finally, park visitors were attached to parks primarily because of the emotional/symbolic meaning of the place (place identity), the associated social ties to the place (social boding), and the functional dependence on the resource to fill their needs or goals (place dependence).

Development of a Community Stakeholder Park Audit Tool

This project worked with a diverse group of 34 community stakeholders to develop and test a user-friendly park audit tool that could be used to evaluate neighborhood parks for their potential to promote youth physical activity. The stakeholders represented diverse constituencies with an interest in community parks, youth, and/or public health (e.g., academia, parks and recreation, public health, planning and development, youth agencies, business associations, legislators, youth and adult park users and non-users, etc.). The tool development

process included a detailed review of existing park audit tools, three workshops with community stakeholders, and field testing of the new tool in diverse parks across KCMO.

The new Community Park Audit Tool (CPAT) is 6 pages in length and contains four sections entitled Park Information, Access and Surrounding Neighborhood, Park Activity Areas, and Park Quality and Safety. An accompanying guidebook containing more detailed information and definitions was also developed to facilitate minimal training. To test the inter-rater reliability of the CPAT, pairs of stakeholders independently audited a total of 59 parks. Statistical analyses showed that there was a very high degree of reliability (i.e., match between raters) for the vast majority of the 140 items in the tool.

In addition to developing the tool, community stakeholders reported a range of positive reactions from their participation in the project. For example, 83% reported that their perceptions of the importance of both the built environment and parks for promoting physical activity had improved 'moderately' or 'a lot' over the course of the project. They also provided numerous suggestions about how the CPAT could facilitate efforts related to improving knowledge, attitudes, and advocacy efforts in relation to KCMO parks. Dissemination of the CPAT is ongoing both locally and nationally, and such efforts should facilitate greater engagement of diverse groups in evaluating and advocating for improved parks and overall healthy community design.

Kansas City Neighborhood and Park Study

The purpose of the Kansas City Neighborhood and Park Study (KCNPS) was to understand how neighborhood and park environments influence the physical activity and health of nearby children and adults. The primary component of the KCNPS was a mail survey of 893 households dispersed across KCMO that addressed residents' perceptions of neighborhoods and parks as well as various health behaviors and outcomes, including physical activity and park use. All parks within 1 mile of survey respondents' homes were mapped to measure availability of park space and all such parks were also audited using the CPAT to assess park attributes such as features, amenities, access, quality, safety, and neighborhood context.

Some of the key findings of the KCNPS included that 56% of adult respondents and 62% of youth had visited a park within the past month. For adults, trails were the most used park facilities and walking/hiking the most popular activity, with playing with kids and playgrounds most common for youth. More than half of the sample perceived they could walk to a park within 10 minutes or less. Safety from crime and injury, maintenance, and cleanliness were some of the park attributes rated most important for being physically active in parks. Residents also reported fairly positive perceptions of the quality of the parks in their neighborhoods.

Our analyses also found that youth who had a park within ½ mile of home were more than twice as likely to achieve recommended levels of physical activity as those with no parks nearby. With respect to specific features, youth who had a park with a playground within one-half mile or a baseball field within 1 mile of their home were also more likely to achieve physical activity recommendations.

ACKNOWLEDGEMENTS

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We would like to thank several individuals at the Kansas City, Missouri Parks and Recreation Department for their guidance, support, and enthusiasm that have contributed immensely to the success of these projects. These include, but are not limited to:

- Mr. Mark McHenry, Director
- Mr. Steve Lampone, Deputy Director
- Ms. Karmen Bradley, Executive Assistant
- Ms. Burnetta Burtin, Secretary to the Board of Commissioners (retired)
- Ms. Jennifer Jones-Lacy, Special Projects Manager

The following graduate students were also invaluable members of the KCPAPAP team:

- Ms. Gina Besenyi, Department of Kinesiology, Kansas State University
- Ms. Katy Vaughan, Department of Kinesiology, Kansas State University
- Ms. Hua Bai, Department of Parks, Recreation and Tourism, University of Missouri

Finally, we wish to acknowledge the generous funding received from the following organizations:

- Robert Wood Johnson Foundation Active Living Research program
- Kansas City, Missouri Parks and Recreation Department
- University of Missouri Research Council
- Kansas State University Office of Research

Suggested citation for this report:

Kaczynski, A.T., Wilhelm Stanis, S.A., Besenyi, G.M., & Vaughan, K.B.. (2011). *Kansas City, Missouri: Parks and Physical Activity Project*. Manhattan, KS: Kansas State University.

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Welcome to the Kansas City Parks and Physical Activity Project (KCPAPAP), a joint venture of researchers from Kansas State University, the University of Missouri, and the Kansas City, Missouri Parks and Recreation Department.

Physical inactivity is widely recognized as a significant public health concern because of its association with an increased risk of premature death, obesity, and numerous chronic diseases. Although past research and health promotion efforts have treated physical inactivity as an individual choice, a growing and convincing body of evidence indicates that many attributes of the built and social environments facilitate or restrict the opportunities people have to be physically active. Parks, in particular, have been viewed as important community settings for physical activity that can have a positive impact on public health due to their relatively low cost and ability to reach a large number of people (Bedimo-Rung, Mowen, & Cohen, 2005; Moody et al., 2004).

The purpose of the KCPAPAP is to better understand and improve the way parks promote youth and adult physical activity in the Kansas City area. The KCPAPAP is comprised of three project components:

Investigating Park Environments and Physical Activity
This study employed three integrated methodologies – observations of park users, park visitor surveys, and park environment audits – to investigate the role of park environments in facilitating physical activity.

Development of a Community Stakeholder Park Audit Tool
This study worked with a diverse group of community stakeholders to develop a user-friendly park audit tool that could be used to evaluate neighborhood parks for their potential to promote youth physical activity.

Kansas City Neighborhood and Park Study
This study employed three methodologies – detailed park audits, surveys of neighborhood residents, and GIS data on park availability and size– to examine how neighborhood and park environments influence the physical activity behaviors of children and adults across Kansas City, Missouri.

SECTION 1
INVESTIGATING PARK ENVIRONMENTS AND PHYSICAL ACTIVITY

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Introduction

Emerging research suggests parks are important resources for physical activity and public health, and given their ubiquity across municipalities and their relatively low cost of service provision, it is likely that thoughtfully-designed parks have significant untapped potential for population-level physical activity promotion. Nevertheless, many park visitors remain sedentary during their visits and information regarding factors that influence and facilitate physical activity in parks is still limited. Moreover, beyond simple observations of visitors' behaviors, which often do not provide a complete picture of their total physical activity within the park, surveys of park users can provide valuable information about their park visitation patterns, origins, motivations, constraints, socio-demographic characteristics, overall behaviors during their visit, and other important contextual details. In general, the use of complementary methodologies can provide a more comprehensive picture of park-based physical activity that can inform the thoughtful design and effective promotion of parks as community physical activity resources. However, no study to date has combined systematic observation of park-based physical activity with valid and reliable audits of park environments or park visitor surveys.

Purpose

The purpose of this component of the KCPAPAP was to employ a multi-method approach to examine the role of park environments in facilitating physical activity and factors that influence park physical activity participation. Specifically, the primary objectives were to:

- Better understand the amount of physical activity that occurs in parks, including its intensity (sedentary, moderate, or strenuous) and duration.
- Examine the level of physical activity that occurs in different areas of park environments.
- Assess park users' perspectives (e.g., motivations, constraints, visitation patterns, use behaviors, important site characteristics) on the role of parks in their physical activity participation.

Methods

The study occurred in July-August 2009 and involved three integrated components: i) observation of physical activity in parks, ii) audits of the physical park environment, and iii) on-site surveys with park users. Four parks in Kansas City, Missouri (Loose, Penn Valley, Budd, and Roanoke) were chosen for their central location, variety of features, and moderate size (26-129 acres each) and were divided into 14-28 observable target areas per park (e.g., trails, playground, open space).

A modified version of the System for Observing Play and Recreation in Communities (SOPARC; McKenzie et al., 2006) was used to record the physical activity of park users by gender (male, female), age (child, teen, adult, senior), race/ethnicity (White, Asian, Black, Hispanic, Other), and intensity level (sedentary, moderate, vigorous). Each park was observed for a total of 39 hours (Friday-Sunday, 7am-8pm) which were spread across two weekends (6 days total) per park. Inter-observer reliability tests yielded intraclass correlations across raters that ranged from 0.89 to 0.98 for all recorded user characteristics. Data on park characteristics were collected via detailed park audits using the Environmental Assessment of Public Recreation Spaces (EAPRS) instrument (Saelens et al., 2006) by two trained raters just prior to physical activity observations being collected in the parks.

Brief, onsite, self-administered questionnaires were administered to park visitors in each of the four parks. Corresponding with park observations (two weekends, Friday-Sunday, 7am-8pm), visitors 18 years and older were systematically sampled, resulting in a final sample of 475 respondents (60.4% response rate). The four-page questionnaire collected information on visitor motivations, constraints, place attachment, important site characteristics, total and park-based physical activity, demographics, and other visit and visitor characteristics.

Findings

Part A: Demographic Characteristics and Physical Activity Levels of Park Users

A total of 8,855 users were observed across the four parks with the majority of park users observed at Loose Park (73%), as illustrated in Figure 1.1. Of the total sample, slightly over half of the park users observed were female, (51.2%) and about 49% were male (Figure 1.2). Figure 1.3 shows that the majority of park users were adults (67.0%), followed by children (21.8%), teens (5.9%), and seniors (5.3%).

Figure 1.1 Park Users by Park

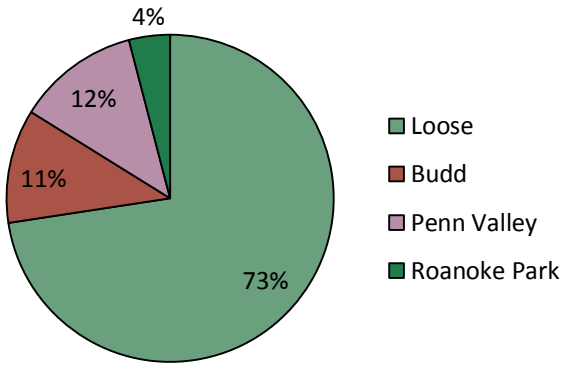


Fig. 1.2 Gender of Park Users

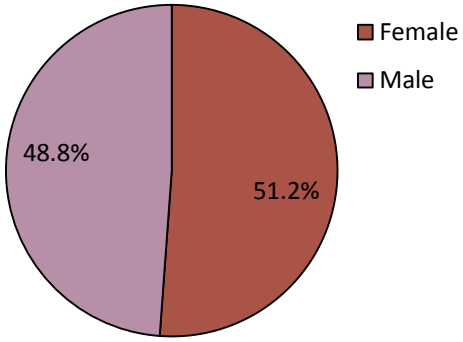


Fig. 1.3 Age of Park Users

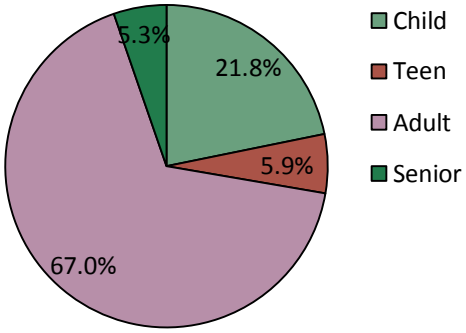


Fig. 1.4 Race/Ethnicity of Park Users

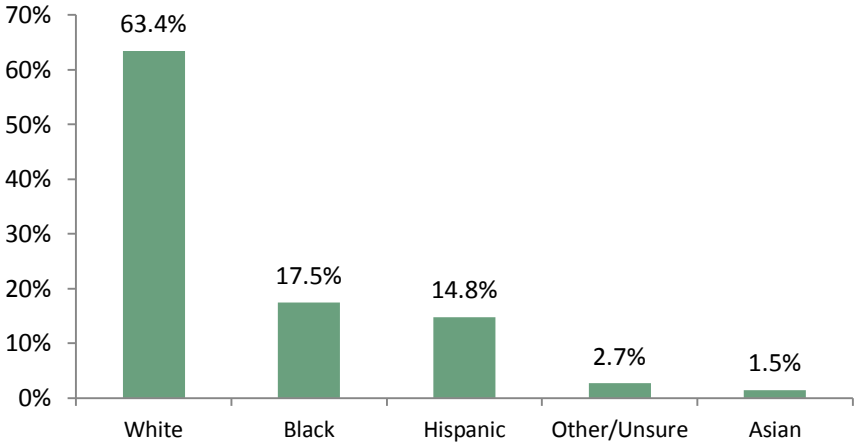


Figure 1.4 shows that the majority of the park users observed were White (63.4%), followed by Black (17.5%), Hispanic (14.8%), other/unsure (2.7%), and Asian (1.5%).

Fig. 1.5 Gender and Age of Park Users

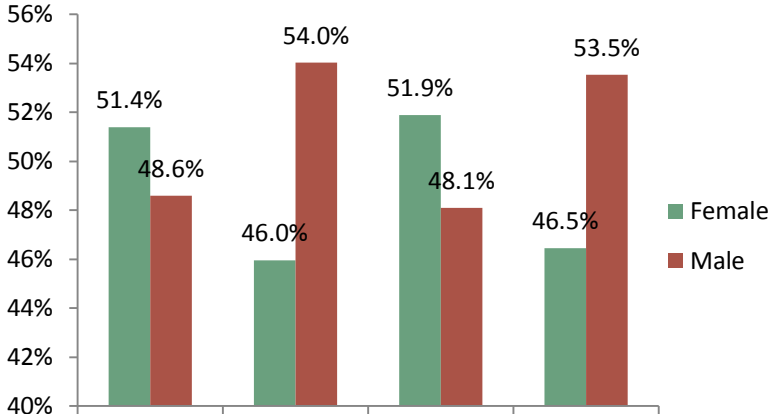
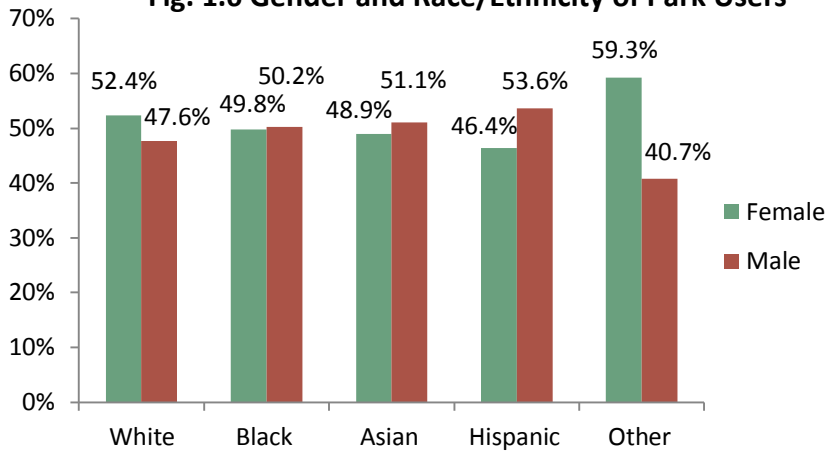


Figure 1.5 shows the gender and age of park users simultaneously. Males were more likely to be teens or seniors, while child and adult users were comprised of a somewhat greater percentage of females.

Fig. 1.6 Gender and Race/Ethnicity of Park Users



However, when examining the gender and race of park users concurrently, there were few differences in the proportion of males and females across race/ethnicity groups (Figure 1.6).

Figure 1.7 shows the breakdown of observed park users by age and race/ethnicity. There was a considerable amount of diversity across all four age groups, but White persons represented the majority of park users in all groups.

Fig. 1.7 Age and Race/Ethnicity of Park Users

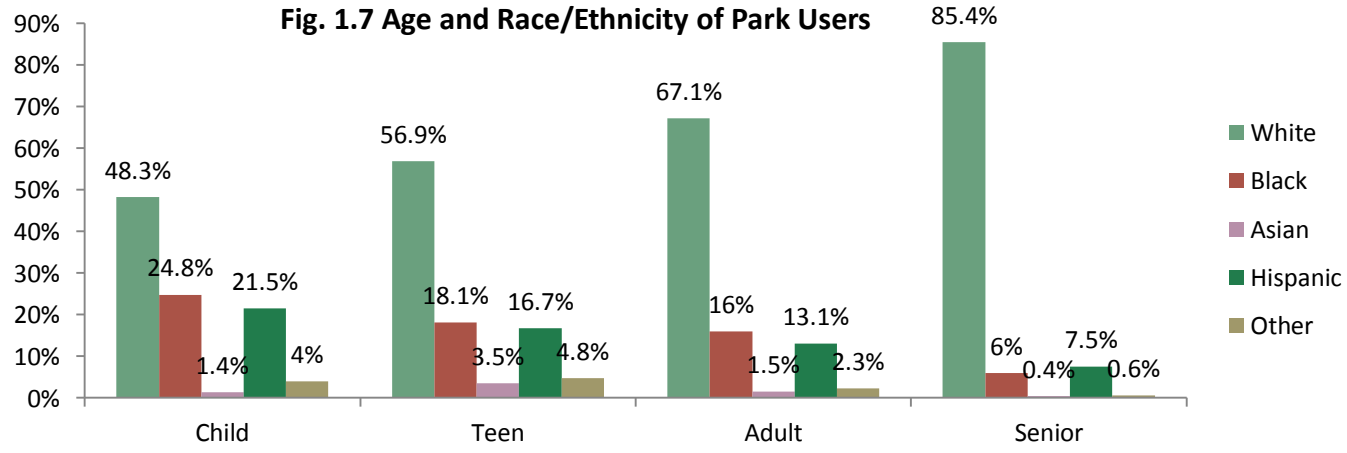
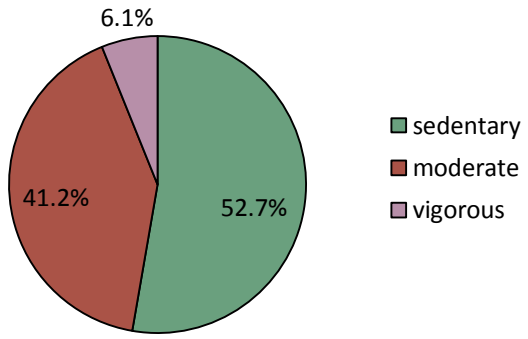


Fig. 1.8 Intensity Levels of Park Users



Park users' physical activity intensity was observed and recorded as sedentary, moderate, or vigorous as shown in Figure 1.8. Just over half of all park users were sedentary (52.7%). Over 40% were moderately active, while very few park visitors (6.1%) were observed engaging in vigorous physical activity during their park visit.

Fig. 1.9 Gender and Intensity of Park Users

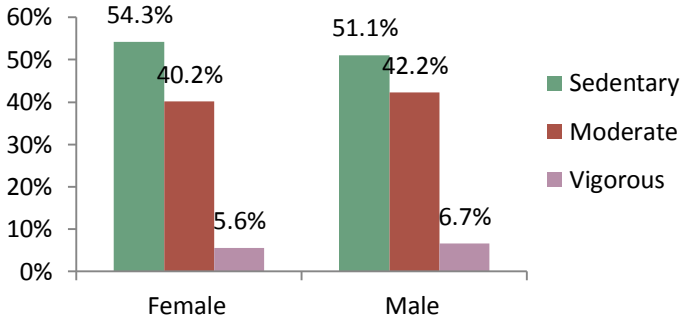


Figure 1.9 shows that there was no significant difference between the two genders with respect to being sedentary, moderately, or vigorously active. Approximately the same percentage of males and females were observed engaging in the three intensity levels.

Fig. 1.10 Age and Intensity of Park Users

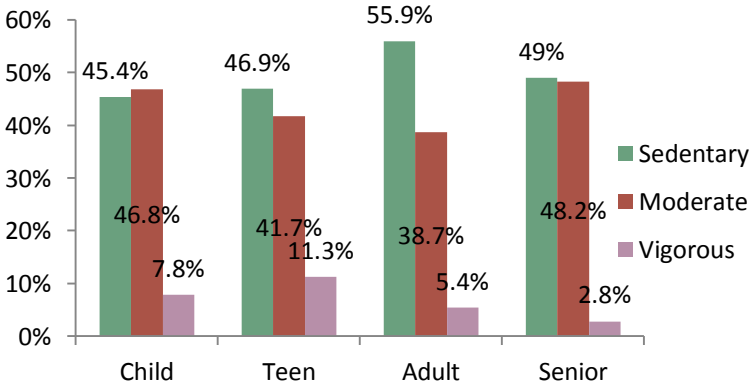


Figure 1.10 shows the breakdown of the intensity of park users by age group. By far, adults exhibited the greatest percentage of sedentary park users, while teens and children had the highest proportion of vigorously active users.

When looking at physical activity intensity by race/ethnicity (Figure 1.11), the graph shows that with the exception of Asians, the greatest percentage for all groups was for the sedentary category. However, Whites had a somewhat lower percentage of sedentary users than most of the other groups.

