RAND HEALTH

Urban Park Use and Physical Activity

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RAND Center for Population Health
and Health Disparities

Goals

- To determine whether improvements in parks result in increases in physical activity among children and adults
- To determine the impact of park improvements on other aspects of health and functioning
- To determine the cost effectiveness of Prop K in increasing physical activity

Proposition K

- Passed in 1996
- Allocates $25 million per year for 30 years to improve parks and open spaces in the City of Los Angeles
- Serves as natural experiment to understand how parks might contribute to population level physical activity

Study Components

- Includes community based participation
- Focuses on new recreation centers and improvements over $1,000,000
- Requires observing activity in parks, including age group and race/ethnicity
- Includes surveys of park users and individuals who live in local neighborhoods

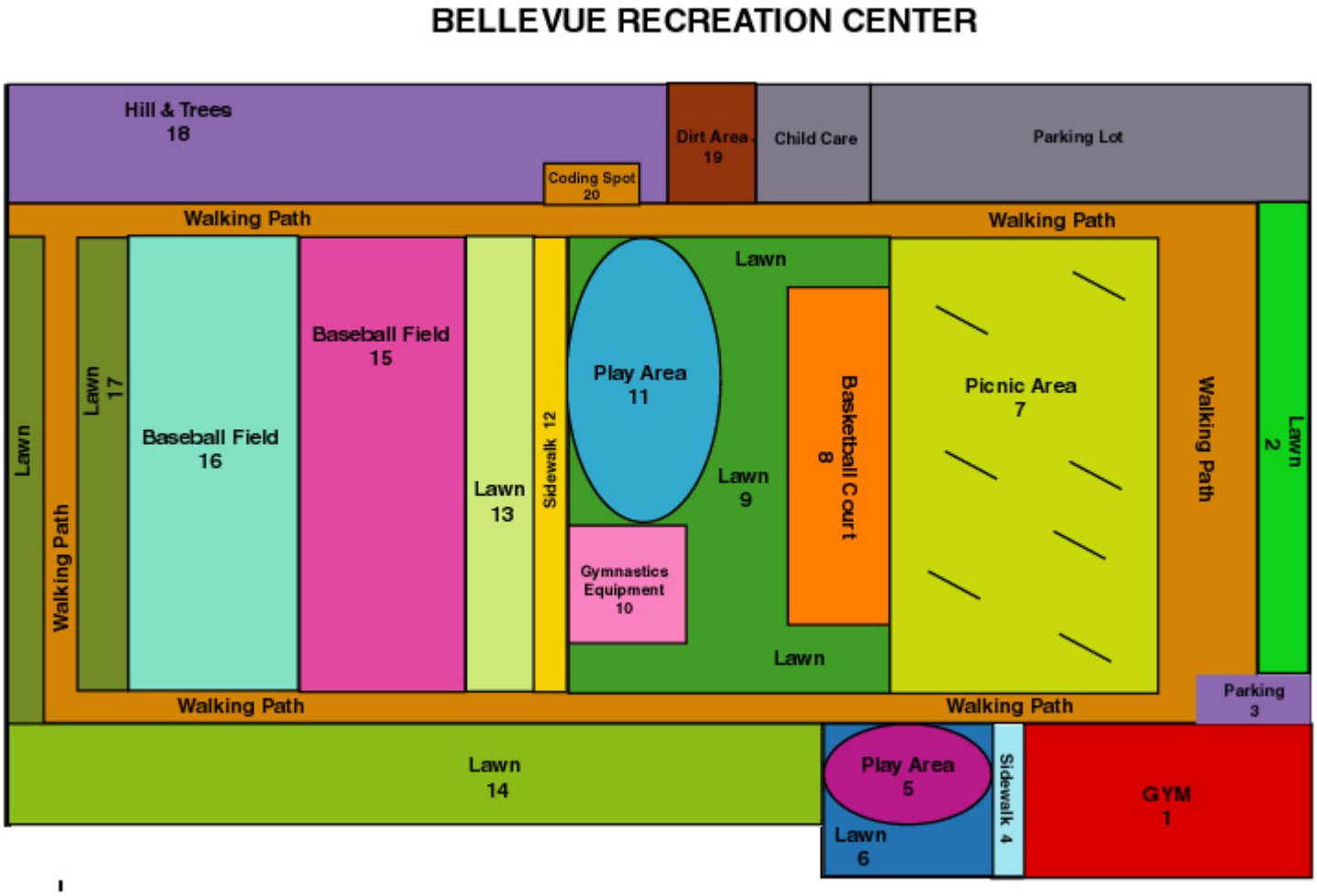
Twelve Neighborhood Parks

- **6 matched pairs based on demographics, SES, park form, and features**
- **All "active" parks with facilities for competitive sports**
- **Most intervention parks are building new gymnasiums**

