



# **The Association of Park Environments and Physically Active Recreation among African American Visitors**

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# Background & Theoretical Approach

## Why African Americans?

- Disparate health status
- Disparate access to private recreation

## Why park environments?

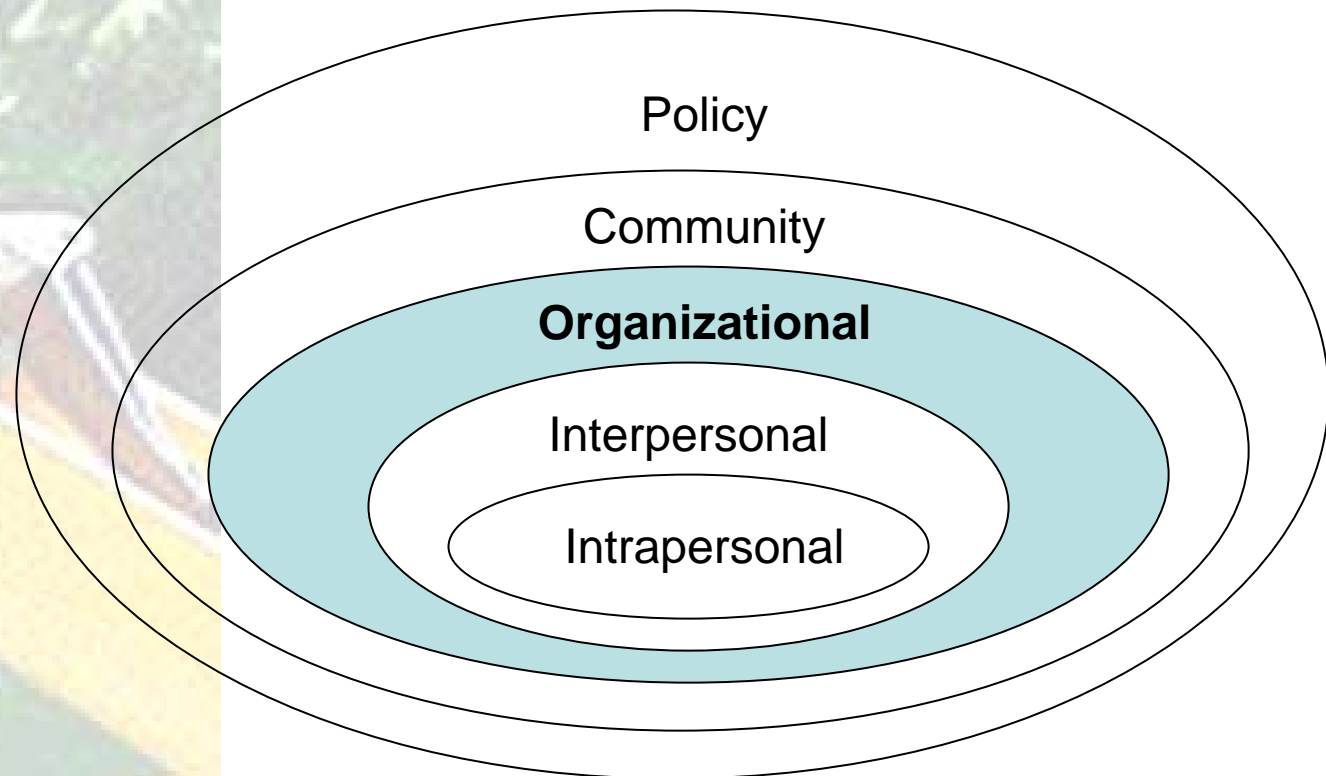
- No additional cost to residents
- Proximate to most housing
- Ability to sustain services
- Park and recreation providers have a mandate to improve or maintain the quality of life for residents



# Background & Theoretical Approach

## Theoretical Approach

- Social ecological perspective
- Identified gaps in understanding





# Objectives

- 1) To understand African American park visitation patterns**
- 2) To understand the relationship of controllable site components and the intensity of recreation activities undertaken at park sites**
  - The relationship of permanent site improvements and African American park visit intensity
  - The relationship of participation in organized recreation and African American park visit intensity
  - The relationship of participation in supervised park activities and African American park visit intensity