Fig. 1.11 Race/Ethnicity and Intensity of Park Users

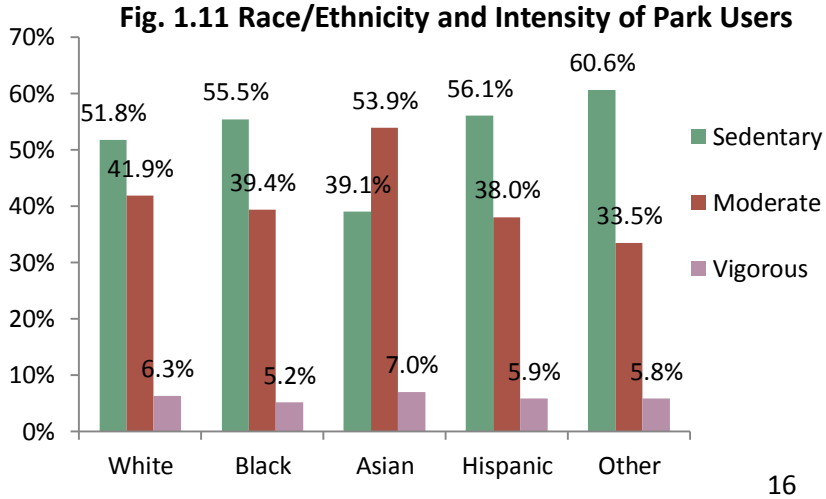
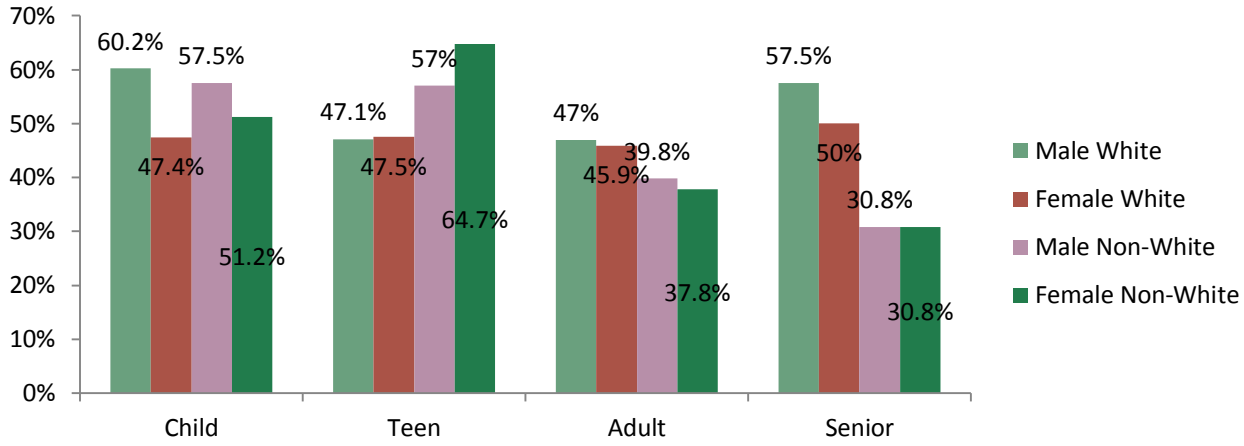


Fig. 1.12 Percentage of Observed Moderate-to-Vigorous Park Users by Gender/Race Group Across Age Groups



We also wished to examine joint effects of gender, race, and age simultaneously. Figure 1.12 depicts the percentage of park users within each age and gender/race group who were observed engaged in moderate-to-vigorous physical activity. For all age groups except teens, male/white visitors had the greatest percentage of users engaged in moderate-to-vigorous physical activity. The gender/race group with the lowest percentage of users engaged in moderate-to-vigorous physical activity varied across age groups, ranging from female/non-white users for adults and seniors, to female/white users for children, and male/white users for teens.

Table 1.1 shows that the five park target areas most used by adults (adults and seniors combined) were paved trails (n=2770), open spaces (n=1412), playgrounds (n=531), picnic shelters (n=464), and tennis courts (n=336). Differences in energy expenditure across these five target areas were examined for the total sample of adults as well as several sub-samples (adult, senior, female, male, White, non-White). As shown in Table 1.1, the ANCOVAs indicated statistically significant differences for all of the adult samples. Within the full sample of adults, scans of users showed a higher mean EE on paved trails (.091 kcal/kg/min) and tennis courts (.089) than in open spaces (.070), playgrounds (.063), or picnic shelters (.063). The same trends were largely found for all sub-samples examined.

Table 1.1: Differences in Energy Expenditure Across Park Target Areas Among Adults

Sample	**Five Most-Used Park Target Areas (average kcal/kg/min)**					**ANCOVA**	
Adult/Senior	Open Space	Paved Trail	Playground	Tennis Court	Picnic Shelter	F	p
Total sample	0.070[b]	0.091[a]	0.063[b]	0.089[a]	0.063[b]	16.88	<.001
Adult	0.069[b]	0.092[a]	0.063[b]	0.087[a]	0.062[b]	61.20	<.001
Senior	0.069[b]	0.086[a]	0.069[ab]	0.097[a]	0.056[b]	10.65	<.001
Female	0.068[b]	0.090[a]	0.061[b]	0.090[a]	0.062[b]	50.58	<.001
Male	0.070[b]	0.090[a]	0.063[b]	0.086[a]	0.063[b]	45.08	<.001
White	0.071[b]	0.093[a]	0.063[b]	0.089[a]	0.063[b]	49.54	<.001
Non-White	0.068[b]	0.086[a]	0.061[b]	0.088[a]	0.059[b]	24.26	<.001

Note: Mean energy expenditure values with different superscript letters were significantly different from one another (p<.05).

Table 1.2 shows that the five areas most-used by youth included paved trails (n=678), playgrounds (n=651), open space (n=504), pools/splash pads (n=258), and picnic shelters (n=201). Overall, fewer EE differences between target areas were observed for the various youth samples examined. For the total youth sample, playgrounds (0.088) had greater EE than picnic shelters (0.070) and similar differences were found for the child and White sub-samples as well (Table 1.2).

Table 1.2: Differences in Energy Expenditure Across Park Target Areas Among Youth

Sample	**Five Most-Used Park Target Areas (average kcal/kg/min)**					**ANCOVA**	
Child/Teen	Open Space	Paved Trail	Playground	Pool/ Splash Pad	Picnic Shelter	F	p
Total sample	0.079[ab]	0.081[ab]	0.088[a]	0.078[ab]	0.070[b]	2.80	.03
Child	0.078[ab]	0.081[ab]	0.089[a]	0.078[ab]	0.070[b]	3.25	<.01
Teen	0.076	0.081	0.073	0.066	0.069	0.68	.67
Female	0.074	0.078	0.082	0.072	0.070	1.14	.34
Male	0.081	0.082	0.089	0.080	0.074	1.68	.13
White	0.077[ab]	0.081[ab]	0.088[a]	0.078[ab]	0.068[b]	3.06	<.01
Non-White	0.081	0.084	0.086	0.077	0.074	1.33	.25

Note: Mean energy expenditure values with different superscript letters were significantly different from one another (p<.05).

Part B: Park Visitor Survey

A total of 475 park visitors were surveyed across the four parks. Table 1.3 shows the demographic characteristics of all of the park visitors surveyed including gender, age, race and ethnicity, education, and income. Slightly over half of park visitors were female, with the majority between the ages of 30-49. The majority of respondents were non-Hispanic White, followed by Hispanic/Latino of any race, and Black/African American. Most respondents were educated with at least a two-year college degree and reported an annual household income between $25,000-$75,000.

Figure 1.13 shows the Body Mass Index (BMI) of the park visitors surveyed. The majority of park users were in the normal weight category (BMI 18.6-24.9), although the sample mean was 26.0 which is classified as overweight.

Fig 1.13 BMI Category of Park Visitors

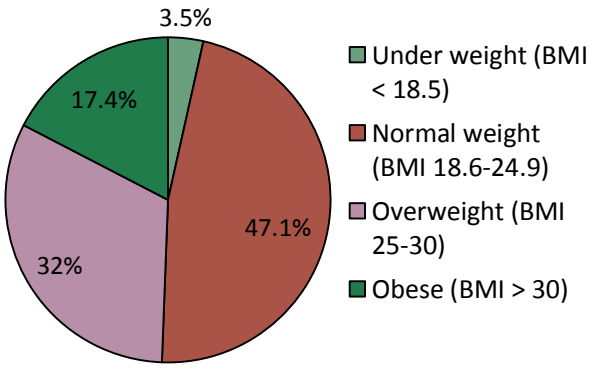


Table 1.3: Demographic Characteristics of All Park Visitors Surveyed

	n	%
Gender (n=469)		
Male	215	45.8
Female	254	54.2
Age (n=458)	(M 38.84, SD 13.32)	
18 – 29	134	29.3
30 – 49	223	48.7
50 – 64	79	17.2
65+	22	4.8
Race and Ethnicity (n=470)		
American Indian or Alaska Native	8	1.7
Asian	8	1.7
Black or African American	53	11.3
Native Hawaiian or Other Pacific Islander	3	0.6
Non-Hispanic White	311	66.2
Other	11	2.3
Multiple Race	6	1.3
Hispanic/Latino, any race	70	14.9
Education (n=468)		
8th grade or less	20	4.3
High school/GED	73	15.6
Some college	101	21.6
Two-year college degree	40	8.5
Four-year degree	129	27.6
Advanced degree	105	22.4
Income (n=437)		
Less than $25,000	93	21.3
$25,000-$49,999	134	30.7
$50,000-$74,999	103	23.6
$75,000-$99,999	34	7.8
$100,000-$149,999	31	7.1
$150,000-$199,999	26	5.9
$200,000 or more	16	3.7

Fig. 1.14 Transportation to the Park

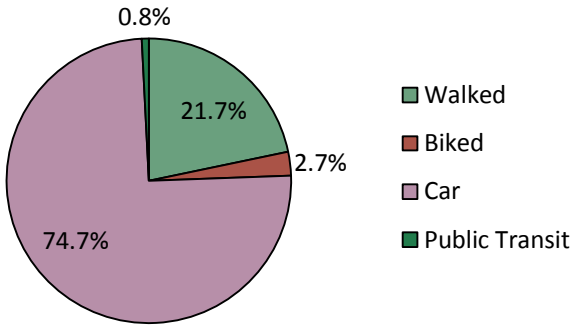


Figure 1.14 shows the mode of transportation used to get to the park. The majority of park users surveyed (75%) drove in a car to the park, followed by walking (22%). Few biked or took public transit.

Table 1.4 shows the time and distance visitors traveled to the park, as well as the time that park visitors spent at the park during the visit when they were surveyed. The mean travel time to the park was 15 minutes for an average distance traveled of just under 8 miles. Once at the park, the average length of the park visit was 1 hour and 40 minutes.

Table 1.4: Park Visit and Travel

	n	Mean	SD	Median	Do Not Know
Travel Time to Park **(Hrs:Mins)**	449	0:15	0:10	0:31	8 (1.8%)
Miles to Park	423	7.71	32.11	3.0	24 (5.4%)
Length of Stay **(Hrs:Mins)**	453	1:40	1:24	1:15	17 (3.6%)

Fig. 1.15 First Visit to the Park

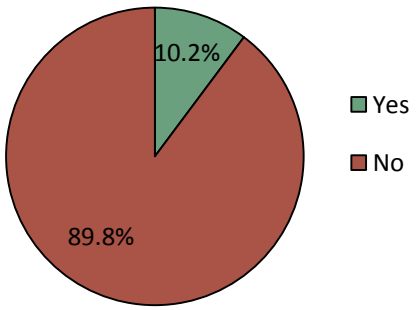


Figure 1.15 and Table 1.5 show past visitation to the park where the surveyed occurred. The majority of respondents said that it was not their first visit to the park (n=422). Of those that had visited the park before, respondents indicated a mean of 47 park visits in the last 12 months and 218 visits total over nearly 10 years of visitation.

Table 1.5: Past Park Visitation

	n	Mean	SD	Median	Do Not Know
Visits In the last 12 months	355	47.23	86.12	12.0	40 (8.4%)
Total Times Visited	280	218.16	686.95	25.0	89 (18.7%)
Total Years Visited	380	9.81	11.73	4.25	17 (3.6%)

Fig. 1.16 Visitor Companions

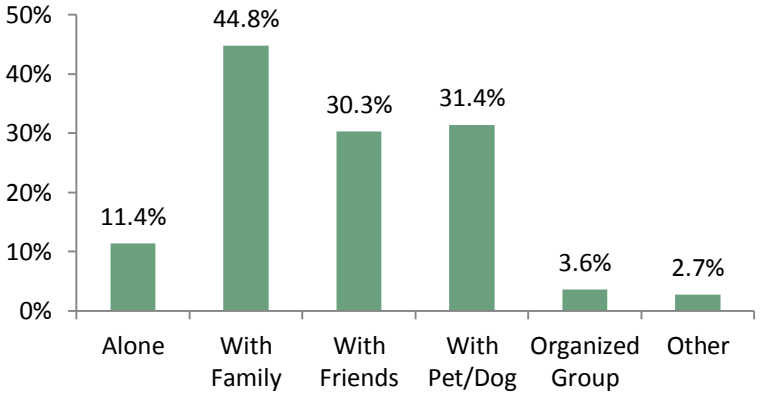


Figure 1.16 shows who park users visited the park with. The majority of park users visit the park with family (45%); many park users also visit the park with a pet (31%) or with friends (30%).

Table 1.6 shows the activities that park users engaged in during their park visit. The top five activities were relaxing, walking/hiking, other (e.g., skateboarding, playing with dog), playing with kids, and picnicking (Note: respondents were allowed to indicate more than one activity during their visit).

Table 1.6: Activities Done During Park Visit

	n	%
Relaxing	229	48.2
Walking/hiking	220	46.3
Other	161	33.9
Playing with kids	141	29.7
Picnicking	79	16.6
Group Sports	71	14.9
Reading	56	11.8
Sightseeing	43	9.1
Bird watching	39	8.2
Jogging/running	34	7.2
Viewing/photographing nature	31	6.5
Biking	21	4.4
Fishing	7	1.5
Rollerblading	4	0.8

Table 1.7: Motivation For Park Visits			
Motivation Items	**n**	**Mean**	**SD**
Health (α=0.701)	**472**	**4.03**	**0.82**
To be physically active	452	4.08	1.02
To get away from the usual demands of life	468	4.05	1.01
To relax physically	458	3.97	1.03
Enjoy Nature (α=0.872)	**473**	**3.90**	**0.91**
To be close to nature	468	4.00	0.97
To view scenery	457	3.88	0.98
To experience nature	471	3.83	1.06
Social Interaction (α=0.355)	**470**	**3.76**	**0.84**
To do something with my family	458	3.99	1.17
To be with people who enjoy the same things I do	456	3.86	1.06
To be with members of my own group	452	3.36	1.14
Achievement (α=0.787)	**465**	**3.02**	**1.02**
To have thrills and excitement	458	3.12	1.21
To challenge myself	451	3.06	1.18
To test my skills and abilities	442	2.86	1.21
Solitude (α=0.762)	**468**	**2.96**	**1.01**
To experience solitude	461	3.15	1.21
To be on my own	456	2.98	1.24
To be away from other people	458	2.71	1.21

Note: Measured on a 5pt scale ranging from Very Unimportant (1) to Very Important (5).

Table 1.7 shows motivations for park visits. Physical activity is a common benefit sought by people using parks and trails, but is rarely the sole motivation. Overall, park visitors were highly motivated. Visitors were most motivated by health benefits, followed by enjoying nature and social interaction, and least motivated by achievement and solitude experiences.

Table 1.8 shows the place attachment items that draw park users to the park. Place attachment refers to the bonds that people develop with places. Respondents were attached to the resource primarily because of the emotional/symbolic meaning of the place (place identity), followed by the associated social ties to the place (social boding), and the functional dependence on the resource to fill an individual's needs or goals (place dependence).

Table 1.8: Place Attachment			
Place Attachment Items	**n**	**Mean**	**SD**
Place Identity (α=0.848)	**468**	**3.86**	**0.85**
This park means a lot to me	465	4.18	0.86
I identify strongly with this park	437	3.70	0.99
I am very attached to this park	458	3.69	1.02
Social Bonding (α=0.508)	**468**	**3.60**	**0.77**
I (will) bring my children to this park	443	3.81	1.08
I have a lot of fond memories about this park	444	3.72	1.10
I have a special connection with the people who come to this park	461	3.31	1.03
Place Dependence	**469**	**3.42**	**0.93**
I enjoy recreating at this park more than any other park	454	3.54	1.07
I get more satisfaction out of visiting this park from any	465	3.48	1.07
I wouldn't substitute any other park for what I like to do here	463	3.40	1.11
Recreating here is more important than recreating at any other place	463	3.25	1.04

Note: Measured on a 5pt scale ranging from Strongly Disagree (1) to Strongly Agree (5).

Table 1.9: Physical Activity During a Typical Park Visit					
	n	Mean (Hrs:Mins)	SD (Hrs:Mins)	Median (Hrs:Mins)	Do Not Know
All Activities	419	1:40	1:14	1:30	32 (7.1%)
Sedentary Activities	405	0:30	0:44	0:20	
Moderate Intensity Activities	405	0:31	0:36	0:30	
Vigorous Intensity Activities	401	0:20	0:39	0:00	

Table 1.9 shows the amount of physical activity park users do during a typical park visit. Of the average of 1 hour 40 minutes in the park, users engage in sedentary activities for 30 minutes, moderate intensity activities for 31 minutes, and vigorous intensity for 20 minutes (with some of their visit time uncategorized). Figure 1.17 shows that approximately 87% of visitors report at least some activity during their typical park visit.

Figure 1.17 Typical Visit Activity

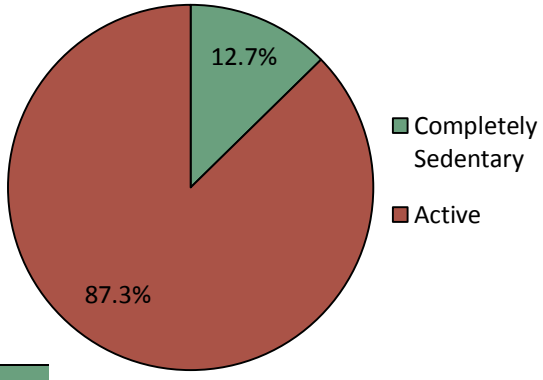


Table 1.10 Important Site Attributes			
Site Attributes	**n**	**Mean**	**SD**
Feeling safe from crime	458	4.47	0.88
Beauty	463	4.25	0.86
Maintenance	457	4.24	0.91
Easy to get here	462	4.23	0.89
Feeling safe from injury	461	4.23	0.96
Other	91	4.22	1.08
Cleanliness of facilities	456	4.17	1.00
Close to home	461	4.08	1.02
Walking/hiking/biking paths	457	4.06	1.01
Drinking fountains	461	3.99	1.01
Parking	457	3.99	0.98
Restrooms	464	3.98	1.04
Benches	462	3.97	0.96
Lighting	461	3.94	0.99
Picnic area	453	3.67	1.15
Playground	462	3.61	1.25
Being near water	458	3.61	1.06
Sports fields	456	3.35	1.22

Note: Measured on a 5pt scale ranging from Very unimportant (1) to Very Important (5).

Table 1.10 shows the importance of site attributes for physical activity participation. All site attributes were rated as important for physical activity. Visitors rated feeling safe from crime as the most important site attribute for physical activity, followed by beauty and maintenance of facilities. Also highly important is access, in terms of ease to get there, being close to home, and walking/hiking/biking paths. Sport fields were surprisingly rated as the least important, although still important.

Table 1.11 shows constraints to park-based physical activity. Constraints are factors that limit or inhibit participation and enjoyment in leisure activities. In general, respondents reported low levels of constraints. Park visitors reported structural constraints (external or environmental factors) as the most limiting, followed by interpersonal constraints (social factors), and were least constrained by intrapersonal factors (individual psychological qualities).

Table 1.11 Constraints to Park-Based Physical Activity

Constraint Items	n	Mean	SD
Structural (α=0.847)	**456**	**1.47**	**0.54**
Poorly maintained park	438	1.82	1.05
Don't have enough time	421	1.74	0.97
Park is not designed for the activities I want to do	423	1.64	1.01
I am physically active elsewhere	400	1.64	0.96
Lack of scenic beauty	424	1.52	0.89
Lack information on physical activity opportunities at the park	417	1.48	0.84
Park is too far away from where I live	431	1.46	0.88
Limited park hours	425	1.36	0.79
Park is too crowded	419	1.24	0.55
Conflict with other park users	425	1.21	0.58
Lack transportation to the park	417	1.19	0.55
Don't feel welcome at the park	423	1.12	0.46
Interpersonal (α=0.814)	**443**	**1.43**	**0.58**
No one to be physically active with	408	1.57	0.87
Friends/family don't have time	406	1.52	0.84
Friends/family prefer other activities	408	1.51	0.83
Too many family obligations	407	1.49	0.85
Friends/family skill levels different than mine	417	1.24	0.63
Lack support from friends/family	410	1.20	0.56
Intrapersonal (α=0.853)	**454**	**1.41**	**0.55**
Fear of crime from other people in the park	439	1.92	1.03
Personal safety concerns	433	1.60	0.96
Not in good enough shape	422	1.42	0.80
Don't have enough physical energy	421	1.35	0.70
Don't like to be physically active	388	1.29	0.71
Self-conscious when physically active	428	1.26	0.65
Personal health problems	418	1.25	0.67
Fear of prejudice from others based on my race/ethnicity	421	1.19	0.59
Don't have the right skills	413	1.14	0.46

Note: Measured on a 4pt scale ranging from Not a Problem (1) to A Major Problem (4).

Fig. 1.18 Self-Perceived Health

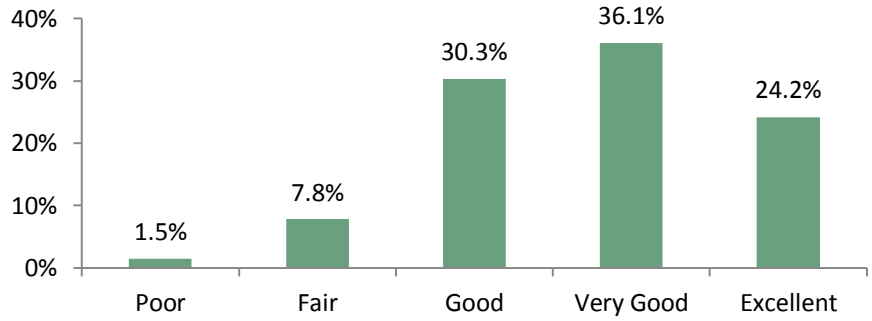


Figure 1.18 shows park survey respondents' self-perceived health. The majority of respondents thought that they were in good, very good, or excellent health (90%).