Neighborhood Characteristics

- Most parks included in this study are located in predominantly Latino and African-American neighborhoods
- Most parks studied are in low-income neighborhoods and serve an average of 67,000 people in 1 mile radius and 210,000 people in 2 mile radius
- Parks size ranges from 3.4 to 16 acres, with an average of 8 acres

Park Map of Activity Areas



Observation Methods

- Park activity was observed four times per day
  - 7:30 - 8:30am
  - 12:30 - 1:30pm
  - 3:30 - 4:30pm
  - 6:30 - 7:30pm

- Park activity was observed for each day of the week and primary and secondary activities in each target area recorded, including being a spectator.

- Individuals were counted and recorded by:
  - Gender (female or male)
  - Age group (child, teen, adult, or senior)
  - Race/ethnicity (Latino, black, white, or other)
  - Activity level (sedentary, walking, or vigorous)

Survey Methods

- Park users were surveyed based on:
  - Target Area (busy and quiet areas)
  - Activity Level (sedentary, walking, or vigorous)
  - Gender (50% male, 50% female)

- Neighborhood residents were surveyed based on random selection of households in specified increments from the park:
  - 1/4 mile
  - 1/2 mile
  - One mile
  - Two miles

- Each participant was asked to complete a Parent Survey when they had a child under 18-years-of-age