# Methodology

**4 parks within one census tract in eastern NC**

**SOPARC observations**

**4 time periods x 2 observations x 7 days**

**Each visitor observed was treated as a case**

1) Mode and frequency description

- Descriptive & Chi-square statistics

2) Contribution of different controllable site components to explain variance in activity intensity among African American visitors

- OLS regression



# Results

## Descriptives

- 2,113 park visitors were observed
- 811 (38%) were African American
- Slightly higher than the proportion of African Americans in the local population (34%)
- 61.2% of African Americans park visitors engaged in moderate/vigorous (M/V) activity
- African American park users were observed in significantly higher proportion at City Park and in significantly lower proportion at Waterfront Park



# Results

Same activity intensity as White visitors ( $X^2 = 9.31, p = .12$ )

## **Environmental association and activity intensity**

Participation involving site improvements

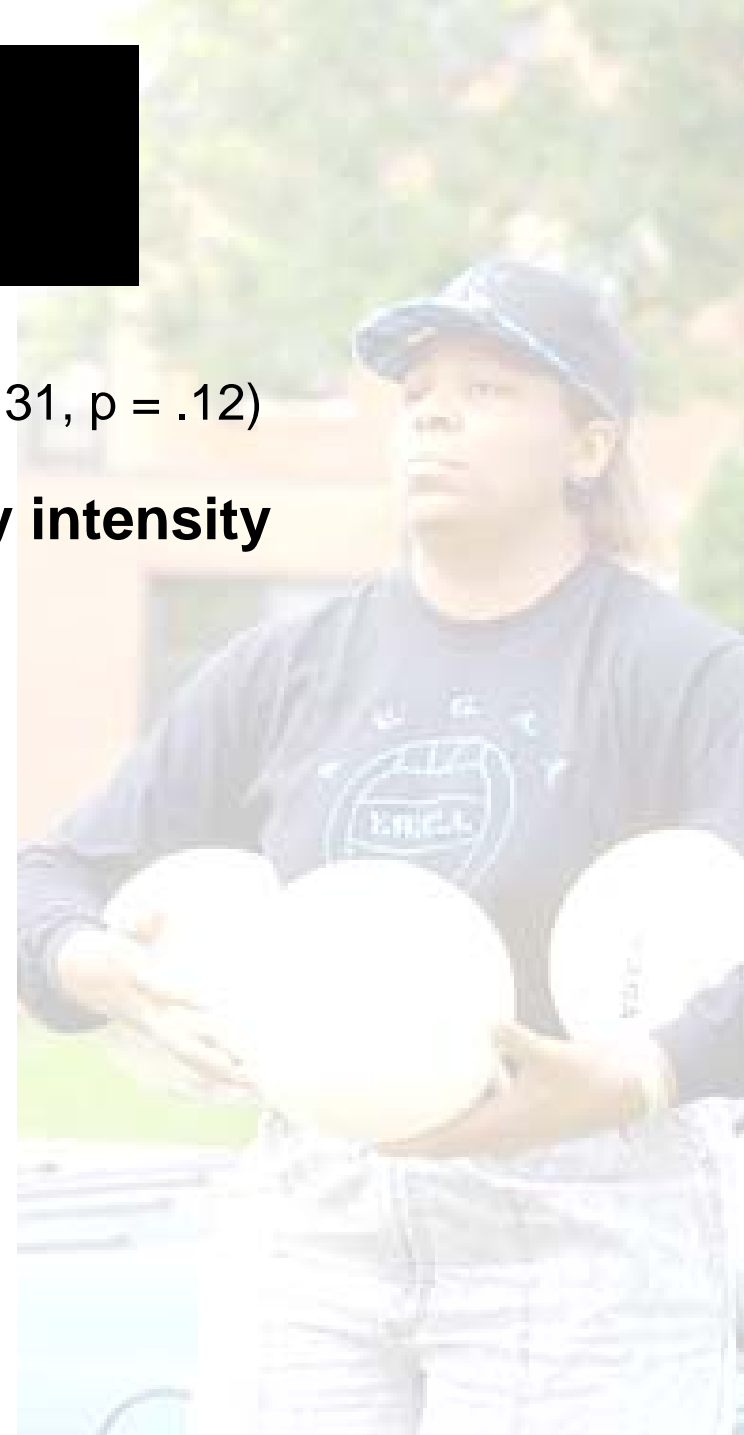
- M/V 92% of the time

Participation in organized activities

- M/V 62% of the time

Participation in supervised activities

- M/V 52% of the time



# Results

	Child	Teen	Adult	Older Adult
<b>African American males</b>				
Sedentary	Picnicking (n=10) Sitting (n=9) Fishing (n=1)	Sitting (n=4) Standing (n=3) Fishing (n=2)	Standing (n=62) Picnicking (n=32) Sitting (n=27)	Picnicking (n=4) Fishing (n=4) Sitting (n=3)
Moderate	Baseball (n=18) Dbls.Tennis (n=9) Walking (n=1)	Dbls.Tennis (n=8) Baseball (n=2) Walking (n=0)	Dbls.Tennis (n=14) Walking (n=7) Baseball (n=4)	Walking (n=2) Dbls.Tennis (n=1) Baseball (n=0)
Vigorous	Climbing (n=47) Jumping (n=41) Sgls.Tennis (n=8)	Soccer (n=21) Boarding (n=4) Sgls.Tennis (n=3)	Biking (n=15) Soccer (n=12) Sgls. Tennis (n=7)	Sgls. Tennis (n=1) Biking (n=1)



# Results

	Child	Teen	Adult	Older Adult
<b>African American females</b>				
Sedentary	Picnic (n=20) Stand (n=12) Sit (n=10)	Picnic (n=9) Stand (n=4) Sit (n=3)	Stand (n=52) Sit (n=40) Picnic (n=15)	Sit (n=8) Picnic (n=5) Stand (n=4)
Moderate	Dbls.Tennis (n=8) Baseball (n=5) Walking (n=1)	Dbls.Tennis (n=7) Walking (n=3) Baseball (n=1)	Dbls.Tennis (n=14) Walking (n=7) Baseball (n=4)	Walking (n=1) Dbls.Tennis (n=0) Baseball (n=0)