Table 1.12 shows the overall physical activity that surveyed park users typically engage in each week. The majority of park users engage in moderate and/or vigorous intensity physical activity. About 10% of respondents do not participate in any moderate level activity, and about 21% do not participate in any vigorous level activity. On average, respondents report engaging in moderate intensity activity 4.4 days per week for about 1 hour and 30 minutes, and vigorous intensity physical activity 3.5 days per week for about 1 hour and 20 minutes.

Table 1.12: Overall Physical Activity

	n	Mean	SD	Median	Do Not Know	Do Not Do
Moderate activity						22 (9.7%)
Days per week	399	4.43	4.5	1.81	46 (9.9%)	
Time per day (Hrs:Mins)	377	1:29	1:54	1:00	66 (13.9%)	
Vigorous activity						98 (21.2%)
Days per week	294	3.49	3.0	1.71	71 (15.3%)	
Time per day (Hrs:Mins)	281	1:18	1:29	1:00	77 (17.4%)	

Figure 1.19 shows where park users typically engage in physical activity. On average, the majority of park users engage in the greatest proportion of physical activity at home (31%). However, many of the survey respondents engage in physical activity at this location (27%) or another park (20%).

Fig. 1.19 Physical Activity by Location

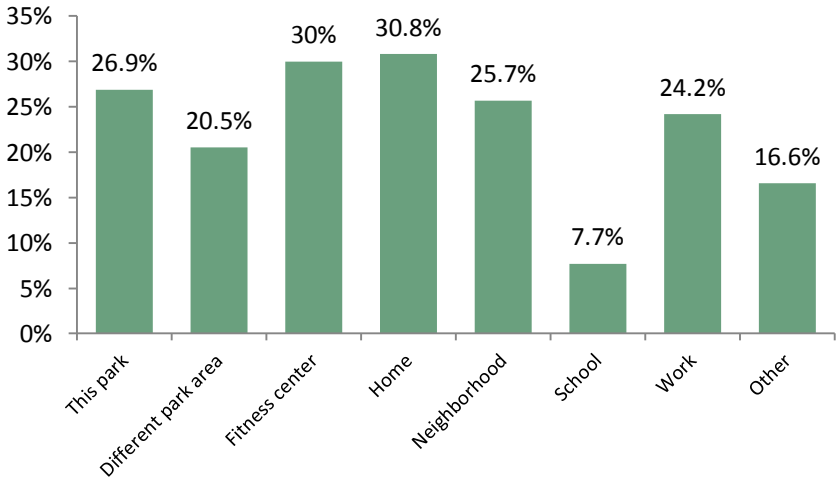


Table 1.13 shows a multiple regression analysis of the influences of three dimensions of place attachment (place identity, place dependence, and social bonding) on park-based activity. In contrast to the sedentary minutes model, the multiple regression models for moderate, vigorous, and overall minutes of physical activity were all significant, suggesting that place attachment is associated with park-based physical activity. Social bonding emerged as an important place attachment dimension for predicting physical activity in parks, suggesting that the social relationships and interactions that occur at the park are particularly important in encouraging physically active behaviors.

Table 1.13 Multiple Regression Analysis: Park Activity on Place Attachment Dimensions

	Dependent Variable Models (standardizedβ)			
Independent Variables	**Sedentary**	**Moderate**	**Vigorous**	**Overall PA**
Place Identity	-.05	.11	-.22**	-.09
Place Dependence	.08	-.01	.13	.07
Social Bonding	.08	.14*	.15*	.20**
F Value	*1.90*	*6.34****	*4.21***	*5.54***
R^2	*.014*	*.045*	*.031*	*.039*

Note: Minutes of sedentary, moderate, vigorous, and overall physical activity during a typical park visit.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Tables 1.14 and 1.15 show the comparison for perceived importance of park site attributes for physical activity by respondents' race/ethnicity and gender. No differences emerged across age groups when controlling for gender and race/ethnicity. When comparing the importance of site attributes by race/ethnicity (while controlling for age and gender), eight differences emerged (Table 1.14). Specifically, Black and Hispanic respondents rated the following attributes as more important than White respondents: cleanliness, parking, playgrounds, picnic areas, sport fields, and being near water. Likewise, Hispanic respondents also rated restrooms and lighting as more important than White respondents.

Table 1.14: Differences in Important Site Attributes by Race/Ethnicity

	Race/Ethnicity (Mean)			
Site Attributes	**Black**	**Hispanic**	**White**	**F Value**
Cleanliness	4.49^{a}	4.51^{a}	4.02^{b}	9.75***
Parking	4.26^{a}	4.23^{a}	3.88^{b}	5.64**
Restrooms	$4.16^{a,b}$	4.28^{a}	3.85^{b}	5.54**
Lighting	$4.14^{a,b}$	4.30^{a}	3.83^{b}	7.39***
Playgrounds	4.13^{a}	4.20^{a}	3.36^{b}	18.46***
Picnic areas	4.05^{a}	4.18^{a}	3.46^{b}	14.14***
Sport fields	3.86^{a}	3.94^{a}	3.09^{b}	19.93***
Being near water	3.87^{a}	3.92^{a}	3.51^{b}	5.34**

Note: Controlling for the effects of age and gender
**p<.01; ***p<.001; ^{a,b} Any two means not sharing the same superscript are significantly different at p<.05

Differences by gender emerged for five of the site attributes, when controlling for race/ethnicity and age (Table 1.15). Males indicated that sport fields were more important for physical activity than females. In contrast, female respondents rated feeling safe from crime, ease to get there, feeling safe from injury, and lighting as more important than male respondents.

Table 1.15: Differences in Important Site Attributes by Gender

	Gender (Mean)		
Site Attributes	**Male**	**Female**	**F Value**
Safe from crime	4.28	4.65	21.49***
Ease to get there	4.10	4.33	7.74**
Safe from injury	3.97	4.46	29.78***
Lighting	3.79	4.06	8.21**
Sport fields	3.52	3.18	8.36**

Note: Controlling for the effects of age and race/ethnicity
***p*<.01; ****p*<.001

Conclusion

This component of the KCPAPAP employed a multi-method approach to examine the role of park environments in facilitating physical activity and the factors that influence park physical activity participation. Observations and surveys of onsite park visitors provide a better understanding of the amount of physical activity that occurs in parks and the differences in physical activity across various areas of park environments, as well as park user demographics and insights into park users' perspectives (e.g., motivations, constraints, visitation patterns, use behaviors, important site characteristics) on the role of parks in their physical activity participation. Together, these findings provide a greater understanding of how parks are being used for physical activity, as well how additional physical activity may be promoted.

SECTION 2
DEVELOPMENT OF A COMMUNITY STAKEHOLDER PARK AUDIT TOOL

SECTION 2: DEVELOPMENT OF A COMMUNITY STAKEHOLDER PARK AUDIT TOOL

Introduction

Park environments provide important venues for adult and youth physical activity. However, better understanding what it is about these settings that attracts and encourages their active use requires reliable methods for auditing park environments. At the same time, developing activity-friendly neighborhoods, including better parks, requires support from multiple constituencies, including those not directly responsible for parks or physical activity promotion. This can be accomplished by involving representatives from diverse groups in evaluating, advocating for, and promoting improved accessibility and design of community parks and open spaces. To date, several tools for evaluating the features of parks have been developed. Table 2.1 provides a summary of the attributes of prominent park audit tools using several key criteria. Unfortunately, existing tools all contain important shortcomings in that they weren't developed with an emphasis on youth physical activity and/or weren't developed or tested with diverse stakeholders. Consequently, these limitations have perhaps prevented their widespread uptake and use by non-academic professionals and community groups.

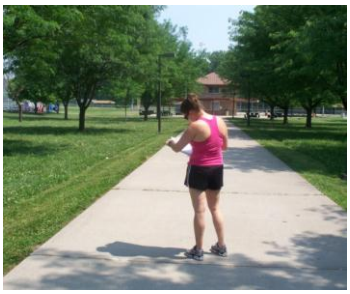
Table 2.1: Summary of Existing Park Audit Tools

Audit Tool	Use Setting	Length	Park Quality	Youth-Oriented	Developed with Stakeholders	Tested with Stakeholders
BRAT-DO	Parks	16 pages, 181 items	Yes	No	Some	No
EAPRS	Parks	47 pages, 646 items	Yes	Somewhat	Some	No
PARA	Varied resources	1 page, 49 items	Limited	No	No	No
POST	Parks, ovals	2.5 pages, 88 items	Limited	No	Some	No
SHAPE	Parks	1 pages, 20 items	Yes	No	Some	No

Table 2.1 Abbreviations: BRAT-DO: Bedimo-Rung Assessment Tools – Direct Observation (Bedimo-Rung et al., 2006); EAPRS: Environmental Assessment of Public Recreation Spaces (Saelens et al., 2006); PARA: Physical Activity Resource Assessment (Lee et al., 2005); POST: Public Open Space Audit Tool (Giles-Corti et al., 2005); SHAPE: Safe, Healthy, and Attractive Public Environments (unpublished KCMO park maintenance rating tool)

Purpose

The purpose of this project was to develop a tool that will enable diverse stakeholders to quickly and reliably audit community parks for their potential to promote youth physical activity. The specific aims of the project were:



- To review and evaluate existing park audit tools for their suitability for i) use by diverse community stakeholders, and ii) understanding park characteristics that may

encourage youth physical activity.

- To develop a revised, user-friendly tool with lay terminology that can facilitate involvement in research by community stakeholders and that captures park characteristics that are likely associated with youth physical activity.

- To test the reliability of the new tool when used by diverse community stakeholders to audit parks.

- To engage stakeholders in a process of thinking about the role of parks in community-level physical activity participation and how parks may be better designed to enhance youth physical activity in particular.

- To document the process of tool development and engagement by community stakeholders around parks, the results of this process, and to disseminate lessons learned to facilitate better process in the future and in other communities.

Methods

This project brought together over 30 representatives from across the KC metro area who represented diverse constituencies with an interest in community parks and public health (e.g., academia, parks and recreation, public health, youth agencies, legislators, community users and non-users, etc.). Over the course of 2010, these stakeholders engaged in three workshops and tested the park audit tool in over 60 Kansas City parks that represented a mix of quality and size and that emphasized features oriented towards youth physical activity (e.g., playgrounds). Each study stage is described below.

Study Stages:

1. **Review of existing instruments** (February-April 2010): We began by reviewing existing park audit instruments to evaluate their user-friendliness and suitability to youth physical activity and to analyze the domains and specific items each covers.
2. **Planning workshop with community stakeholders** (June 2010): An initial workshop with community stakeholders was held to introduce the study and to engage participants in the process of developing a revised park audit tool that emphasizes youth physical activity and use by non-researchers.
3. **Development of park audit tool** (July-August 2010): The study team used information gathered in stages 1 and 2, as well as our own expertise related to park-based physical activity, to develop a revised park audit tool.

4. **Training workshop with community stakeholders** (September 2010): A second workshop was held with stakeholders to present the preliminary version of the new tool and to train participants in its use for testing in field settings.
5. **Testing of park audit tool** (September-October 2010): Pairs of trained park raters used the new tool to audit over 60 parks. These data were used to examine the tool's inter-rater reliability.
6. **Evaluation workshop with community stakeholders** (January 2011): A final workshop was held with stakeholders to gain feedback on the tool's overall usability and to gather suggestions on disseminating it throughout the community and beyond.
7. **Dissemination of the park audit tool** (February-November 2011): Finally, dissemination of the Community Park Audit Tool is ongoing both locally and nationally via workshops with community groups and presentations at conferences, through publications in professionally-oriented and peer-reviewed journals, and through a project website.

Findings

Through the development phase of the tool, stakeholders identified numerous points of interest that fit into three themes. They thought that the tool should capture the wide range of potential facilities and amenities in parks and their condition, that considerations specific to youth should be addressed (e.g., fencing, vandalism, shade, nearby traffic, etc.), and that the tool should be 2-8 pages in length or 15-60 minutes and have simple question response formats, space for subjective comments, and directions within the tool that were easy to follow and required minimal training. These considerations were combined with our detailed review of existing instruments to create the new Community Park Audit Tool (CPAT). The full CPAT tool (which can be found in Appendix B) contains four sections entitled Park Information, Access and Surrounding Neighborhood, Park Activity Areas, and Park Quality and Safety. An accompanying guidebook containing more detailed information and definitions was also developed. The tool spans 6 pages (including a half-page of instructions and tips and directions throughout) and is largely designed with simple response formats (e.g., yes/no, all/some/none). The completion time when used in diverse parks (1.1 to 193.2 acres) by community stakeholders ranged from 10 to 65 minutes, with an average of 32 minutes.

To test the reliability and feasibility of the new tool (stage 5), a sample of 66 parks was selected. Parks were chosen to maximize diversity with respect to location, size, key features, quality, and surrounding neighborhood income and racial composition. Participating stakeholders were randomly assigned to each other and to 3-12 parks each. Provided with park addresses and maps, the stakeholders undertook the park audits independently and received compensation of $20 per hour for completing and returning their park audit forms. For 7 parks, completed audits were received from only 1 stakeholder, thus resulting in a final sample of 59

pairs of park ratings for use in the present analyses. Selected characteristics of the 59 parks are shown in Table 2.2.

Table 2.2 Characteristics of Audit Tool Testing Parks

Park Attribute	Number of Parks	
	N	%
Total	59	100%
Size		
0.1-4.99 acres	15	25.4%
5-9.99 acres	13	22.0%
10-14.99 acres	11	18.7%
20 or more acres	20	33.9%
Selected Park Facilities		
Green Space	56	94.9%
Playground	38	64.4%
Trail	32	54.2%
Baseball Field	26	44.1%
Basketball Court	17	28.8%
Sport Field	14	23.7%
Tennis Court	10	16.9%
Lake	7	11.9%
Splash Pad	4	6.8%
Swimming Pool	3	5.1%
Selected Park Amenities		
Car Parking	57	96.6%
Trash Can	45	76.3%
Benches	44	74.6%
Picnic Table	37	62.7%
Lights	25	42.4%
Shade	24	40.7%
Picnic Shelter	17	28.8%
Restroom	13	22.0%
Bike Rack	4	6.8%
Drinking Fountain	4	6.8%

Table 2.2 (continued)		
Park Attribute	**Number of Parks**	
	N	**%**
Park Quality[a]		
Lower quality (0.00-0.74)	20	33.9%
Medium quality (0.75-0.99)	18	30.5%
Higher quality (1.00)	21	35.6%
Location		
North district	24	40.7%
Central district	18	30.5%
South district	17	28.8%
Neighborhood Income[b,c]		
Lowest quartile	12	20.7%
Second quartile	16	27.6%
Third quartile	16	27.6%
Fourth quartile	14	24.1%
Neighborhood Minority Proportion[c]		
0-24%	28	47.5%
25-49%	10	16.9%
50-74%	5	8.5%
75-100%	16	27.1%

Table 2 notes:
[a]Calculated based on average SHAPE maintenance rating from 2009 and 2010 (range=0-1.00)
[b]Income quartiles: $8,442-$31,960; $31,961-$41,737; $41,738-$57,828; $57,829-$229,33; income data not available for one park.
[c]Neighborhood income and minority proportion based on data from the 2000 census for the tract containing each park's centroid

To demonstrate the utility of a measurement tool, it is important to establish its inter-rater reliability, or the degree to which different users acquire the same ratings. To investigate the CPAT's inter-rater reliability, we examined the proportion of the time that the ratings were a match when two stakeholders audited the same park (i.e., percent agreement). Overall, as shown in Table 2.3, there was a very high degree of reliability for the vast majority of the 140 items in the tool. For 10 items (all related to sub-elements of uncommon park activity areas), reliability could not be assessed because less than three pairs of ratings were available. In the rest of the tool, for all but 4 items, percent agreement between the two auditors exceeded 70%, with most items well above 80-90%. Lower reliability items were often related to subjective or temporally-variable elements in the Park Quality and Safety section, such as noise and lighting coverage. However, given their theoretical significance for park-based physical activity, many were retained after modifying the items or associated guidebook instructions based on feedback received after the field testing stage (e.g., better defining an 'external trail').

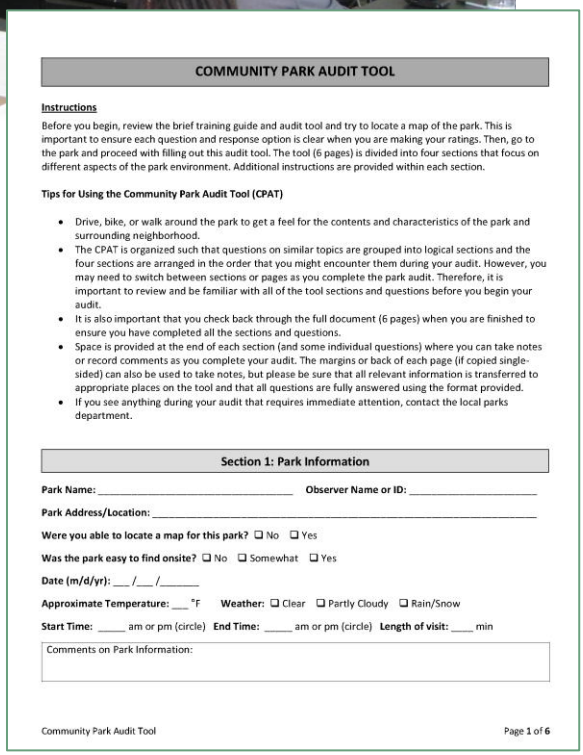
Table 2.3 Reliability of Community Park Audit Tool Items				
			Percent Agreement	
CPAT Section	Total Items	Reliability not assessed	Greater than 70%	Less than 70%
Access & Surrounding Neighborhood	38	0	38	0
Park Activity Areas	52	10	40	2
Park Quality & Safety	50	0	48	2
Total	**140**	**10**	**126**	**4**

We also sought to examine any effects on the community stakeholders from participating in the CPAT development project. During the final workshop, a one-page survey was administered that included both closed- and open-ended questions. The survey found that 83% of stakeholders reported that their perceptions of the importance of both the built environment and parks for promoting physical activity had improved 'moderately' or 'a lot' over the course of the project. When asked during the final workshop discussions about the process and the utility of the tool, several themes emerged. Participants spoke of the networking and community building impacts of the tool development process: "The process encourages and fosters a sense of togetherness, team building and community." In addition, they indicated that the tool helps increase a community's understanding of the importance of parks for physical activity: "It broadens awareness." Finally, they also indicated that this will be a useful tool for advocacy efforts in communities: "It provides a nice vehicle for engaging grassroots citizens and constituents in a reasonably manageable process by which to assess parks and what they offer."

Conclusion

At 6 pages and 32 minutes to complete on average, the CPAT is considerably more efficient than most other park audit tools designed exclusively for park environments (e.g., Bedimo-Rung et al., 2006; Saelens et al., 2006). At the same time, as a result of our extensive development process involving reviews of existing audit tools, key informant interviews, and multiple stakeholder workshops, the CPAT is comprehensive, especially with respect to capturing attributes related to park quality and youth-oriented features. It also compares favorably with conceptual models that have been developed about elements of parks that are important for physical activity (Bedimo-Rung et al., 2005; Loukaitou-Sideris & Sideris, 2010). Most importantly, though, unlike past tools designed for and tested with researchers, the CPAT was developed and tested with diverse community stakeholders. That the CPAT was created with considerable input from non-academic parties undoubtedly contributed to its reported ease of use and demonstrated reliability among stakeholders. Further, those stakeholders reported a range of positive reactions resulting from their engagement in this project. Future projects should test the CPAT with varied populations (including youth) and explore how using such tools can facilitate citizens' cognitive and behavioral responses related to knowledge, attitudes,

and advocacy. Our hope is that the CPAT will facilitate greater engagement of diverse groups in evaluating and advocating for improved parks and overall healthy community design.



COMMUNITY PARK AUDIT TOOL

Instructions

Before you begin, review the brief training guide and audit tool and try to locate a map of the park. This is important to ensure each question and response option is clear when you are making your ratings. Then, go to the park and proceed with filling out this audit tool. The tool (6 pages) is divided into four sections that focus on different aspects of the park environment. Additional instructions are provided within each section.

Tips for Using the Community Park Audit Tool (CPAT)

- Drive, bike, or walk around the park to get a feel for the contents and characteristics of the park and surrounding neighborhood.
- The CPAT is organized such that questions on similar topics are grouped into logical sections and the four sections are arranged in the order that you might encounter them during your audit. However, you may need to switch between sections or pages as you complete the park audit. Therefore, it is important to review and be familiar with all of the tool sections and questions before you begin your audit.
- It is also important that you check back through the full document (6 pages) when you are finished to ensure you have completed all the sections and questions.
- Space is provided at the end of each section (and some individual questions) where you can take notes or record comments as you complete your audit. The margins or back of each page (if copied single-sided) can also be used to take notes, but please be sure that all relevant information is transferred to appropriate places on the tool and that all questions are fully answered using the format provided.
- If you see anything during your audit that requires immediate attention, contact the local parks department.