Promotoras

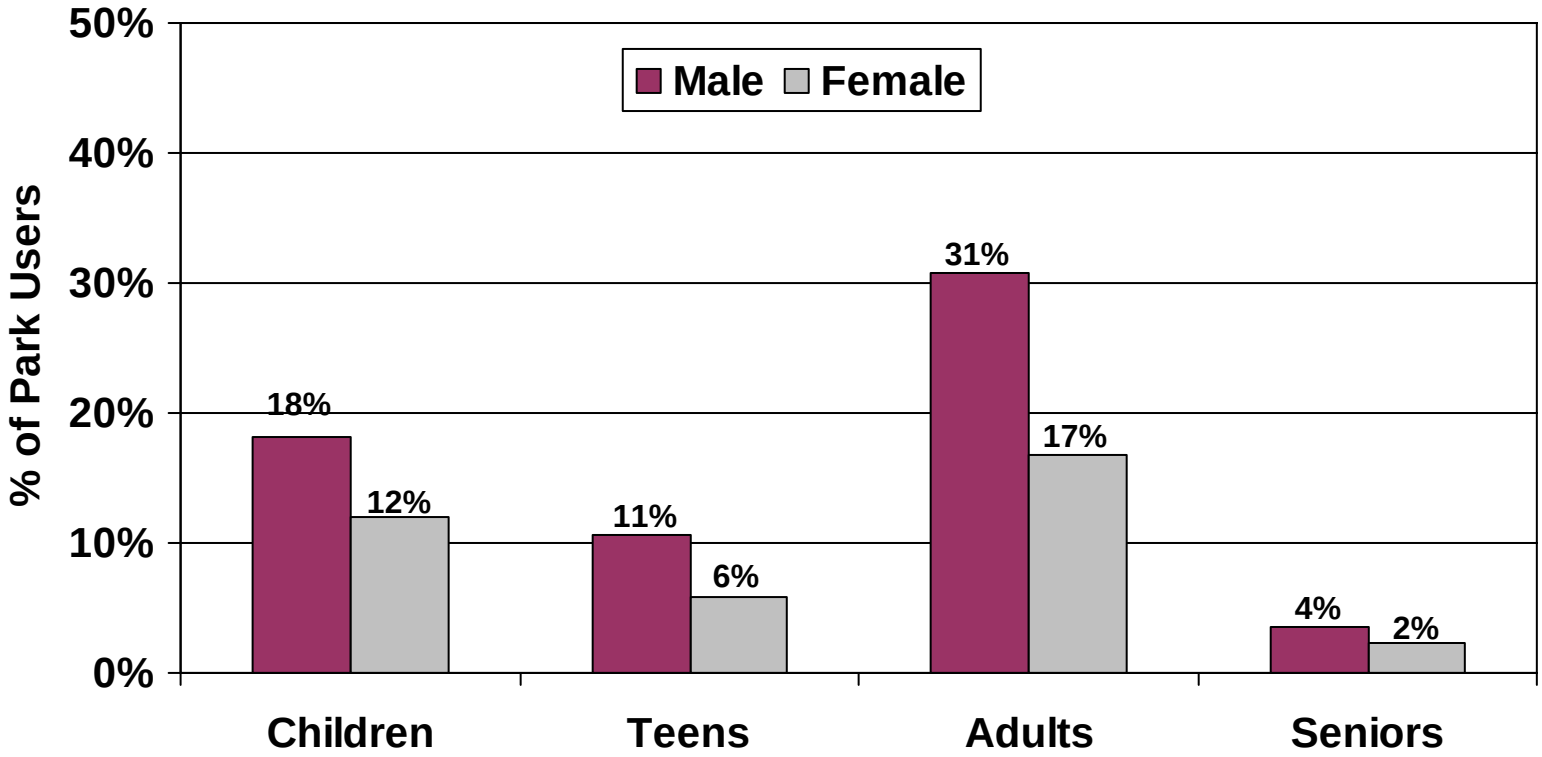
Counter

Gymnasium Targeted for Improvement

Playground Area to be Replaced with Gym