Vigorous	Climbing (n=60) Jumping (n=38) Sgls.Tennis (n=8)	Boarding (n=9) Sgls.Tennis (n=7) Soccer (n=1)	Climbing (n=29) Jumping (n=11) Running (n=4)	Sgls. Tennis (n=2) Biking (n=1)

# Results

<b>Variable</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math></b>
Play structures	1.26	0.28	0.70**
Sport field/court	1.57	0.04	0.81**
Picnic shelters w/grill	-0.55	-0.11	-3.08**
Trail/path	0.78	0.15	0.13**
Games/hobby equipment	0.01	0.01	1.73
Open space field	0.09	0.06	0.03
Supervision	1.38	0.03	0.71**
Activity organization	0.31	0.12	0.08*

*Note.*  $R^2 = .72$  Adjusted  $R^2 = .61$ ;  $p < .05$ , \*\* $p < .01$

# Key Findings

- African American visitation patterns indicated a preference for developed parks that provide multiple site improvements instead of more passive parks with limited site features
- The literature suggests this is true for all populations but with varying intensities
- The percentage of African American park visitors is equal to or slightly greater than the percentage of African Americans in the community
- Findings suggest that physical activity promotion in parks may be a viable mechanism to provide health benefits to this population





# Implications

- Park departments should consider allocating funds toward park design and features over providing park programs
  - This is likely to be more effective and more palatable: money spent on site improvements will impact more residents
- 
- African American youth were more active than teens and adults
  - The mechanisms used to attract youth seem to be unlikely to attract similar activity in teens and adults
  - Integration of use zones for different ages and activities is recommended

# Future Research

- Understand other ways that parks may promote African American health
- Pre-post intervention analysis of site improvements in African American neighborhood green spaces
- Determine the effect size of attributes for different minority groups
- Expand and repeat the current analysis with new tools
- Correlate self-report observations to outcomes derived from accelerometers heart rate monitors, and momentary sampling techniques



# Thank You!



Questions and  
Comments?

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