Section 1: Park Information

Park Name: _____ **Observer Name or ID:** _____

Park Address/Location: _____

Were you able to locate a map for this park? ❑ No ❑ Yes

Was the park easy to find onsite? ❑ No ❑ Somewhat ❑ Yes

Date (m/d/yr): ___ /___ /_____

Approximate Temperature: ___ °F **Weather:** ❑ Clear ❑ Partly Cloudy ❑ Rain/Snow

Start Time: _____ am or pm (circle) **End Time:** _____ am or pm (circle) **Length of visit:** ____ min

Comments on Park Information:

Community Park Audit Tool Page 1 of 6

SECTION 3
KANSAS CITY NEIGHBORHOOD AND PARK STUDY

SECTION 3: KANSAS CITY NEIGHBORHOOD AND PARK STUDY

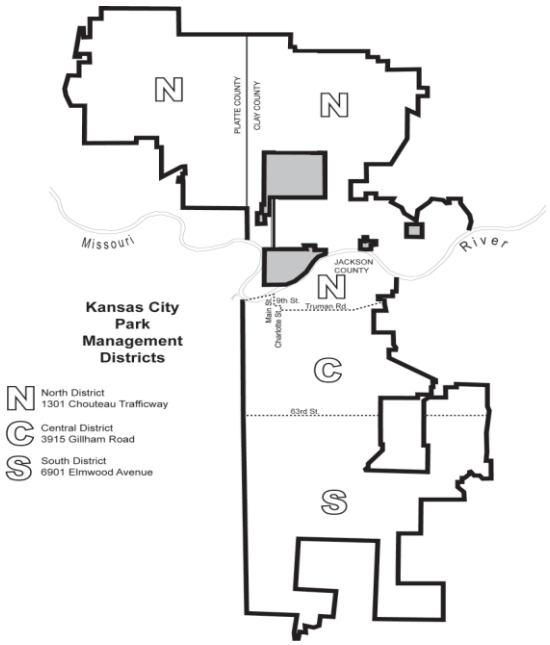
Introduction

Park environments provide a wealth of opportunities for facilitating neighborhood and park-based physical activity. However, not all parks are created equal and they can vary widely with respect to proximity, size, features, condition, and surrounding neighborhood. Few studies have provided an in-depth examination of how the characteristics of parks and the neighborhoods around them help to shape the health and health behaviors of residents of all ages.

Purpose

The purpose of the Kansas City Neighborhood and Park Study (KCNPS) was to examine how the proximity, features, quality, and neighborhood environments around parks influence physical activity and park use among children and adults. More specifically, some of the key research questions explored included:

- Is proximity to parks associated with physical activity participation and park use among children and adults?
- Which park features are associated with physical activity participation and park use among children and adults?
- Is park quality associated with physical activity participation and park use among children and adults?
- How does the context of the surrounding neighborhood (safety, connectivity, aesthetics, etc.) affect physical activity participation and park use among children and adults?



Methods

This community-based, cross-sectional study occurred concurrently with the previous phase of the Kansas City Parks and Physical Activity Project (development of a community stakeholder park audit tool) and involved three integrated components. The first component consisted of a mail survey completed by 893 randomly-selected households in the study neighborhoods that collected information about perceptions of the neighborhood and nearby parks, physical activity behavior of children and adults in the home, and park use and park-based physical activity. The second component utilized geographic information systems (GIS) technology to gather exposure data regarding the availability and size of parks within 1 mile around survey respondents. Finally, observational audits using the CPAT were conducted on all KCMO parks

within 1 mile of study households to assess park attributes such as features, amenities, access, quality, safety, and neighborhood context.

Findings

Part A: Descriptive Characteristics of the Sample

There were a total of 893 adult respondents to the survey component of the Kansas City Neighborhood and Park Study. Respondents were distributed across 122 census tracts in Kansas City, Missouri with an average of 7 respondents per tract. In the study sample, as shown in Figure 3.1, 61% of respondents were female and 39% were male. The age distribution of survey respondents (mean=50.7 years) is shown in Figure 3.2.

Fig. 3.1 Gender of Survey Respondents

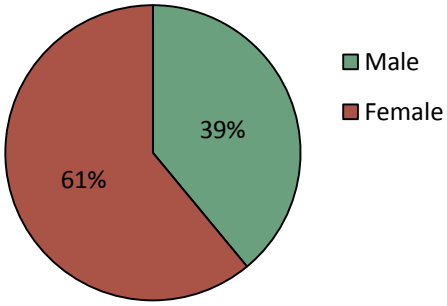


Fig. 3.2 Age of Survey Respondents

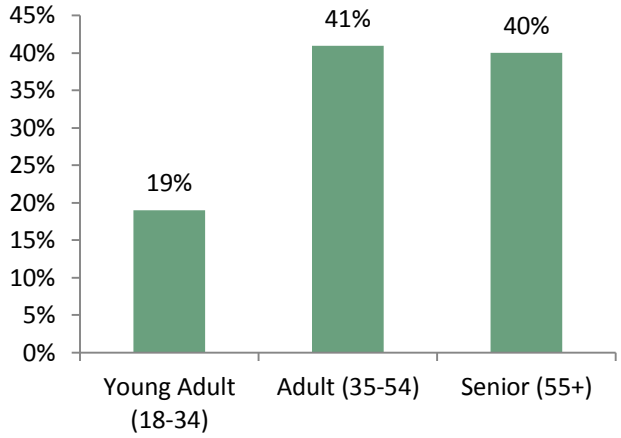


Fig. 3.3 Race of Survey Respondents

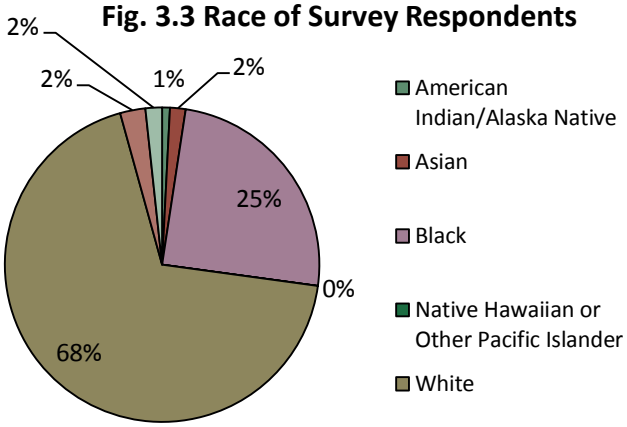


Figure 3.3 shows the race breakdown of survey respondents. The majority of respondents were White (68%), with Black the second largest category (25%).

Fig. 3.4 Number of Children Per Survey Household

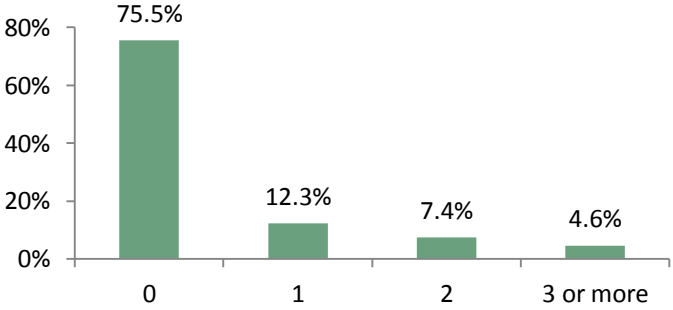


Figure 3.4 shows that approximately 25% of survey respondents had one or more children under the age of 18 living in the household.

Where available, survey respondents reported demographic information for one child in the household with the next birthday during the year (Figure 3.5). In total, data were collected about 228 children. Children were divided into three age categories: child (3-5 yrs), adolescent (6-12 yrs), and teen (13-17 yrs), as illustrated in Figure 3.5. The majority of children were adolescents, with a mean age across all children of 10.5 years old.

Fig. 3.5 Age of Children

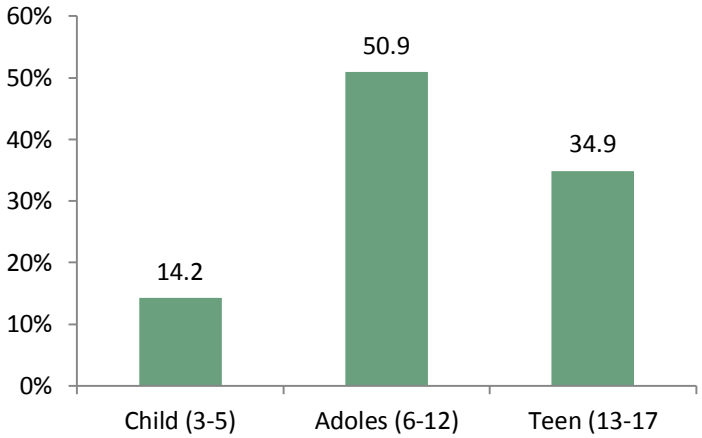


Fig. 3.6 Gender of Children

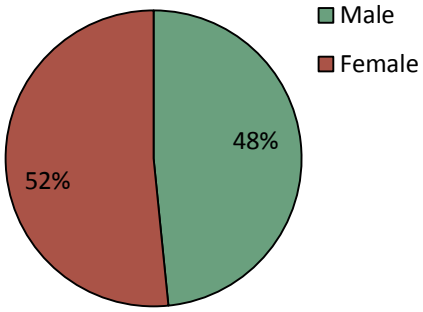
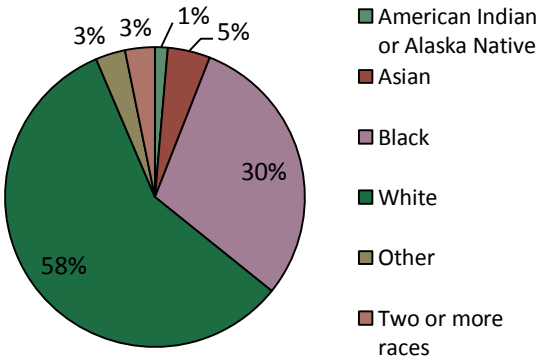


Figure 3.6 shows the gender distribution of children was about even, with 52% female and 48% male.

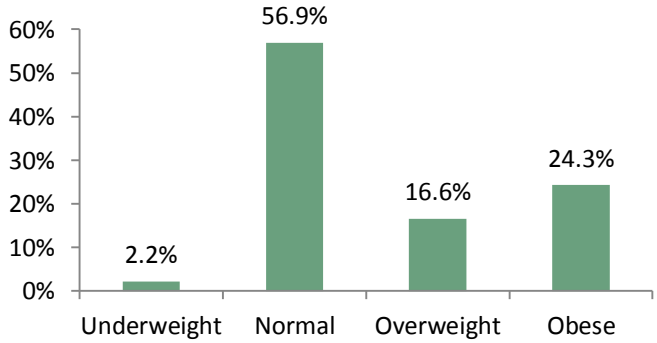
Fig. 3.7 Race of Children



Approximately 8.6% of youth were of Hispanic origin, with the percentage for males (9.8%) slightly higher than females (7.4%). With respect to race, as shown in figure 3.7, the majority of the youth sample was White (58%), followed by Black (30%), Asian (5%), Other (3%), American Indian/Alaska Native (1%), and 3% marking 2 or more races.

Figure 3.8 shows that over half (57%) of the adult survey respondents were in the normal range for body mass index (BMI). However, most of the rest of the sample was either overweight or obese (41% total). The mean BMI of the sample was 27.9 which is in the middle of the range of the overweight category for adults (25.5 to 29.9).

Fig. 3.8 Body Mass Index of Survey Respondents



Youth BMI categories were calculated using standardized percentiles that take into consideration gender and age. Figure 3.9 shows that over half of youth (57%) were in the normal BMI range. However, almost all of the remaining youth fell into the overweight (16%) or obese (24%) categories.

Figure 3.9 Body Mass Index of Youth

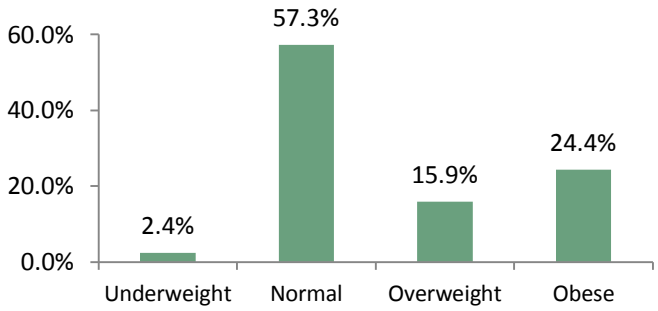


Fig. 3.10 Marital Status of Survey Respondents

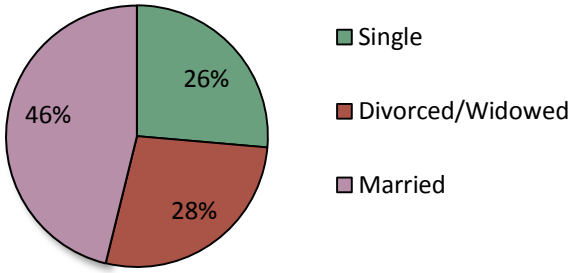
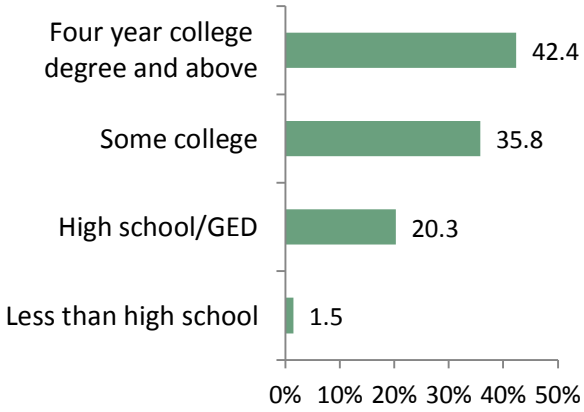


Fig. 3.11 Education Level of Survey Respondents



As shown in Figure 3.10, the marital status of the surveyed adults was as follows: 26% single (never married), 28% either divorced or widowed, and 46% married or living with a domestic partner.

The education level of survey respondents was varied. Figure 3.11 shows that just over 1% did not finish high school, about 20% completed high school or the equivalent, almost 26% completed some college, 10% received an Associate's degree, 25% attained a Bachelor's degree, and about 17% completed an advanced degree.

Figure 3.12 shows that the majority of the study sample (50%) was full time employees, while 24% were retired, and the rest of the sample was distributed among part-time employment, homemakers, unemployed persons, people on disability, or students.

Fig. 3.12 Employment Status of Survey Respondents

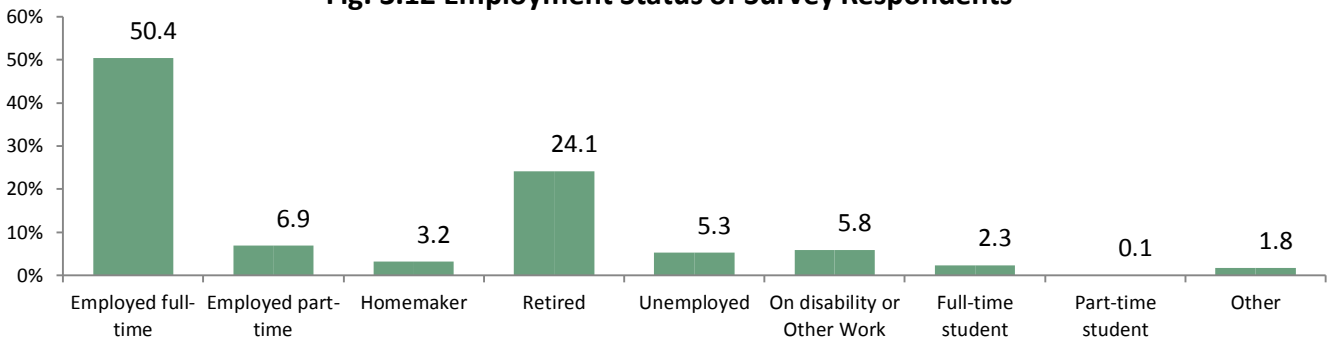


Figure 3.13 shows that the income of the survey participants was divided into three groups: low income (less than $25,000) which encompassed 25% of respondents, middle income ($25,000-$74,999) accounting for 50% of respondents, and high income (greater than $75,000) accounting for 25% of respondents. The majority of survey respondents owned one or two motor vehicles (82%), with only 8% owning 3 or more vehicles in the household (Figure 3.14).

Fig. 3.13 Income of Survey Respondents

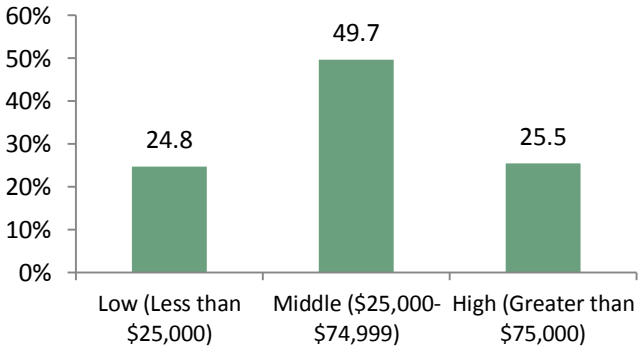


Fig. 3.14 Number of Motor Vehicles in Household

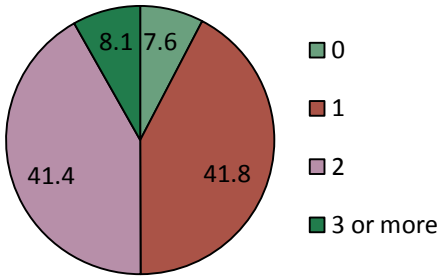


Fig. 3.15 Percentage of Respondents with Chronic Conditions

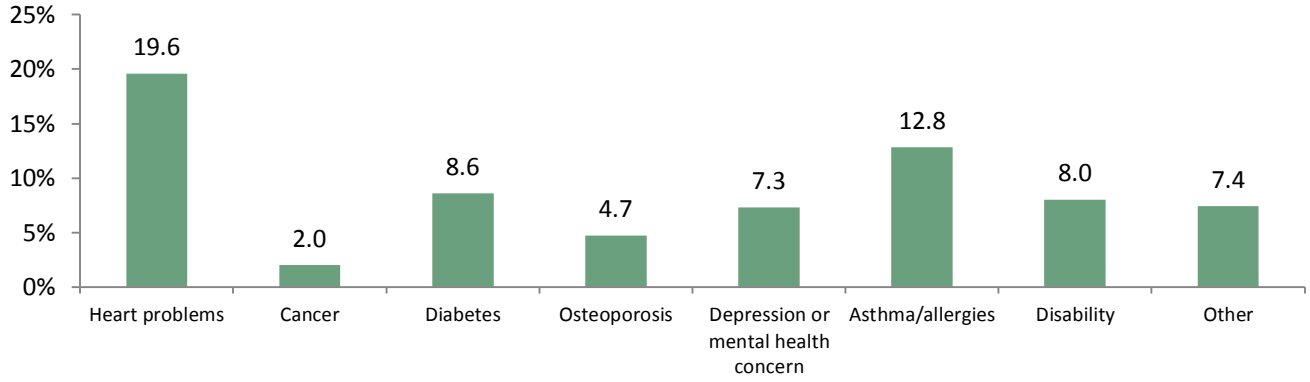


Figure 3.15 shows the percentages of survey respondents with chronic conditions. The most common health problem was heart disease, with about 20% of respondents reporting they have the condition. Cancer was the chronic condition least represented in the sample (2%).

When asked for their perception of their overall health, Figure 3.16 shows that the

Fig. 3.16 Self-Rated Overall Health

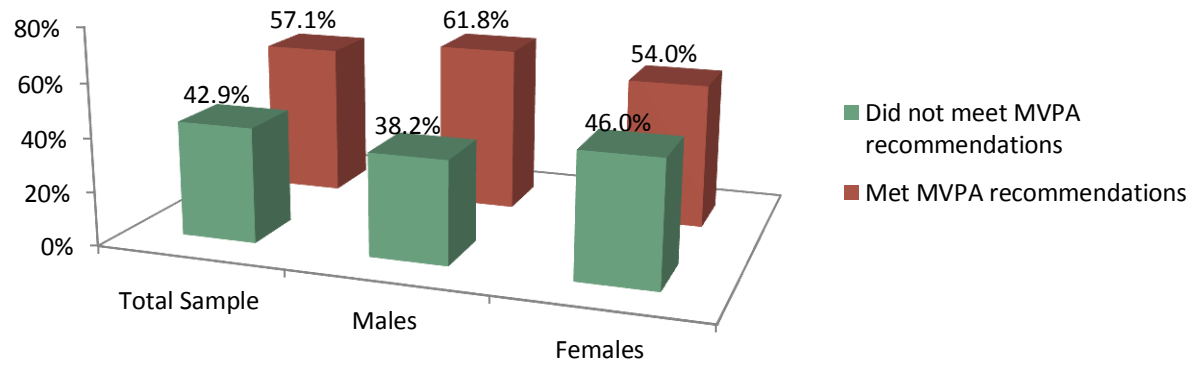
majority of survey respondents (66.4%) stated that they are in good or very good health. Only a small percentage (3.4%) thought they were in poor overall health.

Part B: Physical Activity Participation

Physical activity can be moderate-intensity (i.e., brisk walking, bicycling, vacuuming, gardening, or anything else that causes small increases in breathing or heart rate) or vigorous-intensity (i.e., running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate). Achieving recommended levels of physical activity for adults is defined as at least 150 minutes of moderate-intensity activity per week or at least 75 minutes of vigorous-intensity activity, or some equivalent combination exceeding 150 minutes per week.

Figure 3.17 shows that when looking at combined moderate to vigorous physical activity (MVPA), 43% of the sample did not meet MVPA recommendations. Of these, 26.5% of respondents did not participate in any MVPA. Survey respondents participated in an average of 344 minutes of MVPA per week (though these figures are skewed somewhat by some respondents who reported very high levels of activity). Males were slightly more active, averaging 444 minutes of MVPA compared to females with 279 minutes of MVPA per week.

Fig. 3.17 Percentage of Survey Respondents Meeting Physical Activity Recommendations



Youth (< 18 years) should be moderately-to-vigorously active for a minimum of 60 minutes on at least 5 days per week (Table 3.1). For youth in the study sample, 53% did not meet this recommended level of activity.