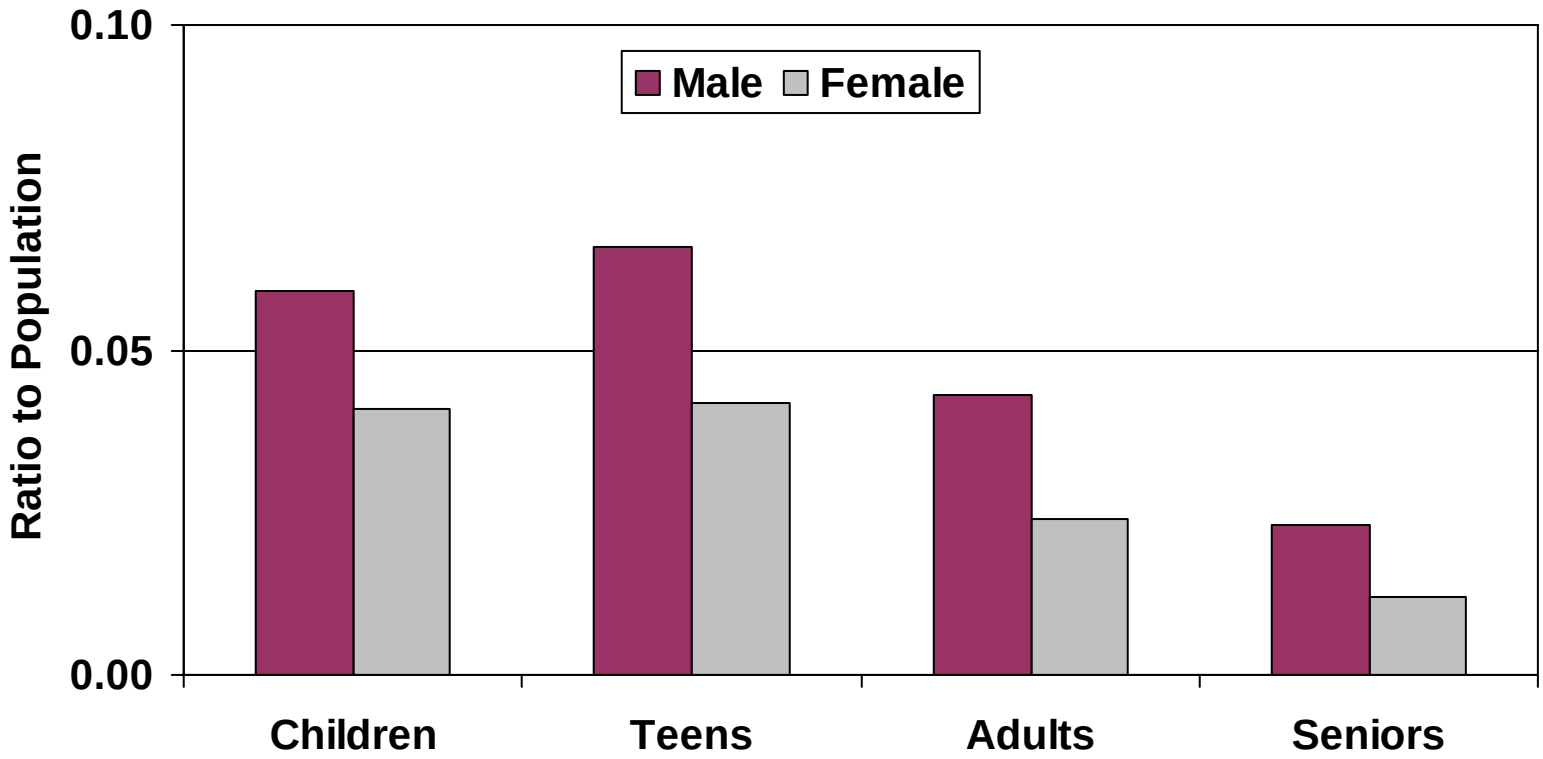
Tennis Courts to be Replaced with Gym

More Males than Females Use the Parks (63% vs. 37%)

