



Race Differences in Park Use and Park-Based Physical Activity

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The Pennsylvania State University

7th Annual Active Living Research Conference - February 2010

Acknowledgements

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- Jeanette Gustat, Ph.D. – Tulane University School of Public Health and Tropical Medicine

- **Funding support:**

- Cooperative Agreement Number 5K01DP000088 from the Centers for Disease Control and Prevention



Introduction

- Health inequalities in obesity and physical activity (PA) exist across race/ethnicity (e.g., Blacks compared to Whites)
- Parks increasingly being studied as low-cost settings to promote PA for populations at greatest risk for inactivity
- Numerous studies have explored park access across race. However, less is known about racial variations in terms of park visitation, particularly park-based physical activity

Background Literature

- Blacks and Whites have different preferences for park settings and experiences (Payne et al. 2002; Stamps & Stamps, 1985; Kaplan & Talbot, 1988)
- Mixed results regarding the role of race with respect to park use (Floyd et al. 2008; Cohen et al. 2007)
- Black visitors less active in parks (Floyd et al. 2008)

Study Objectives

- To explore differences in park visitation behaviors and park-based physical activity levels between Blacks and Whites in New Orleans, LA
 - Are there differences in desired park experiences, who they visit with, park visitation frequency/duration, park activities, and park-based physical activity between Black and White visitors?
 - Are park behaviors related to park-based physical activity differently for Black than for White park visitors?



Methods and Measures

Study Setting/Sample

- Surveys in 28 New Orleans neighborhood parks in summer 2008 (N = 219 adults)
- Parks selected to be representative of New Orleans neighborhood parks from each of eight planning districts
- Systematic sampling procedures used to intercept visitors within the parks

Park-Based Physical Activity (PBPA)

- Primary outcome measure
- Self-reported physical activity during the visit...
 - Categories consistent with SOPARC and self-reported measures (Physical Activity in Parks Survey - PA-PS)
 - Sedentary, Walking, Vigorous Physical Activity
 - Dichotomized – Sed. vs. Mod./Vig. PBPA

Race/Ethnicity

- The primary independent variable...
- Self-reported by the respondent...
 - Black or African-American (N = 123)
 - White or Caucasion (N = 96)
 - Other race/ethncity categories excluded due to low sample size (< 5%)

Park Use (Visitation) Measures

- Frequency of park visits (visit once a week or more frequently vs. visit a few times a month or less frequently)
- Planned duration of the park visit (total minutes)
- Who they came to the park with (e.g., alone, children, adult companions, chaperone)



Desired Park Experiences

- The importance of various park experiences...
 - Adopted from the Recreation Experience Preference (REP) scale (Driver 1983, Manfredi et al. 1996)
 - A reduced 15 item scale to reflect urban park experiences (1 = very important to 5 = not important)
 - PCA identified three domains consistent with prior REP studies - Active, Escape, Social

Park Activities

- Visitors were asked to list their park activities
- Top recreation activities...
 - Walking/playing with dogs
 - Playing with children
 - Socializing with others
 - Watching sports
 - Playing sports



Analyses

- Chi-Square and Wilcoxon Two Sample tests
- Relationships between park behaviors and PBPA...
 - For each park behavior, logistic regression predicting MV-PBPA, stratified on race
- Differential effect of park behavior on PBPA between black and white park visitors...
 - For each park behavior, simple logistic regression predicting MV-PBPA, with a race interaction effect



Study Results

Description of the Sample

	All (N=219)			Black (N=123)		White (N=96)		
	N	%		N	%	N	%	
<i>Sex</i>								
Male	102	46.6		61	49.6	41	42.7	
Female	117	53.4		62	50.4	55	57.3	
<i>Age, y (mean, SD, range)</i>	36.3	11.32	18-74	35.2	11.07	37.8	11.53	†
<i>Education</i>								*
1-less than college grad	121	56.0		94	78.3	27	28.1	
2-college grad or more	95	44.0		26	21.7	69	71.9	

† - $p < .10$; * - $p < .0001$

Significant Differences between White and Black Visitors

- Blacks more likely to report MV-PBPA during their visit (68% vs. 52%, $p=0.035$) and stay longer (126 minutes vs. 53 minutes $p<0.0001$)
- Blacks more likely to visit with children (55% vs. 32%, $p=0.001$) while Whites more likely to visit alone (50% vs. 33%, $p=0.012$).

Significant Differences between White and Black Visitors

- Whites more likely to report walking/playing with dogs (58% vs. 5%, $p < 0.001$) or socializing (21% vs. 5%, $p = 0.001$)
- Blacks more likely to report watching a sporting event (32% vs. 3%, $p < 0.0001$) or playing team sports (29% vs. 6%, $p < 0.0001$)
- “Active,” “Social,” and “Escape” experiences were significantly more important to Black than White visitors

Significant Contributions to PBPA

Among Black Park Visitors...

- **Higher odds of MV-PBPA related to:**
 - Frequency of their park visits (OR=3.24, CI=1.16-9.08)
 - Total time spent in park (OR=1.01, CI=1.00-1.01)
 - Playing team sports (OR= 3.07, CI=1.15-8.18)
 - Having “active” motivations (OR= 2.97, CI=1.67-5.29)
 - Having “social” motivations (OR = 1.62, CI=0.94-2.79)
- **Lower odds of MV-PBPA related to:**
 - Female gender (OR=0.48, CI=0.22-1.04)*
 - Age (OR=0.95, CI=0.91-0.98)
 - Watching a sporting event (OR=0.30, CI=0.13-.68)

Significant Contributors to PBPA

Among White Park Visitors...

- **Higher odds of MV-PBPA related to:**
 - Total time spent in park (OR=1.01, CI=1.00-1.03)
 - Coming with children (OR=2.61, CI=1.06-6.40)
 - Playing with children (OR=5.03, CI=1.69-14.95)
 - Having “social” motivations for park use (OR=1.72, CI=1.12-2.65)
- **Lower odds of MV-PBPA related to:**
 - Coming alone (OR=0.36, CI=0.16-0.82)
 - Walking/playing with dogs (OR=0.28, CI=0.12-0.66)

Stratified Analysis - Interactions

- Between Black and White park visitors, certain characteristics had differential effects on MV-PBPA, indicated by a significant interaction with race.
 - Frequency of park visits ($p=.013$) and coming to the park alone ($p=.004$) were associated with higher MV-PBPA among Blacks but lower MV-PBPA among Whites
 - Coming to the park with children ($p=.010$) was associated with lower MV-PBPA among Blacks but higher MV-PBPA among Whites.



Conclusions & Future Directions

Conclusions

- In this study context, Blacks and Whites differed in how they used neighborhood parks in many respects
- Blacks were more physically active during their visit
- Across both user groups, we could explore ways to make playing/walking dogs in the park and watching sporting events more physically active



Conclusions

- Important differences existed between the races that are relevant for park-based PA promotion...
 - For Black visitors, park managers could also encourage a greater frequency of park visits
 - For White visitors, park managers could encourage park visits with children

Future Directions

- Integrate other confounding issues as they relate to race and park-based physical activity –
 - For example, Shiness & Floyd (1996) and Shiness et al. (1999) examined inter-racial contact, social class
- Examine park setting preferences of blacks/whites and community type (rural, urban) as they relate to PBPA
- Explore whether there are any park features that are related to race and PBPA by race

Thank You!

Questions?