Table 3.1 Number of Youth Meeting Physical Activity Recommendations

Physical Activity Level	Total		Male		Female	
	n	%	N	%	n	%
Meets PA Recommendations	89	46.6%	44	47.3%	43	45.3%
Does Not Meet PA Recommendations	102	53.4%	49	52.7%	52	54.7%

Note: Numbers do not always sum to total because certain demographic data (e.g., gender) were missing for some youth.

The average number of times that survey respondents walk as a means of transport in their neighborhoods, such as going to and from work, walking to shops, or to public transit was 1.09 times per week. In a usual week, survey respondents spent an average of 51.73 minutes walking as a means of transport in their neighborhood. Further, in a usual week, survey respondents averaged 2.12 walking trips for recreation, health, or fitness in or around their neighborhood. The average number of minutes that residents engaged in walking for recreation, health, or fitness was 31.27 minutes per week.

Respondents were asked the locations at which they typically engage in physical activity. Figure 3.18 shows that survey respondents spent the most time engaging in physical activity at work or at some other location; the next highest location for engagement in physical activity was at home.

Fig. 3.18 Physical Activity Locations (Minutes Per Week)

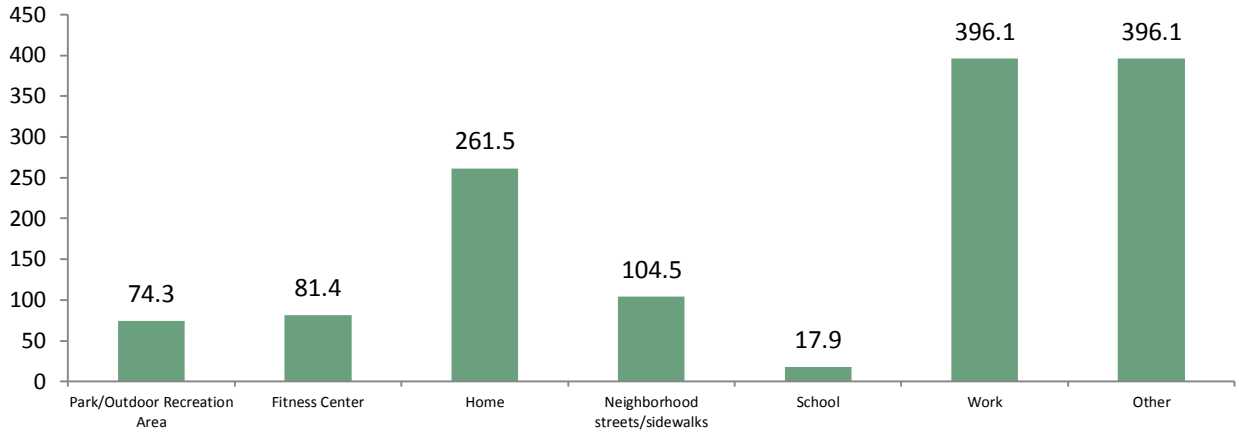
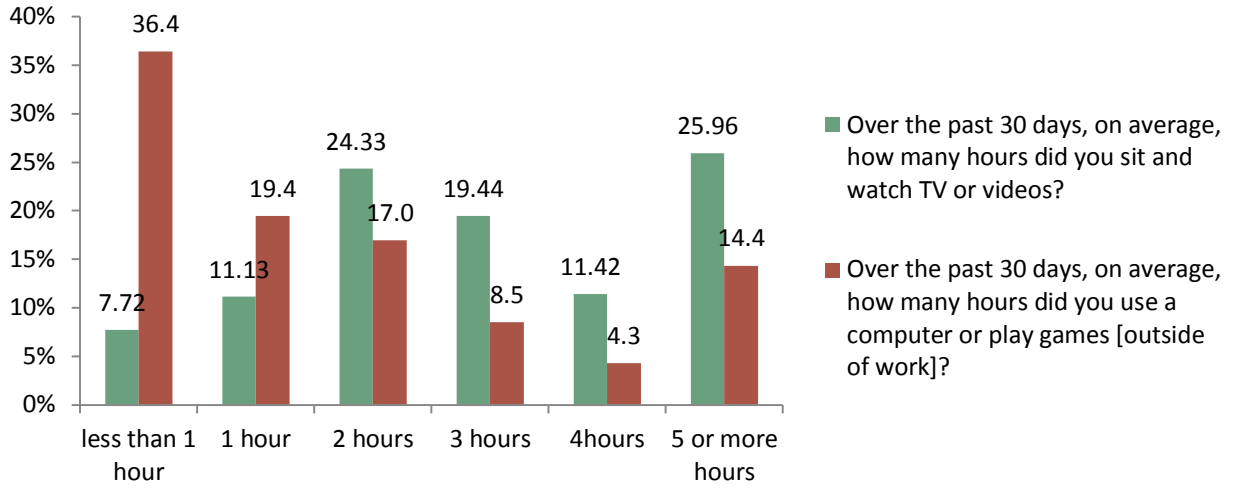


Figure 3.19 shows that over the past 30 days, on average, the majority of respondents spent more time watching TV and videos than using a computer or playing games (outside of work). About 25% of respondents reported spending 5 or more hours per day watching TV or videos while 14% spent the same amount of time using a computer or playing games. About 36% of the sample reported spending less than an hour per day using a computer or playing games, but only about 8% spent less than an hour per day watching TV or videos.

Fig. 3.19 Time Spent on Screen Media



Part C: Park Usage and Perceptions

Fig. 3.20 Park Visitation in the Past Month

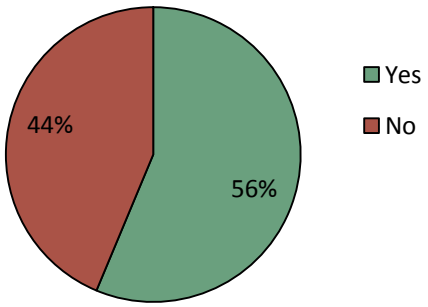
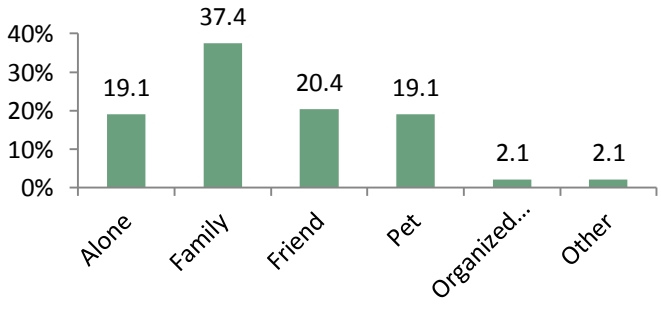


Figure 3.20 shows that during the last month (i.e., last 30 days), 56% of survey respondents reported visiting a park, while 44% did not. Of the 56% who did visit a park, 6.12 was the average number of times they visited during the past month. Park users' visits ranged from once that month to 30 times during the month. The average time of park users' visits was 100.8 minutes, or 1 hour and 40 minutes; park visits ranged from 10 minutes to 19 hours per visit. Survey respondents reported that they spent on average of 69 minutes of their park visit being physically active.

The majority of respondents who had visited a park in the last month went with family (Figure 3.21). About 1 in 5 respondents visited the park alone.

Fig 3.21 Park Visit Co-Participants



Respondents were asked which activities they participated in during their last park visit. By far, walking/hiking was the most popular activity to do at the park (Figure 3.22).

Fig. 3.22 Park Activities

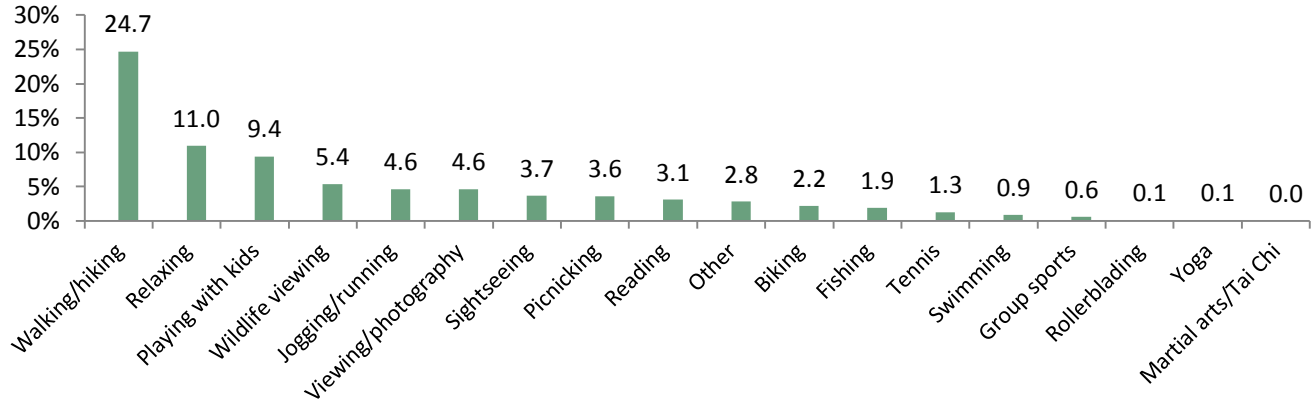


Figure 3.23 details the facilities that were used by park visitors during their last visit. Trails were the most used facility, followed by open/green spaces, playgrounds, and picnic areas.

Fig. 3.23 Park Facility Areas

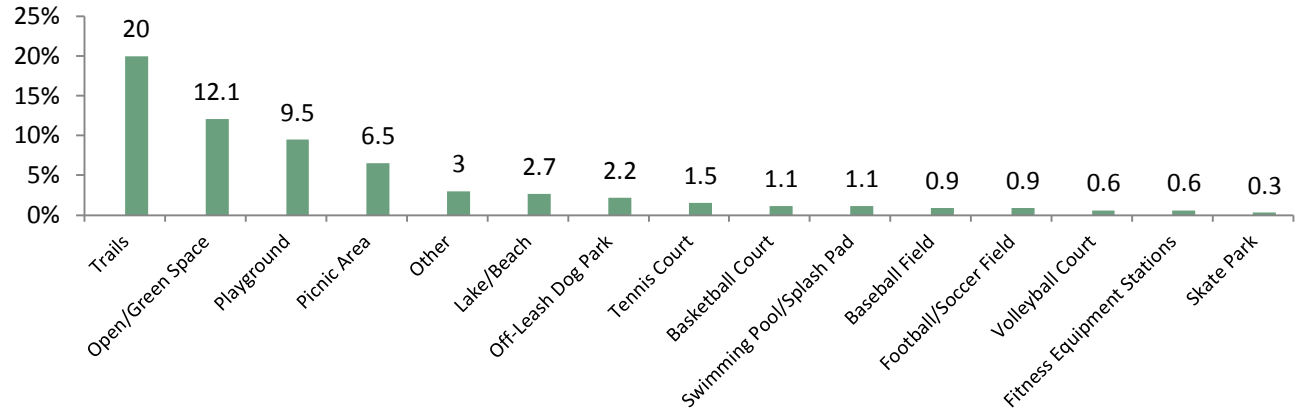


Fig. 3.24 Park Activity Level

The activity level of park visitors on their last visit to the park is illustrated in Figure 3.24. The majority of park visitors reported engaging in mostly light (47%) or moderate (38%) activities.

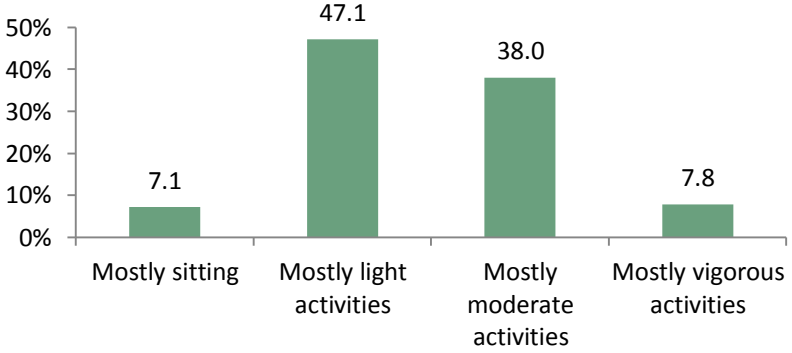
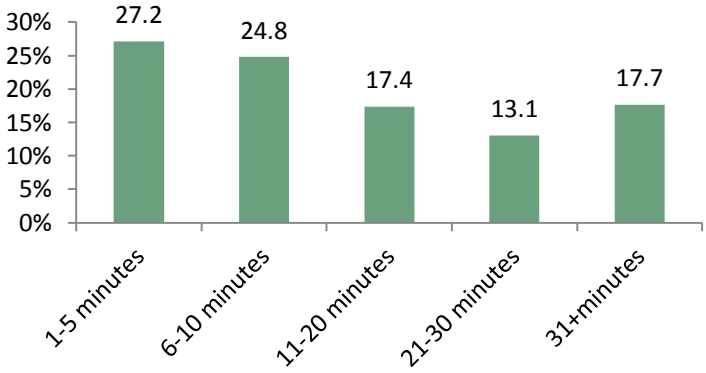


Fig. 3.25 Perceived Walking Distance to Closest Park



Park visitors were asked how long it would take them to walk to their nearest park. Figure 3.25 shows that 27% responded that it would take from 1-5 minutes to walk to their nearest park, 25% said it would take 6-10 minutes, 17% said it would take 11-20 minutes, and 30% said it would take 21 minutes or more.

Table 3.2: Perceived Park Quality	
Neighborhood Park Item	**Mean**
Parks in my neighborhood are a benefit to the people who live here.	3.85
Parks in my neighborhood are clean.	3.70
Parks in my neighborhood are used by many people.	3.59
Parks in my neighborhood are well-maintained.	3.53
Parks in my neighborhood are attractive.	3.50
Parks in my neighborhood are safe.	3.45
Parks in my neighborhood have facilities that I am interested in.	3.21

Note: Based on a 5 pt scale ranging from Strongly Disagree (1) to Strongly Agree (5).

Table 3.2 shows results of perceived park quality. Respondents agreed that neighborhood parks are a benefit and that they appear both clean and used by residents. However, they recorded the lowest scores for their neighborhood parks being safe and having facilities of interest.

Table 3.3: Park Attributes Important for Physical Activity	
Park Attribute	**Mean**
Feeling safe from crime	4.67
Maintenance of park areas	4.43
Cleanliness of park areas	4.42
Feeling safe from injury	4.36
Lighting	4.22
Easy to get there	4.18
Beauty	4.08
Trash cans	4.08
Shade trees	4.06
Parking	4.05
Restrooms	4.02
Close to home	3.99
Peacefulness/quiet	3.98
Benches	3.96
Drinking fountains	3.71
Picnic area	3.62
Being near water	3.03
Bike racks	3.02
Close to public transit	2.66
Food/vending machines	2.22

Note: Based on a 5 pt scale ranging from Very Unimportant (1) to Very Important (5).

Table 3.3 displays park attributes important for physical activity. Respondents indicated that feeling safe from crime or injury and maintenance and cleanliness of park areas were important in relation to their park-based physical activity participation.

Table 3.4 shows constraints to park-based physical activity. Fear from crime, available activities, park maintenance, and personal safety topped the list of concerns.

Table 3.4: Constraints to Park-based Physical Activity	
Problem/Concern	**Mean**
Fear of crime from other people in the park	2.18
Park is not designed for the activities I want to do	2.10
Poorly maintained park (e.g., excess trash, run down facilities)	2.09
Don't have enough time	2.01
Personal safety concerns (e.g., fear of injury, poorly maintained equipment)	1.91
Parks are too far away from where I live	1.91
No one to be physically active with	1.86
I am physically active elsewhere	1.82
Lack of scenic beauty	1.80
Too many family obligations	1.76
Friends/family don't have time	1.74
Don't have enough physical energy	1.73
Not in good enough shape	1.72
Friends/family prefer other activities	1.72
Lack information on physical activity opportunities at the park	1.71
Personal health problems (e.g., difficulty walking)	1.67
Don't like to be physically active	1.49
Limited park hours	1.47
Park is too crowded	1.39
Friends/family skill levels different than mine	1.38
Lack support from friends/family	1.35
Self-conscious when physically active	1.34
Fear of prejudice from others based on my race/ethnicity	1.26
Don't feel welcome at the park	1.26
Don't have the right skills	1.24
Lack transportation to the park	1.22
Conflict with other park users	1.21

Note: Based on a 4 pt scale ranging from Not a Problem (1) to A Major Problem (4).

Part D: Child Activities and Influences

The percentage of children in the study sample meeting physical activity recommendations (47%) was presented in Table 3.1 above (see Part B).

Figure 3.26 shows that the location where surveyed children were most often physically active was at school. Home was the location next most often selected, followed by a park and in the neighborhood.

Fig. 3.26 Physical Activity Locations

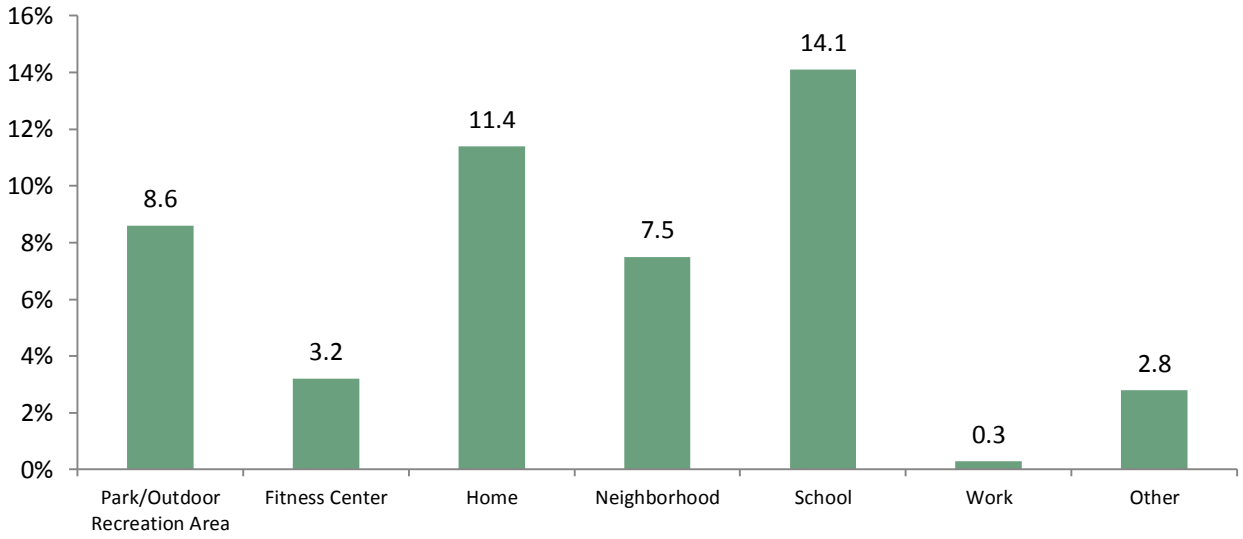


Figure 3.27 shows the majority of children usually walked or biked to and from school zero days per week. However, about 10% of children walked or biked five days a week to and from school.

Fig. 3.27 Frequency of Walking or Biking To/From School

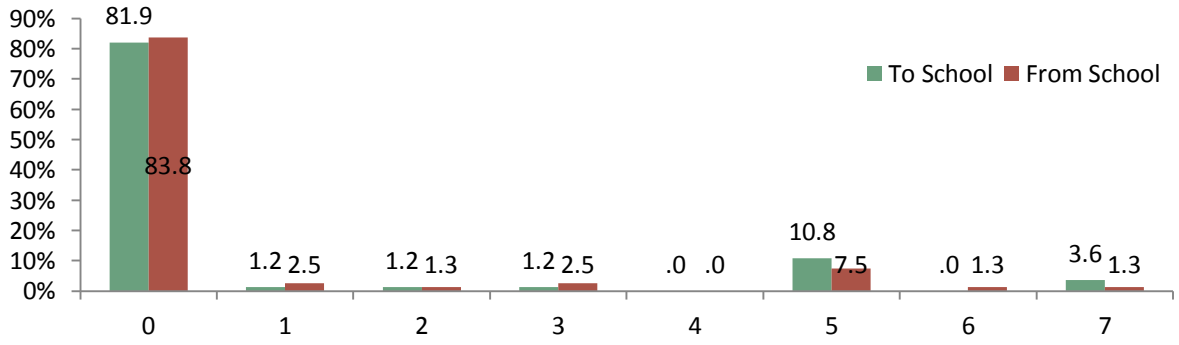


Fig 3.28 Hours Per Day of Screen Time

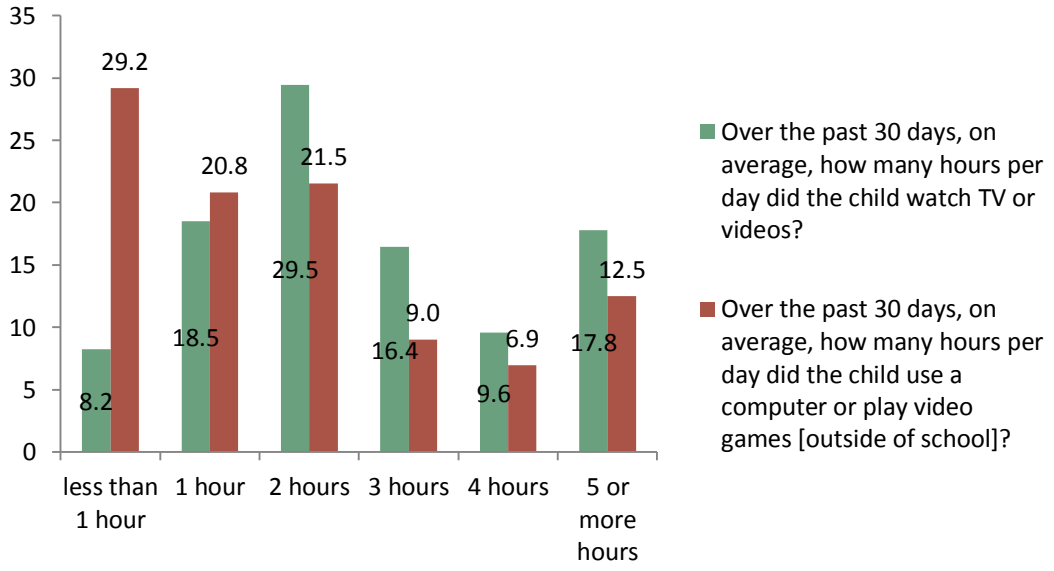


Figure 3.28 shows that over the past 30 days, on average, surveyed children tended to watch more television and videos than use a computer or play video games.

Table 3.5: Parental Perceptions of Neighborhood Safety

Safety Concern	Mean
There is a safe area in my neighborhood for my child to play outdoors.	2.70
There is too much traffic in my neighborhood for my child to play outdoors.	2.13
Letting children play outside in my neighborhood is dangerous.	2.04
The crime rate in my neighborhood makes it unsafe for my child to play outdoors.	1.97
I worry that my child will be hurt by gangs if he/she plays outside.	1.82
I do not feel safe outside of my house/apartment in my neighborhood.	1.78
I worry that my child will be hurt by other children if he/she plays outside.	1.76

Note: Based on a 4 pt scale ranging from Strongly Disagree (1) to Strongly Agree (4).

Table 3.5 shows parental perceptions of several neighborhood safety issues (on a scale of 1=strongly disagree to 4=strongly agree). The highest mean score indicated that parents felt their children had a safe place to play in the neighborhood. Agreement scores for most of the other negative concerns asked about were relatively low.

The majority of youth in the study sample (62%) had visited a park in the last month (Figure 3.29). Of those 62% that had visited a park in the last 30, the average number of days the child visited a park in that time period was 5.22 days.

Fig. 3.29 Park Visitation Within The Last Month

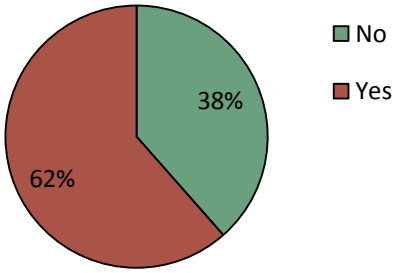
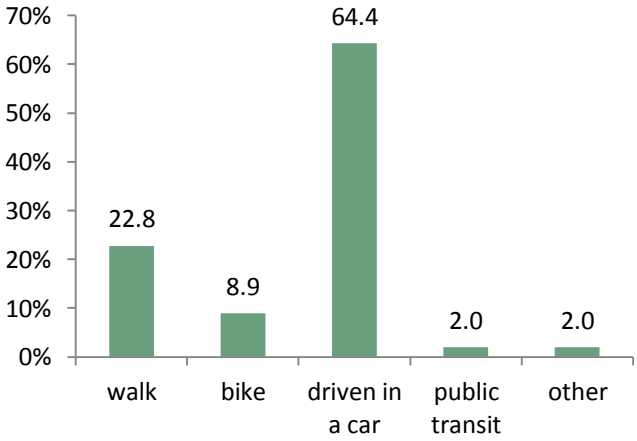


Fig. 3.30 Mode of Transit to the Park



As shown in figure 3.30, when the surveyed children go the park, the majority (64%) are driven in a car; only about one-third (31.7%) actively transport (i.e., walk or bike) to the park.

Figure 3.31 depicts the activity level of the children on their last park visit. Over 80% of the youth were moderately to vigorously active (i.e., walking, jogging, soccer, basketball, etc.).

Fig. 3.31 Activity Level During Park Visit

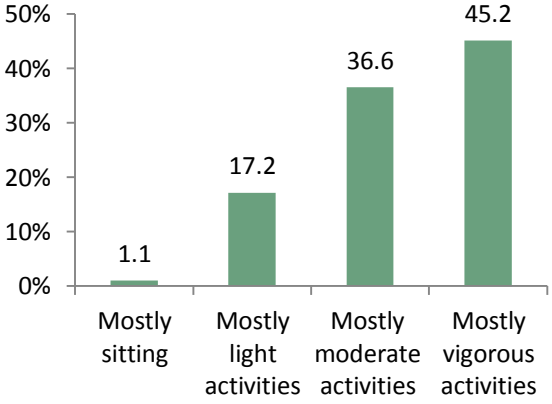


Fig. 3.32 Children's Park Activities

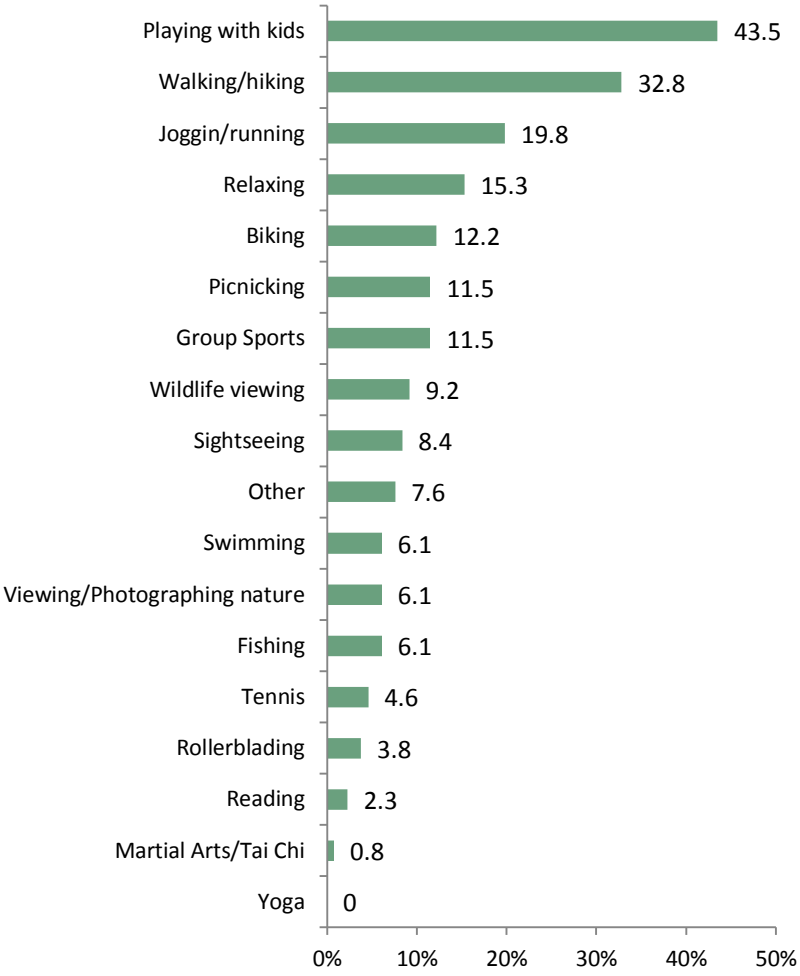


Figure 3.32 shows that out of the youth that visited a park in the last month, about 43% went to the park to play with friends or parents, and the next most frequent activities were walking/ hiking and jogging/running.

Fig. 3.33 Park Facility Areas

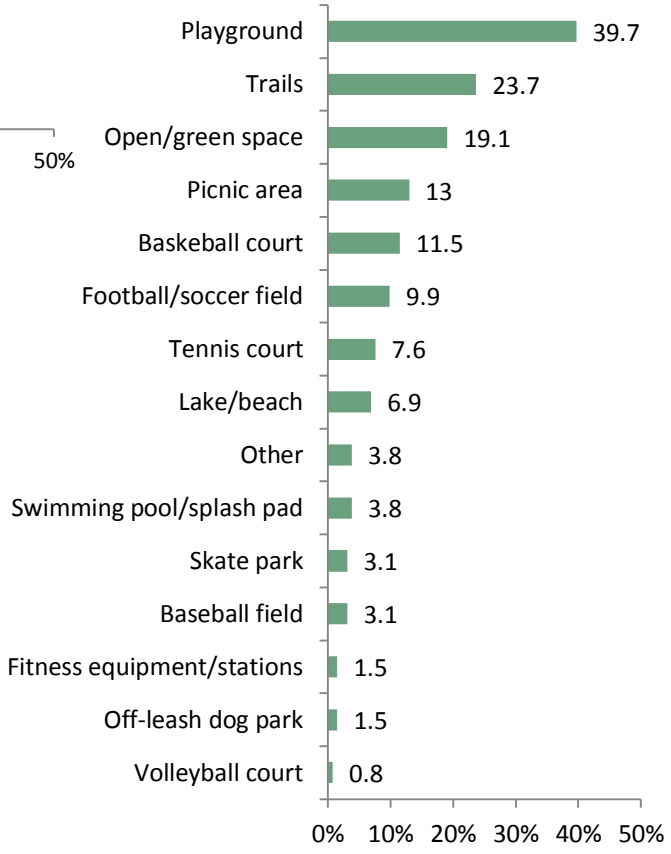


Figure 3.33 shows that the most used park facility areas by children were playgrounds, trails, and open/green spaces, with 40%, 24%, and 19% of park users indicating these facilities, respectively.

We also sought to understand how **living close to park space** and particular **park features** were related to youth being physically active. To explore this, three measures of park proximity were created – distance to the closest park, number of parks within ½ mile and 1 mile, and total park acres within ½ mile and 1 mile. All parks within 1 mile were also audited using the Community Park Audit Tool to determine the features within them.

Table 3.6 shows the relationship between park proximity and the likelihood of youth meeting physical activity recommendations, while controlling for other individual and neighborhood level factors. All youth and female youth who had a park within one-half mile of home were more likely to achieve physical activity recommendations than those with no parks nearby. Likewise, all youth and male youth with three or more parks within 1 mile were significantly more likely to achieve physical activity recommendations than those with only 1 park.

Table 3.6 Association of Park Proximity with Meeting Physical Activity Recommendations among Youth									
Park Proximity Analysis	**Total**			**Male**			**Female**		
	n	**OR**	**95% CI**	**n**	**OR**	**95% CI**	**n**	**OR**	**95% CI**
Closest Park									
0 parks	155	1.00		76	1.00		79	1.00	
¼ mile or less[a]	155	0.86	0.29-2.54	76	1.05	0.19-5.67	79	0.75	0.15-3.77
½ mile or less[a]	155	2.59*	1.24-5.41	76	2.22	0.68-7.23	79	3.27*	1.08-9.94
1 mile or less[a]	155	1.72	0.71-4.16	76	2.71	0.56-13.09	79	1.36	0.44-4.16
Number of Parks									
½ mile - 0 parks	155	1.00		76	1.00		79	1.00	
½ mile - 1 park	155	2.29*	1.03-5.09	76	2.19	0.60-8.04	79	2.89	0.92-9.14
½ mile - 2 or more parks	155	2.28	0.65-8.03	76	2.31	0.35-15.15	79	1.95	0.23-16.78
½ mile - 1 park	57			31	1.00		27	1.00	
½ mile - 2 or more parks	57	1.02	0.24-4.39	31	1.47	0.18-11.95	27	0.61	0.06-6.70
1 mile - 0 parks	155	1.00		76	1.00		79	1.00	
1 mile - 1 park	155	0.97	0.35-2.71	76	0.98	0.16-6.19	79	0.95	0.24-3.79
1 mile - 2 parks	155	1.76	0.59-5.22	76	4.98	0.66-37.66	79	1.04	0.25-4.30
1 mile - 3 or more parks	155	3.85*	1.29-11.52	76	14.73*	1.26-172.65	79	2.89	0.68-12.21
1 mile - 1 park	124	1.00		65	1.00		59	1.00	
1 mile - 2 parks	124	2.07	0.72-5.98	65	5.36	0.81-35.45	59	1.19	0.26-5.52
1 mile - 3 or more parks	124	4.79*	1.63-14.04	65	17.45*	1.46-208.01	59	3.62	0.78-16.94

*p<.05

[a]The reference group for each closest park analysis is 0 parks within the specified distance.

Table 3.6 Association of Park Proximity with Meeting Physical Activity Recommendations among Youth (continued)									
Park Proximity Analysis	**Total**			**Male**			**Female**		
	n	**OR**	**95% CI**	**n**	**OR**	**95% CI**	**n**	**OR**	**95% CI**
Park Space									
¼ mile - 0 acres	155	1.00		76	1.00		79	1.00	
¼ mile - 0.1-4.9 acres	155	0.66	0.14-3.08	76	0.53	0.03-8.12	79	1.47	0.16-13.65
¼ mile - 5 or more acres	155	0.96	0.22-4.19	76	1.76	0.16-19.50	79	0.37	0.03-4.26
¼ mile - 0.1-4.9 acres	23	1.00		13	1.00		10	1.00	
¼ mile - 5 or more acres	23	1.66	0.29-9.69	13	16.00	0.72-354.80	10	0.46	0.02-8.99
½ mile - 0 acres	155	1.00		76	1.00		79	1.00	
½ mile - 0.1-9.9 acres	155	1.78	0.66-4.85	76	1.21	0.24-6.08	79	2.74	0.59-12.67
½ mile - 10-19.9 acres	155	3.52*	1.09-11.36	76	4.11	0.68-24.97	79	5.69	0.63-51.42
½ mile - 20 or more acres	155	3.33	0.90-12.35	76	2.55	0.24-27.45	79	2.96	0.55-16.10
½ mile - 0.1-9.9 acres	57	1.00		31	1.00		26	1.00	
½ mile - 10-19.99 acres	57	2.07	0.40-10.61	31	1.35	0.14-13.05	26	1.94	0.05-70.53
½ mile - 20 or more acres	57	1.70	0.31-9.49	31	2.65	0.11-61.82	26	0.58	0.04-8.93
1 mile - 0 acres	155	1.00		76	1.00		79	1.00	
1 mile - 0.1-19.9 acres	155	1.10	0.41-2.99	76	1.51	0.27-8.48	79	1.03	0.28-3.82
1 mile - 20-49.9 acres	155	2.24	0.79-6.37	76	4.24	0.67-26.6	79	1.69	0.43-6.61
1 mile - 50 or more acres	155	2.68	0.88-8.17	76	5.69	0.66-48.85	79	1.60	0.37-6.95
1 mile - 0.1-9.9 acres	124	1.00		65	1.00		59	1.00	
1 mile - 20-49.9 acres	124	2.26	0.88-5.82	65	2.58	0.60-11.05	59	2.08	0.50-8.64
1 mile - 50 or more acres	124	2.94*	1.04-8.29	65	3.65	0.56-23.68	59	1.74	0.40-7.53

* p<.05.

In looking at the relationship between park facilities and youth PA, Table 3.7 shows that youth who had a park with a playground within one-half mile or a baseball field within 1 mile of their home were more than twice as likely to achieve physical activity recommendations.

Table 3.7 Association of Park Facilities with Meeting Physical Activity Recommendations among Youth

Park Facilities	½ Mile		1 Mile	
	OR	95% CI	OR	95% CI
Sports Field	2.89	0.27-31.27	1.25	0.51-3.06
Baseball Field	2.52	0.96-6.60	2.88*	1.33-6.26
Playground	2.51*	1.11-5.65	2.07	0.94-4.57
Swimming Pool	1.79	0.28-11.30	1.58	0.49-5.13
Trail	1.27	0.54-3.00	2.05	0.99-4.23
Green Space	1.26	0.60-2.64	1.72	0.71-4.16
Basketball Court	1.20	0.45-3.17	1.88	0.88-4.03
Tennis Court	0.68	0.21-2.16	1.33	0.63-2.81
Lake	0.59	0.09-3.78	1.14	0.46-2.85
Splash Pad	n/a	n/a	1.44	0.43-4.81
Skate Park	n/a	n/a	3.05	0.52-17.90
Volleyball Court	n/a	n/a	2.49	0.42-14.97
Fitness Station	n/a	n/a	4.14	0.42-40.56
Dog Park	n/a	n/a	4.08	0.31-54.41

* $p < .05$.

For all analyses, the reference group was youth who did not have the park feature within ½ mile or 1 mile.

n/a indicates no features at the specified distance.

Finally, we examined the relationship between numerous park amenities and youth meeting physical activity recommendations (note: a few of the park characteristics included in the list of amenities may not fit the traditional definition of a positive park attribute that contributes to park visitors' PA – e.g., threatening behavior, dangerous spots – but they have been included amongst the other non-facility park features while recognizing this limitation).

As shown in Table 3.8, having a park with a transit stop, traffic signal, picnic table, grill, trash can, shad, and a road through the park within 1 mile of home was associated with greater odds of youth achieving at least 5 days per week of 60 minutes of physical activity.

Table 3.8 Association of Park Amenities with Meeting Physical Activity Recommendations among Youth

Park Amenities	½ Mile		1 Mile	
	OR	95% CI	OR	95% CI
Traffic Signal	2.11	0.95-4.67	2.65*	1.19-5.92
Roads Through Park	2.01	0.55-7.41	3.09*	1.32-7.25
Picnic Table	1.91	0.84-4.32	2.47*	1.14-5.34
Lights	1.87	0.77-4.56	1.47	0.70-3.09
Trash Cans	1.68	0.78-3.63	2.40*	1.07-5.38
Grill	1.65	0.64-4.23	2.77*	1.31-5.85
Benches	1.48	0.69-3.17	1.85	0.82-4.17
Picnic Shelter	1.44	0.50-4.14	1.73	0.82-3.68
Animal Waste Bag	1.44	0.32-6.43	1.17	0.50-2.74
Sidewalk	1.42	0.66-3.04	1.92	0.90-4.10
Car Parking	1.39	0.67-2.87	1.51	0.65-3.52
Transit Stop	1.38	0.56-3.37	2.17*	1.02-4.63
Rule Posted-Animals	1.17	0.27-5.11	0.96	0.43-2.14
Drinking Fountain	1.01	0.40-2.56	1.15	0.55-2.39
Neighborhood Visible	0.98	0.41-2.38	1.63	0.78-3.43
Restroom	0.84	0.22-3.22	1.28	0.59-2.77
Park Monitored	0.76	0.17-3.45	0.82	0.34-1.97
Shade	0.73	0.28-1.92	2.37*	1.15-4.87
External Trail	0.51	0.13-1.96	0.9	0.42-1.93
Dangerous Spots	0.34	0.09-1.34	1.22	0.59-2.54
Threatening Behavior	n/a	n/a	1.46	0.42-5.09
Emergency Device	n/a	n/a	0.95	0.12-7.70
Vending	n/a	n/a	0.72	0.05-9.85
Bike Lane	n/a	n/a	0.51	0.13-1.96
Bike Rack	n/a	n/a	0.46	0.10-2.05

* $p < .05$;

For all analyses, the reference group was youth who did not have the park feature within ½ mile or 1 mile.
n/a indicates no features at the specified distance.

Conclusion

The KCNPS is one of the first studies of its kind to provide a comprehensive look at how a wide variety of neighborhood and park-related characteristics influence physical activity and related outcomes amongst children and adults. The participants in the KCNPS were drawn from across KCMO and thus provide a fairly representative sample from which to better understand how parks promote health city-wide. The findings in this section have provided a wealth of information about characteristics of the participants in the KCNPS, their physical activity patterns and locations, and factors that influence overall and park-based physical activity. Nevertheless, analyses using the various data sources from the KCNPS are ongoing. For example, future analyses will examine residents' perceptions of the quality of parks in their neighborhood and how this is associated with their overall and park-based physical activity. Further, similar to the results presented in Tables 3.6 to 3.8 for youth, we also plan to examine how park proximity and features are related to adult physical activity and park use. Other analyses will address issues related to accessing parks for physical activity and how the safety of neighborhoods and parks impacts decisions about outdoor activities.

A future (fourth) component of the KCPAPAP will use an environmental justice framework to explore whether disparities exist across census tracts in KCMO by income and race/ethnicity with respect to the availability, features, and quality of parks. All told, the KCPAPAP and its study components provide evidence of the physical activity benefits of parks and guidance for planning efforts aimed at improving how city parks can facilitate the health and wellness of Kansas City residents of all ages for years to come.

REFERENCES

Bedimo-Rung, A. L., Gustat, J., Tompkins, B. J., Rice, J., & Thompson, J. (2006). Development of a direct observation instrument to measure environmental characteristics of parks for physical activity. *Journal of Physical Activity & Health, 3*(Suppl 1), S176-S189.

Bedimo-Rung, A. L., Mowen, A. J., & Cohen, D. A. (2005). The significance of parks to physical activity and public health: A conceptual model. *American Journal of Preventive Medicine, 28* (2 Supplement 2), 159-168.

Centers for Disease Control and Prevention (2011). Physical Activity for a Healthy Weight. US Department of Health and Human Services on-line government document. Retrieved March 6, 2011 from the world wide web: http://www.cdc.gov/healthyweight/physical_activity/index.html

Giles-Corti, B., Broomhall, M. H., Knuiman, M., Collins, C., Douglas, K., Ng, K., et al. (2005). Increasing walking: How important is distance to, attractiveness, and size of public open space? *American Journal of Preventive Medicine, 28*(2 Suppl 2), 169-176.

Lee, R. E., Booth, K. M., Reese-Smith, J. Y., Regan, G., & Howard, H. H. (2005). The physical activity resource assessment (PARA) instrument: Evaluating features, amenities and incivilities of physical activity resources in urban neighborhoods. *The International Journal of Behavioral Nutrition and Physical Activity, 2*, 13.

Loukaitou-Sideris, A., & Sideris, A. (2010). What brings children to the park? Analysis and measurement of the variables affecting children's use of parks. *Journal of the American Planning Association, 76*(1), 89-107.

McKenzie, T. L., Cohen, D. A., Sehgal, A., Williamson, S., Golinelli, D. (2006). System for Observing Play and Recreation in Communities (SOPARC): Reliability and feasibility measures. *Journal of Physical Activity and Health, 3*(Suppl 1), S208-S222.

Moody, J. S., Prochaska, J. J., Sallis, J. F., McKenzie, T. L., Brown, M, & Conway, T. L. (2004). Viability of parks and recreation centers as sites for youth physical activity promotion. *Health Promotion Practice, 5*(4), 438-443.

Saelens, B.E., Frank, L.D., Auffrey, C., Whitaker, R.C., Burdette, H.L., & Colabianchi, N. (2006). Measuring physical environments of parks and playgrounds: EAPRS instrument development and inter-rater reliability. *Journal of Physical Activity & Health, 3*(Supplement1), 190-207.

Appendix A: Kansas City Park Visitor Survey

For staff use only:
Park: _____ Date :_____

KANSAS CITY PARK VISITOR SURVEY

TODAY'S VISIT TO THE PARK

1. How did you get to the park today? ____ Walked ____ Biked ____ Car ____ Public transit

2. How long did it take you to get here? ____(hours) :____(minutes) ____ Do not know

3. How many miles did you travel to get here? ____miles ____ Do not know

4. How long will you stay here today? ____(hours) :____(minutes) ____ Do not know

5. Is this your first visit to this park? ____ Yes ____ No (if no, please answer 5 a, b, and c)

If no:
- **a. How many total times have you visited (including today)?** _____ times ____ Do not know
- **b. How many times have you visited in the past 12 months?** _____ times ____ Do not know
- **c. How many years have you been coming to this park?** _____ years ____ Do not know

6. With whom are you visiting the park today? (please check all that apply)

____ Alone ____ With friends ____ With other members of an organized group
____ With family ____ With pet/dog ____ Other (please specify):_____

7. What activities did/will you do at the park today? (please check all that apply)

____ Walking/hiking ____ Picnicking ____ Bird watching
____ Jogging/running ____ Relaxing ____ Group sports
____ Biking ____ Fishing ____ Sightseeing
____ Rollerblading ____ Reading ____ Viewing/photographing nature
____ Group sports ____ Playing with kids ____ Other (please specify): _____

8. Below is a list of possible reasons why people recreate at this park. Please circle the appropriate number that indicates how important each reason is to you for recreating at this park.

	Very Unimportant	Unimportant	Neither	Important	Very Important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills and abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To have thrills and excitement	1	2	3	4	5

9. Regarding this park, please indicate to what extent you agree or disagree with each of the following statements?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This park means a lot to me	1	2	3	4	5
I wouldn't substitute any other park for the type of recreation I do here	1	2	3	4	5
I have a lot of fond memories about this park	1	2	3	4	5
I have a special connection with the people who come to this park	1	2	3	4	5
I enjoy recreating at this park more than any other park	1	2	3	4	5
Recreating here is more important than recreating at any other place	1	2	3	4	5
I am very attached to this park	1	2	3	4	5
I (will) bring my children to this park	1	2	3	4	5
I identify strongly with this park	1	2	3	4	5
I get more satisfaction out of visiting this park than from visiting any other park	1	2	3	4	5

PHYSICAL ACTIVITY IN THIS PARK

10. How important are each of the following attributes when you choose a park for your physical activities?

Site Attributes	Very Unimportant	Unimportant	Neither	Important	Very Important
Walking/hiking/biking paths	1	2	3	4	5
Benches	1	2	3	4	5
Feeling safe from crime	1	2	3	4	5
Feeling safe from injury	1	2	3	4	5
Easy to get here	1	2	3	4	5
Lighting	1	2	3	4	5
Drinking fountains	1	2	3	4	5
Restrooms	1	2	3	4	5
Parking	1	2	3	4	5
Cleanliness of facilities (e.g., toilets)	1	2	3	4	5
Maintenance (e.g., fountains work)	1	2	3	4	5
Beauty	1	2	3	4	5
Close to home	1	2	3	4	5
Being near water	1	2	3	4	5
Sport fields (e.g., tennis, baseball, soccer)	1	2	3	4	5
Playground	1	2	3	4	5
Picnic area	1	2	3	4	5
Other (please specify): _____	1	2	3	4	5

11. Please tell us about your physical activity during a *typical visit* to this park:

How long do you typically stay here for all activities? ____(hours) :____(minutes) per day ___ Do not know

Of that time, during a typical visit, about how many minutes do you usually spend doing (if zero minutes, please write "0"):

a. sedentary activities (e.g., reading, picnicking, etc.)? ____ minutes
b. moderate intensity activities (e.g., activities that cause small increases in breathing or heart rate)? ____ minutes
c. vigorous intensity activities (e.g., activities that cause large increases in breathing or heart rate)? ____ minutes

12. Listed below are reasons some people do not participate in physical activity at this park at all or as often as they would like. Please tell us to what extent the following problems/concerns keep you from participating in physical activity at all or as often as you would like at this park.

Problems/concerns	Not A Problem	A Minor Problem	A Moderate Problem	A Major Problem	Not Applicable
No one to be physically active with	1	2	3	4	NA
Fear of crime from other people in the park	1	2	3	4	NA
Lack of scenic beauty	1	2	3	4	NA
Poorly maintained park (e.g., excess trash, run down facilities)	1	2	3	4	NA
Park is not designed for the activities I want to do	1	2	3	4	NA
Personal safety concerns (e.g., fear of injury, poorly maintained equipment)	1	2	3	4	NA
Personal health problems (e.g., difficulty walking)	1	2	3	4	NA
Limited park hours	1	2	3	4	NA
Parks are too far away from where I live	1	2	3	4	NA
I am physically active elsewhere	1	2	3	4	NA
Don't like to be physically active	1	2	3	4	NA
Too many family obligations	1	2	3	4	NA
Don't have enough time	1	2	3	4	NA
Not in good enough shape	1	2	3	4	NA
Friends/family don't have time	1	2	3	4	NA
Lack information on physical activity opportunities at the park	1	2	3	4	NA
Don't have enough physical energy	1	2	3	4	NA
Friends/family prefer other activities	1	2	3	4	NA
Lack transportation to the park	1	2	3	4	NA
Fear of prejudice from others based on my race/ethnicity	1	2	3	4	NA
Park is too crowded	1	2	3	4	NA
Lack support from friends/family	1	2	3	4	NA
Don't have the right skills	1	2	3	4	NA
Don't feel welcome at the park	1	2	3	4	NA
Self-conscious when physically active	1	2	3	4	NA
Conflict with other park users	1	2	3	4	NA
Friends/family skill levels different than mine	1	2	3	4	NA

13. What could be done to improve this park for physical activity?

OVERALL PHYSICAL ACTIVITY PARTICIPATION AND HEALTH

14. Compared to other people your age, would you say your overall health is: (please check one option)

____ Poor ____ Fair ____ Good ____ Very good ____ Excellent ____ Not sure

15. How many <u>days per week</u> do you participate in physical activity at a <u>moderate</u> intensity level (causes small increases in breathing or heart rate) for at least 10 minutes at a time?

____ days per week ____ Do not know ____ Do not do moderate activities

15b. On days when you do <u>moderate</u> intensity activities for at least 10 minutes at a time, how much <u>total time per day</u> do you spend doing these activities?

____(hours) :____(minutes) per day ____ Do not know ____ Not applicable

16. How many <u>days per week</u> do you participate in physical activity at a <u>vigorous</u> intensity level (causes large increases in breathing or heart rate) for at least 10 minutes at a time?

____ days per week ____ Do not know ____ Do not do vigorous activities

16b. On days when you do vigorous intensity activities for at least 10 minutes at a time, how much <u>total time per day</u> do you spend doing these activities?

____(hours) :____(minutes) per day ____ Do not know ____ Not applicable

17. Overall, out of all the physical activity you do, please indicate the percentage of your activity that occurs in each of the following locations. All of the numbers you record should add up to <u>100%</u>.

This park	_____%
Different park/recreation area	_____%
Fitness center	_____%
Home	_____%
Neighborhood streets/sidewalks	_____%
School	_____%
Work	_____%
Other (please specify): _____	_____%
Total	100%

FINALLY, PLEASE TELL US ABOUT YOURSELF ….

18. Are you? ____ Male ____ Female

19. What is the highest level of education you have completed? (please circle one category)

Less than High school	High school/ GED	Some College	Two-year college degree	Four-year college degree	Advanced Degree

20. Are you of Hispanic or Latino origin? (check one)

____ Not Hispanic or Latino ____ Hispanic or Latino

21. What racial category or categories best describes you? (select one or more)

____ American Indian or Alaska Native
____ Asian
____ Black or African American
____ Native Hawaiian or Other Pacific Islander
____ White
____ Other (please specify) _____

22. How tall are you? ____ feet ____ inches

23. About how much do you weigh? _____ pounds

24. What year were you born? 19____

25. What is your annual household income before taxes? (check one)

____ less than $25,000 ____ $25,000-49,999 ____ $50,000-74,999 ____ $75,000-99,999
____ $100,000-149,999 ____ $150,000-199,999 ____ $200,000 or more

26. How many children under the age of 18 live in your household? ____ children under 18 in household

27. What is your zip code? _____

28. Finally, please provide us with your <u>mailing address</u> or the <u>closest intersection to your home</u>? This will be used solely for mapping purposes and is very important so we can determine where people are coming from to use the park. All data will be kept completely confidential.

You're done! Thank you very much for completing this survey. Please return the survey to a member of the research team to claim your reward!

Appendix B: Community Park Audit Tool

COMMUNITY PARK AUDIT TOOL

Instructions

Before you begin, review the brief training guide and audit tool and try to locate a map of the park. This is important to ensure each question and response option is clear when you are making your ratings. Then, go to the park and proceed with filling out this audit tool. The tool (6 pages) is divided into four sections that focus on different aspects of the park environment. Additional instructions are provided within each section.

Tips for Using the Community Park Audit Tool (CPAT)

- Drive, bike, or walk around the park to get a feel for the contents and characteristics of the park and surrounding neighborhood.
- The CPAT is organized such that questions on similar topics are grouped into logical sections and the four sections are arranged in the order that you might encounter them during your audit. However, you may need to switch between sections or pages as you complete the park audit. Therefore, it is important to review and be familiar with all of the tool sections and questions before you begin your audit.
- It is also important that you check back through the full document (6 pages) when you are finished to ensure you have completed all the sections and questions.
- Space is provided at the end of each section (and some individual questions) where you can take notes or record comments as you complete your audit. The margins or back of each page (if copied single-sided) can also be used to take notes, but please be sure that all relevant information is transferred to appropriate places on the tool and that all questions are fully answered using the format provided.
- If you see anything during your audit that requires immediate attention, contact the local parks department.

Section 1: Park Information

Park Name: _____ **Observer Name or ID:** _____

Park Address/Location: _____

Were you able to locate a map for this park? ❑ No ❑ Yes

Was the park easy to find onsite? ❑ No ❑ Somewhat ❑ Yes

Date (m/d/yr): ___ /___ /_____

Approximate Temperature: ___ °F **Weather:** ❑ Clear ❑ Partly Cloudy ❑ Rain/Snow

Start Time: _____ am or pm (circle) **End Time:** _____ am or pm (circle) **Length of visit:** ____ min

Comments on Park Information:

Section 2: Access and Surrounding Neighborhood

This section asks about factors related to accessing the park and about features of the neighborhood surrounding the park. Several questions include follow-up responses if you answered yes. After completing all questions, provide any additional comments in the space at the end of the section. **When thinking about the surrounding neighborhood, consider all areas that are visible from all sides of the park.**

When rating the access and surrounding neighborhood, please use the following definition:

- **Useable**: everything necessary for use is present and nothing prevents use (e.g., sidewalks are passable)

1. Can the park be **accessed for use**? (e.g., not locked/fenced, available for activity, etc.) ❑ No ❑ Yes

2. Are there **signs** that state the following (could be same sign)? *(check all that are present)*
   ❑ Park name ❑ Park hours ❑ Park contact information ❑ Park/facility rental information
   ❑ Park rules ❑ Park map ❑ Rental equipment information ❑ Event/program information

3. How many **points of entry** does the park have? ❑ More than 5 (or park boundary is open) ❑ 2-5 ❑ Only 1

4. Is there a **public transit stop** within sight of the park? ❑ No ❑ Yes

5. What types of **parking** are available for the park? *(check all that are present)*
   ❑ None ❑ Parking Lot ❑ On street parking ❑ Bike rack(s)

6. Are there **sidewalks** on *any* roads adjacent to the park? (could be on opposite side of road) ❑ No ❑ Yes
   If yes … Are they useable? ❑ All or most are useable ❑ About half ❑ None or few useable
   If yes … Are there **curb cuts and/or ramps** on *any* sidewalks bordering or entering the park? ❑ No ❑ Yes

7. Is there an external **trail or path** connected to the park? ❑ No ❑ Yes
   If yes … Is it useable? ❑ No ❑ Yes

8. Are there **bike routes** on *any* roads adjacent to the park? *(check all that are present)*
   ❑ None ❑ Marked lane ❑ Designated route sign ❑ Share the road signs/markers

9. Are there nearby **traffic signals** on *any* roads adjacent to the park? (e.g., crosswalk, stop light/sign) ❑ No ❑ Yes

10. What are the main **land use(s) around the park**? *(check all that apply)*
    ❑ Residential ❑ Commercial ❑ Institutional (e.g., school) ❑ Industrial (e.g., warehouse) ❑ Natural

11. Which of the following **safety or appearance concerns** are present in the **neighborhood surrounding the park**? *(check all that are present in the surrounding neighborhood within sight on any side of the park)*

❑ Inadequate lighting (e.g., absent or limited lighting on surrounding neighborhood streets)
❑ Graffiti (e.g., markings or paintings that reduce the visual quality of the area)
❑ Vandalism (e.g., damaged signs, vehicles, etc.)
❑ Excessive litter (e.g., noticeable amounts of trash, broken glass, etc.)
❑ Heavy traffic (e.g., steady flow of vehicles)
❑ Excessive noise (e.g., noticeable sounds that are unpleasant or annoying)
❑ Vacant or unfavorable buildings (e.g., abandoned houses, liquor store)
❑ Poorly maintained properties (e.g., overgrown grass, broken windows)
❑ Lack of eyes on the street (e.g., absence of people, no houses or store fronts)
❑ Evidence of threatening persons or behaviors (e.g., gangs, alcohol/drug use)
❑ Other _____

Comments on Access or Surrounding Neighborhood Issues:

Section 3: Park Activity Areas

This section asks about the activity areas in the park. For each activity area type:

1. **First, indicate the number (#) that are present in the park** (if none, write "0").
2. Then, respond to several subsequent questions about **up to three** of those particular areas. If there are more than three areas for a specific activity area type, **rate the first three you encounter during the audit**. If there were no activity areas of that type present in the park, move on to the next type.
3. Finally, use the space provided to note any additional comments about each type of activity area.

When rating the activity areas, please use the following definitions:

- **Useable**: everything necessary for use is present (excluding portable equipment - rackets, balls, etc.) and nothing prevents use (e.g., are there nets up for tennis courts, goals for sport fields, are trails passable, etc.)
- **Good condition**: looks clean and maintained (e.g., minimal rust, graffiti, broken parts; even surface; etc.)

12. **Activity Areas**	**# of Areas**	**Area 1**	**Area 2**	**Area 3**
a. **Playground**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Distinct areas for different age groups		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Colorful equipment (i.e., 3+ colors)		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Shade cover for some (25%+) of the area		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Benches in/surrounding area		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Fence around area (i.e., half or more)		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Separation or distance from road		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
b. **Sport Field** (football/soccer)	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
c. **Baseball Field**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
d. **Swimming Pool**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
e. **Splash Pad**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
f. **Basketball Court**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
g. **Tennis Court**	**(# :_____)**			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				

Activity Areas	# of Areas	Area 1	Area 2	Area 3
h. **Volleyball Court**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
i. **Trail**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Connected to activity areas		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Distance markers/sign		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Benches along trail		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
What is the trail surface? *(check one)*		❑ Paved ❑ Crushed stone ❑ Dirt/mulch	❑ Paved ❑ Crushed stone ❑ Dirt/mulch	❑ Paved ❑ Crushed stone ❑ Dirt/mulch
Comments:				
j. **Fitness Equipment/Stations**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
k. **Skate Park**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
l. **Off-Leash Dog Park**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
m. **Open/Green Space**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
n. **Lake**	(# :_____)			
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Is there a designated swimming area?		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				
o. **Other** (*fill in a type description for each)*		_____	_____	_____
Useable		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Good condition		❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
Comments:				

Comments on Park Activity Areas:

Section 4: Park Quality and Safety

This section asks about factors related to comfort and safety when using the park. Several questions include follow-up responses if you answered yes. After completing all questions, provide any additional comments in the space at the end.

When rating the quality and safety features of the park, please use the following definitions:

- **Useable**: everything necessary for use is present and nothing prevents use (e.g., can get into restrooms, drinking fountains work, etc.)
- **Good condition**: looks clean and maintained (e.g., minimal rust, graffiti, broken parts; etc.)

13. Are there public **restroom(s) or portable toilet(s)** at the park? ❑ No ❑ Yes
    If yes …
    Are the restroom(s) useable? ❑ All or most are useable ❑ About half ❑ None or few are useable
    Are they in good condition? ❑ All or most in good condition ❑ About half ❑ None or few in good condition
    Is there a family restroom? ❑ No ❑ Yes
    Is there a baby change station in any restroom? ❑ No ❑ Yes

14. Are there **drinking fountain(s)** at the park? ❑ No ❑ Yes
    If yes …
    How many different fountains are there? (i.e., units, not spouts) _____
    Are the fountains useable? ❑ All or most are useable ❑ About half ❑ None or few are useable
    Are they in good condition? ❑ All or most in good condition ❑ About half ❑ None or few in good condition
    Are they near activity areas? ❑ All or most are near ❑ About half ❑ None or few are near

15. Are there **bench(es)** to sit on in the park? ❑ No ❑ Yes
    If yes …
    Are the benches useable? ❑ All or most are useable ❑ About half ❑ None or few are useable
    Are they in good condition? ❑ All or most in good condition ❑ About half ❑ None or few in good condition

16. Are there **picnic table(s)** in the park? ❑ No ❑ Yes
    If yes …
    Are the tables useable? ❑ All or most are useable ❑ About half ❑ None or few are useable
    Are they in good condition? ❑ All or most in good condition ❑ About half ❑ None or few in good condition
    Is there a picnic shelter in the park? ❑ No ❑ Yes
    Is there a grill or fire pit in the park? ❑ No ❑ Yes

17. Are there **trash cans** in the park? ❑ No ❑ Yes
    If yes …
    Are they overflowing with trash? ❑ All or most overflowing ❑ About half ❑ None or few overflowing
    Are they near activity areas? ❑ All or most are near ❑ About half ❑ None or few are near
    Are recycling containers provided? ❑ No ❑ Yes

18. Is there **food/vending machines** available in the park? ❑ No ❑ Yes

19. If the sun was directly overhead, how much of the park would be **shaded**? ❑ <25% ❑ 25-75% ❑ >75%

20. Are there **rules posted about animals** in the park? (e.g., dogs must be leashed)? ❑ No ❑ Yes

21. Is there a place to get **dog waste pick up bags** in the park? ❑ No ❑ Yes
    If yes … Are bags available at any of the locations? ❑ No ❑ Yes

22. Are there **lights** in the park? (not including neighborhood street lights) ❑ No ❑ Yes
If yes …
How much of the park could be lit? ❑ <25% ❑ 25-75% ❑ >75%
Are the activity areas lit? ❑ All or most are lit ❑ About half ❑ None or few are lit

23. Is the **park monitored**? (e.g., volunteer or paid staff, patrolled by police, cameras, etc.) ❑ Unsure ❑ Yes

24. Are there **any emergency devices** in the park? (e.g., phone, button, emergency directions) ❑ No ❑ Yes

25. Is there evidence of **threatening behavior or persons** in the park? (e.g., gangs, alcohol/drug use) ❑ No ❑ Yes

26. From the center of the park, how **visible is the surrounding neighborhood**? ❑ Fully ❑ Partially ❑ Not at all

27. Are there **road(s)** of any type through the park? ❑ No ❑ Yes
If yes … Are there traffic control mechanisms on the roads within the park? (e.g., crosswalk, stop light or sign, brick road, speed bumps, roundabouts) ❑ No ❑ Yes

28. Which of the following **park quality concerns** are present **in the park**? *(check all that are present)*
❑ Graffiti (e.g., markings or paintings that reduce the visual quality of the area)
❑ Vandalism (e.g., damaged signs, buildings, equipment, etc.)
❑ Excessive litter (e.g., noticeable amounts of trash, broken glass, etc.)
❑ Excessive animal waste (e.g., noticeable amounts of dog waste)
❑ Excessive noise (e.g., noticeable sounds that are unpleasant or annoying)
❑ Poor maintenance (e.g., overgrown grass/weeds/bushes or lack of grass in green areas)
❑ Other _____

29. What **aesthetic features** are present **in the park**? *(check all that are present)*
❑ Evidence of landscaping (e.g., flower beds, pruned bushes)
❑ Artistic feature (e.g., statue, sculpture, gazebo, fountain)
❑ Historical or educational feature (e.g., monument, nature display, educational signs, etc.)
❑ Wooded area (e.g., thick woods or dense trees)
❑ Trees throughout the park (e.g., scattered trees)
❑ Water feature (e.g., lake, stream, pond)
❑ Meadow (e.g., natural, tall grassy area)
❑ Other _____

30. Are there any **dangerous spots** in the park? (e.g., abandoned building, pit/hole) ❑ No ❑ Yes

Comments on Park Quality and Safety Issues:

Before finishing, please ensure you have answered all questions in the tool.

Appendix C: Kansas City Neighborhood and Park Survey

KANSAS CITY
NEIGHBORHOOD AND PARK SURVEY

Thank you for sharing your thoughts and opinions!

KANSAS CITY NEIGHBORHOOD AND PARK SURVEY

Thank you very much for your willingness to complete this survey. We are interested in learning more about how neighborhood and park factors influence the opportunities Kansas City families have to be physically active. Please read through and answer all questions in the survey.

NEIGHBORHOOD PERCEPTIONS

1. How long have you lived at your current address? _____ years and _____ months

The next several questions ask about features of your neighborhood. For all questions, please think about your neighborhood as the area within a 10-15 minute walk from your home.

2. Please rate how important or unimportant each of the following reasons was in your decision to move to your current neighborhood.

		Very Unimportant	Un-important	Neither	Important	Very Important
a.	Affordability/value	1	2	3	4	5
b.	Closeness to open space (e.g., parks)	1	2	3	4	5
c.	Closeness to job or school	1	2	3	4	5
d.	Closeness to public transportation	1	2	3	4	5
e.	Desire for nearby shops or services	1	2	3	4	5
f.	Ease of walking	1	2	3	4	5
g.	Sense of community	1	2	3	4	5
h.	Safety from crime	1	2	3	4	5
i.	Quality of schools	1	2	3	4	5
j.	Closeness to recreation facilities	1	2	3	4	5
k.	Access to highways	1	2	3	4	5
l.	Other (*please specify*): _____	1	2	3	4	5

3. The following questions ask about the relationships among the people that live in your neighborhood. Please indicate how much you agree or disagree with each statement.

		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
a.	People around my neighborhood are willing to help their neighbors.	1	2	3	4	5
b.	This is a close knit neighborhood.	1	2	3	4	5
c.	People in this neighborhood can be trusted.	1	2	3	4	5
d.	People in this neighborhood generally don't get along with each other.	1	2	3	4	5
e.	People in this neighborhood do not share the same values.	1	2	3	4	5

4. What is the main type of housing in your neighborhood? (*check only one*)

- ❑ Detached single-family housing
- ❑ Townhouses, row houses, apartments, or condos of 2-3 stories
- ❑ Mix of single-family residences and townhouses, row houses, apartments, or condos
- ❑ Apartments or condos of 4-12 stories
- ❑ Apartments or condos of more than 12 stories
- ❑ Don't know/Not sure

5. Please tell us how much you agree or disagree with each of these statements about your neighborhood *(remember to think about your neighborhood as the area within a 10-15 minute walk from your home).*

		Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know
a.	Many shops, stores, markets, or other places to buy things I need are within easy walking distance of my home.	1	2	3	4	DK
b.	It is within a 10-15 minute walk to a transit stop (bus, train, trolley, tram) from my home.	1	2	3	4	DK
c.	There are sidewalks on most of the streets in my neighborhood.	1	2	3	4	DK
d.	The crime rate in my neighborhood makes it unsafe to go on walks at night.	1	2	3	4	DK
e.	The crime rate in my neighborhood makes it unsafe to go on walks during the day.	1	2	3	4	DK
f.	Our neighborhood streets have good lights at night.	1	2	3	4	DK
g.	There are facilities to bicycle in or near my neighborhood, such as special lanes, separate paths or trails, shared use paths for cycles and pedestrians.	1	2	3	4	DK
h.	My neighborhood has several free or low cost recreation facilities, such as parks, walking trails, bike paths, recreation centers, playgrounds, public swimming pools, etc.	1	2	3	4	DK
i.	I see many people being physically active in my neighborhood doing things like walking, jogging, cycling, or playing sports and active games.	1	2	3	4	DK
j.	There is so much traffic on the streets that it makes it difficult or unpleasant to walk in my neighborhood.	1	2	3	4	DK
k.	There are many interesting things to look at while walking in my neighborhood.	1	2	3	4	DK
l.	There is a safe park in my neighborhood.	1	2	3	4	DK
m.	The speed of traffic on most nearby streets is usually slow (30 mph or less).	1	2	3	4	DK
n.	Most drivers go faster than the posted speed limits in our neighborhood.	1	2	3	4	DK
o.	There are many four-way intersections in my neighborhood.	1	2	3	4	DK
p.	There are crosswalks and signals to help walkers cross busy streets in our neighborhood.	1	2	3	4	DK

ADULT PHYSICAL ACTIVITY AND HEALTH

In this section, we would like to know about your participation in physical activities. Please use the following definitions when responding:

Moderate physical activities cause small increases in breathing or heart rate (e.g., brisk walking, gardening).
Vigorous physical activities cause large increases in breathing or heart rate (e.g., jogging, heavy lifting).

6. How many days per week (0-7) do you participate in physical activity at a moderate intensity level (causes small increases in breathing or heart rate) for at least 10 minutes at a time?

____ days per week ❑ Do not know ❑ Do not do moderate activities

6b. On days when you do moderate intensity activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

____ (hours) : ____ (minutes) per day ❑ Do not know ❑ Not applicable

7. How many days per week (0-7) do you participate in physical activity at a vigorous intensity level (causes large increases in breathing or heart rate) for at least 10 minutes at a time?

____ days per week ❑ Do not know ❑ Do not do vigorous activities

7b. On days when you do vigorous intensity activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

____(hours) : ____ (minutes) per day ❑ Do not know ❑ Not applicable

The next set of questions asks about how often and how many total minutes per week you walk in your neighborhood, first for transportation and then for recreation, heath, or fitness.

8. In a usual week, how many times do you walk as a means of transport in your neighborhood, such as going to and from work, walking to shops, or to public transit?

____ # of times in a usual week

9. In a usual week, please estimate the total time you spend walking as a means of transport in your neighborhood.

____ (hours) :____ (minutes) in a usual week ❑ Do not know ❑ Not applicable

10. In a usual week, how many times do you walk for recreation, health, or fitness in or around your neighborhood?

____ # of times in a usual week

11. In a usual week, please estimate the total time you spend walking for recreation, health, or fitness in or around your neighborhood.

____ (hours) :____ (minutes) in a usual week ❑ Do not know ❑ Not applicable

12. Sometimes people encounter obstacles to being physically active. Please rate how confident you are that you could participate in physical activity if the following situations were to occur.

I am confident I could participate when:	Not at all Confident	Slightly Confident	Moderately Confident	Very Confident	Completely Confident
a. I am tired.	1	2	3	4	5
b. I am in a bad mood.	1	2	3	4	5
c. I feel I don't have the time.	1	2	3	4	5
d. I am on vacation.	1	2	3	4	5
e. It is raining or snowing.	1	2	3	4	5

13. Think about all the physical activity you do in a usual week (7 days). Please indicate the number of minutes of your activity that occurs in each of the following locations:

Park/Outdoor recreation area	____ (hours) : ____ (minutes) in a usual week
Fitness center	____ (hours) : ____ (minutes) in a usual week
Home (indoors or outdoors)	____ (hours) : ____ (minutes) in a usual week
Neighborhood streets/sidewalks	____ (hours) : ____ (minutes) in a usual week
School	____ (hours) : ____ (minutes) in a usual week
Work	____ (hours) : ____ (minutes) in a usual week
Other (*please specify*): _____	____ (hours) : ____ (minutes) in a usual week

14. Over the past 30 days, on average, how many hours per day did you sit and watch TV or videos?

❑ Less than 1 hour ❑ 1 hour ❑ 2 hours ❑ 3 hours ❑ 4 hours ❑ 5 or more hours

15. Over the past 30 days, on average, how many hours per day did you use a computer or play computer games [outside of work]?

❑ Less than 1 hour ❑ 1 hour ❑ 2 hours ❑ 3 hours ❑ 4 hours ❑ 5 or more hours

16. Do you currently suffer from any of the following health concerns? (*check all that apply*)

❑ Heart problems (e.g., heart disease, heart attack, high blood pressure, etc.)
❑ Cancer
❑ Diabetes
❑ Osteoporosis
❑ Depression or other mental health concern
❑ Asthma/allergies
❑ Disability (*please describe*) _____
❑ Other (*please list*) _____

17. Compared to other people your age, would you say your overall health is:

❑ Poor ❑ Fair ❑ Good ❑ Very good ❑ Excellent ❑ Not sure

PARK USAGE AND PERCEPTIONS

Please answer the following questions about park usage. By park, we mean a public park or outdoor recreation area in the community that is designed for active or passive use.

18. Within the last month (i.e., last 30 days), did you visit a park?

❑ No – skip to question 23 ❑ Yes – please answer the following questions

18b. How many days in the last month (i.e., last 30 days) did you visit a park?

____ days in the last month visited a park ❑ Do not know

18c. During your last park visit, how much time did you spend in the park?

____ (hours) : ____ (minutes) during last park visit ❑ Do not know

18d. Of that time you said you spent in a park during your last park visit, how much time did you spend being physically active? By physically active we mean doing any physical movement rather than sitting (e.g., walking, biking).

____ (hours) : ____ (minutes) being physically active during last park visit ❑ Do not know

19. Who were you with on your last park visit? (*check all that apply*)

❑ Alone	❑ Friends	❑ Members of an organized group
❑ Family	❑ Pet	❑ Other (please specify): _____

20. What activities did you do during your last park visit? (*check all that apply*)

❑ Walking/hiking	❑ Picnicking	❑ Wildlife viewing (e.g., birdwatching)
❑ Jogging/running	❑ Relaxing	❑ Viewing/photographing nature
❑ Biking	❑ Reading	❑ Sightseeing
❑ Rollerblading	❑ Fishing	❑ Playing with kids
❑ Group sports	❑ Tennis	❑ Swimming
❑ Martial arts/Tai Chi	❑ Yoga	❑ Other (please specify): _____

21. What facility areas did you use during your last park visit? (*check all that apply*)

❑ Trails	❑ Playground	❑ Football/Soccer Field
❑ Basketball Court	❑ Off-Leash Dog Park	❑ Fitness Equipment/Stations
❑ Baseball Field	❑ Lake/Beach	❑ Swimming Pool/Splash Pad
❑ Tennis Court	❑ Skate Park	❑ Picnic Area
❑ Volleyball Court	❑ Open/Green Space	❑ Other (please specify): _____

22. Which of the following best describes your activity level on your last park visit? (*check only one*)

❑ Mostly sitting
❑ Mostly light activities (e.g., standing, walking, or strolling at a slow pace)
❑ Mostly moderate activities (e.g., walking or biking at a moderate pace)
❑ Mostly vigorous activities (e.g., jogging, soccer, basketball)
❑ Don't know

23. Parks are places where people can potentially go to be physically active. When thinking about being active in a park, how important or unimportant is each of the following site attributes?

	Site Attributes	Very Unimportant	Un-important	Neither	Important	Very Important
a.	Benches	1	2	3	4	5
b.	Peacefulness/quiet	1	2	3	4	5
c.	Feeling safe from crime	1	2	3	4	5
d.	Feeling safe from injury	1	2	3	4	5
e.	Easy to get there	1	2	3	4	5
f.	Lighting	1	2	3	4	5
g.	Drinking fountains	1	2	3	4	5
h.	Restrooms	1	2	3	4	5
i.	Parking	1	2	3	4	5
j.	Cleanliness of park areas	1	2	3	4	5
k.	Maintenance of park areas	1	2	3	4	5
l.	Beauty	1	2	3	4	5
m.	Close to home	1	2	3	4	5
n.	Trash cans	1	2	3	4	5
o.	Food/vending machines	1	2	3	4	5
p.	Being near water	1	2	3	4	5
q.	Close to public transit	1	2	3	4	5
r.	Shade trees	1	2	3	4	5
s.	Picnic area	1	2	3	4	5
t.	Bike racks	1	2	3	4	5
u.	Other *(please specify)*: _____	1	2	3	4	5

24. How long would it take you to walk to your nearest park?

❑ 1-5 minutes ❑ 6-10 minutes ❑ 11-20 minutes ❑ 21-30 minutes ❑ 31+ minutes

25. The following questions ask about the parks in your neighborhood. Please indicate how much you agree or disagree with each statement.

		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
a.	Parks in my neighborhood are clean.	1	2	3	4	5
b.	Parks in my neighborhood have facilities that I am interested in.	1	2	3	4	5
c.	Parks in my neighborhood are used by many people.	1	2	3	4	5
d.	Parks in my neighborhood are attractive.	1	2	3	4	5
e.	Parks in my neighborhood are safe.	1	2	3	4	5
f.	Parks in my neighborhood are well-maintained.	1	2	3	4	5
g.	Parks in my neighborhood are a benefit to the people who live here.	1	2	3	4	5

26. Listed below are reasons some people do not participate in physical activity at a park at all or as often as they would like. Please tell us to what extent the following problems/concerns keep you from participating in physical activity at all or as often as you would like in a park, even if you have not used a park recently for physical activity.

	Problems/Concerns	Not A Problem	A Minor Problem	A Moderate Problem	A Major Problem
a.	No one to be physically active with	1	2	3	4
b.	Fear of crime from other people in the park	1	2	3	4
c.	Lack of scenic beauty	1	2	3	4
d.	Poorly maintained park (e.g., excess trash, run down facilities)	1	2	3	4
e.	Park is not designed for the activities I want to do	1	2	3	4
f.	Personal safety concerns (e.g., fear of injury, poorly maintained equipment)	1	2	3	4
g.	Personal health problems (e.g., difficulty walking)	1	2	3	4
h.	Limited park hours	1	2	3	4
i.	Parks are too far away from where I live	1	2	3	4
j.	I am physically active elsewhere	1	2	3	4
k.	Don't like to be physically active	1	2	3	4
l.	Too many family obligations	1	2	3	4
m.	Don't have enough time	1	2	3	4
n.	Not in good enough shape	1	2	3	4
o.	Friends/family don't have time	1	2	3	4
P.	Lack information on physical activity opportunities at the park	1	2	3	4
q.	Don't have enough physical energy	1	2	3	4
r.	Friends/family prefer other activities	1	2	3	4
s.	Lack transportation to the park	1	2	3	4
t.	Fear of prejudice from others based on my race/ethnicity	1	2	3	4
u.	Park is too crowded	1	2	3	4
v.	Lack support from friends/family	1	2	3	4
w.	Don't have the right skills	1	2	3	4
x.	Don't feel welcome at the park	1	2	3	4
y.	Self-conscious when physically active	1	2	3	4
z.	Conflict with other park users	1	2	3	4
aa.	Friends/family skill levels different than mine	1	2	3	4

27. Do you have any other comments or suggestions about Kansas City parks?

CHILD ACTIVITIES AND INFLUENCES

28. Are there any children (3-17 years old) currently living in your household?

❑ No – Please skip to question 50 on the back page ❑ Yes – Please answer the questions in this section

For the rest of this section, please think about the child (3-17 years old) in your household that has the next upcoming birthday.

Please tell us about that child's physical activity participation. "MODERATE TO VIGOROUS PHYSICAL ACTIVITY" means activities that increase heartbeat or breathing, including brisk walking, swimming, biking, gardening, running or any other activity that causes increases in breathing and heart rate.

29. Thinking about the child's moderate to vigorous physical activities, over the past 7 days, on how many days was this child moderately to vigorously active for a total of at least 60 minutes per day?

_____ days in past 7 days ❑ Don't Know

30. Again thinking about the child's moderate to vigorous physical activities, in a typical week, on how many days is this child moderately to vigorously active for a total of at least 60 minutes per day?

_____ days in a typical week ❑ Don't Know

31. Over the past 30 days, on average, how many hours per day did the child sit and watch TV or videos?

❑ Less than 1 hour ❑ 1 hour ❑ 2 hours ❑ 3 hours ❑ 4 hours ❑ 5 or more hours

32. Over the past 30 days, on average, how many hours per day did the child use a computer or play video games [outside of school]?

❑ Less than 1 hour ❑ 1 hour ❑ 2 hours ❑ 3 hours ❑ 4 hours ❑ 5 or more hours

33. Thinking about the same child, please tell us how much you agree or disagree with each of the following statements:

		Strongly Disagree	Disagree	Agree	Strongly Agree
a.	I worry that my child will be hurt by gangs if he/she plays outside.	1	2	3	4
b.	I worry that my child will be hurt by other children if he/she plays outside.	1	2	3	4
c.	There is a safe area in my neighborhood for my child to play outdoors.	1	2	3	4
d.	Letting children play outside in my neighborhood is dangerous.	1	2	3	4
e.	There is too much traffic in my neighborhood for my child to play outdoors.	1	2	3	4
f.	The crime rate in my neighborhood makes it unsafe for my child to play outdoors.	1	2	3	4
g.	I do not feel safe outside of my house/apartment in my neighborhood.	1	2	3	4
h.	Our neighborhood streets have good lights at night.	1	2	3	4

34. Thinking about the same child, please indicate all of the places that child has been physically active in the last 30 days. (*check all that apply*)

- ❑ Park/Outdoor recreation area
- ❑ Fitness center
- ❑ Home (indoors or outdoors)
- ❑ Neighborhood streets/sidewalks
- ❑ School
- ❑ Work
- ❑ Other (*please specify*): _____

35. In a usual week, how many days does this child walk or bike to school? _____days ❑ Not applicable

36. In a usual week, how many days does this child walk or bike from school? _____days ❑ Not applicable

37. Within the last month (i.e., last 30 days), did this child visit a park?

❑ No – skip to question 42 ❑ Yes – please answer the following questions ❑ Do not know

37b. How many days in the last month (i.e., last 30 days) did this child visit a park?

____ days in the last month visited a park ❑ Do not know

38. When this child travels to a park, how does he or she usually get there? (*check only one*)

❑ Walk ❑ Bike ❑ Driven in a car ❑ Public transit ❑ Other _____

39. Which of the following best describes the child's activity level during the last park visit? (*check only one*)

- ❑ Mostly sitting
- ❑ Mostly light activities (standing, walking or strolling at a slow pace)
- ❑ Mostly moderate activities (walking at a moderate pace, playing tennis)
- ❑ Mostly vigorous activities (jogging, soccer, playing basketball)
- ❑ Cannot indicate because I was not with the child during the last park visit

40. What activities did the child do during the last park visit? *(check all that apply)*

❑ Cannot indicate because I was not with the child during the last park visit

❑ Walking/hiking	❑ Picnicking	❑ Wildlife viewing (e.g., birdwatching)
❑ Jogging/running	❑ Relaxing	❑ Viewing/photographing nature
❑ Biking	❑ Reading	❑ Sightseeing
❑ Rollerblading	❑ Fishing	❑ Playing with friends or parents
❑ Group sports	❑ Tennis	❑ Swimming
❑ Martial arts/Tai Chi	❑ Yoga	❑ Other (*please specify*): _____

41. What facility areas did the child use during the last park visit? (*check all that apply*)

❑ Cannot indicate because I was not with the child during the last park visit

❑ Trails	❑ Playground	❑ Football/Soccer Field
❑ Basketball Court	❑ Off-Leash Dog Park	❑ Fitness Equipment/Stations
❑ Baseball Field	❑ Lake	❑ Swimming Pool/Splash Pad
❑ Tennis Court	❑ Skate Park	❑ Picnic Area
❑ Volleyball Court	❑ Open/Green Space	❑ Other (please specify): _____

Please tell us a little bit more about this child. Please be assured that all information will be kept confidential. Once you have returned your survey, all specific address information will be kept separate from the answers you provide.

42. What is this child's gender? ❑ Male ❑ Female

43. What year was this child born? _____ year

44. What is this child's current height? _____ feet _____ inches

45. What is this child's current weight? _____ lbs

46. Is this child of Hispanic or Latino origin? ❑ Yes ❑ No

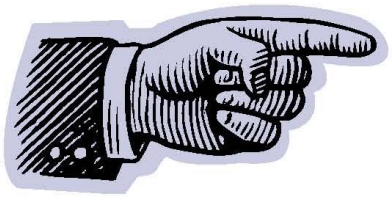
47. What racial category best describes this child? (*check all that apply)*

❑ American Indian or Alaska Native
❑ Asian
❑ Black
❑ Native Hawaiian or Other Pacific Islander
❑ White
❑ Other *(please specify)*: _____

48. Is this child eligible to receive school breakfast or lunch for free or at a reduced cost?

❑ Yes ❑ No ❑ Do not know

49. Is there any additional information you wish to provide about this child or his/her activities?



Please turn to the back page to answer a few final questions about your household …

HOUSEHOLD INFORMATION

Finally, please tell us a bit more about you and your household. All information will be kept confidential. Once you have returned your survey, all specific address information will be kept separate from the answers you provide.

50. What is your gender? ❑ Male ❑ Female

51. What year were you born? _____ year

52. What is your current height? _____ feet _____ inches

53. What is your current weight? _____ lbs

54. Are you of Hispanic or Latino origin? ❑ Yes ❑ No

55. What racial category best describes you? ***(check all that apply)***

❑ American Indian or Alaska Native
❑ Native Hawaiian or Other Pacific Islander
❑ Asian
❑ White
❑ Black
❑ Other *(please specify)* _____

56. What is your current marital status? ***(check only one)***

❑ Single, never married ❑ Divorced ❑ Married
❑ Separated ❑ Widowed ❑ Living with a domestic partner

57. What is the highest level of education you have completed? ***(check only one)***

❑ Less than high school ❑ Some college ❑ Four year college degree
❑ High school/GED ❑ Two-year college degree ❑ Advanced degree

58. What is your current work status? ***(check only one option that indicates your primary role)***

❑ Employed full-time ❑ Retired ❑ Full-time student
❑ Employed part-time ❑ Unemployed ❑ Part-time student
❑ Homemaker ❑ On disability or other work leave ❑ Other _____

59. What is your annual household income before taxes? ***(check only one)***

❑ less than $25,000 ❑ $50,000-74,999 ❑ $100,000-149,999
❑ $25,000-49,999 ❑ $75,000-99,999 ❑ $150,000 or more

60. How many children under the age of 18 live in your household? _____# of children

61. How many total motor vehicles are owned by the members of your household? ***(that are driven at least once per week)*** _____# of vehicles

62. What is your five-digit zip code? _____ zip code

You're done! Thank you very much for completing this survey.
Please return the survey in the white postage-paid envelope provided. Don't forget to fill out the enclosed blue card for a chance to win a prize and return it in the envelope with your survey!