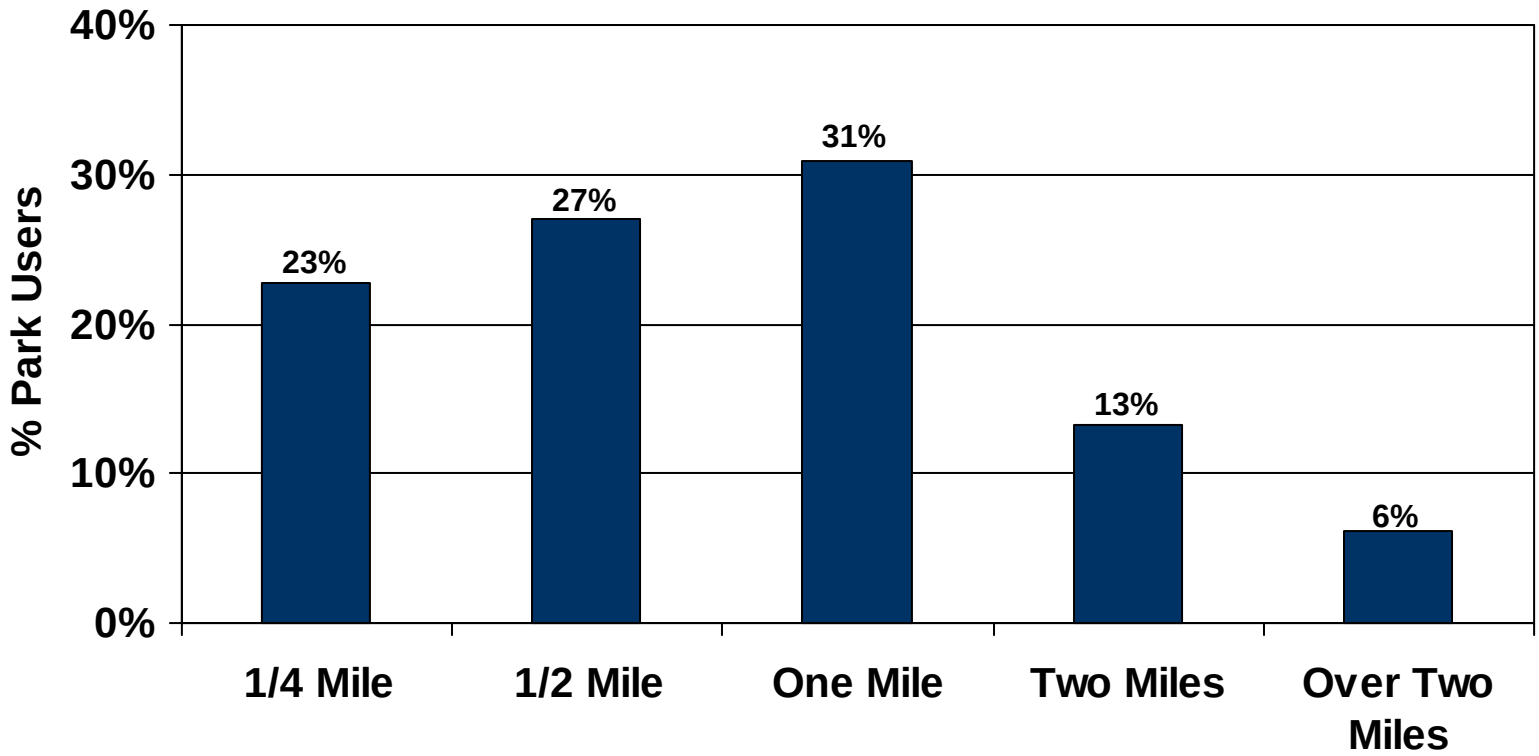


Average of 2000 persons observed per park over 7 days

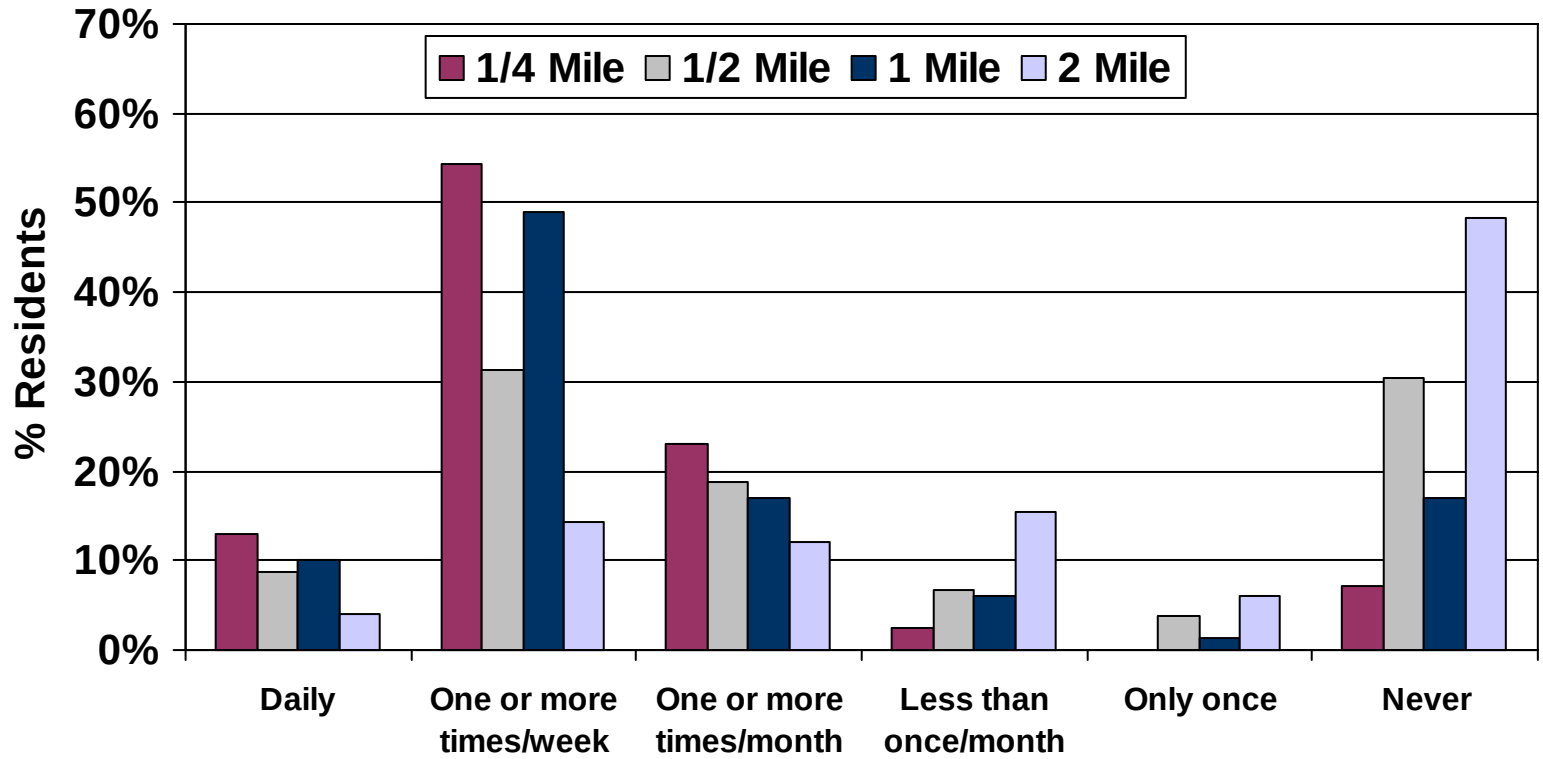
Children and Teens Use Parks More than Adults



Most Park Users Live Within 1 Mile of the Park

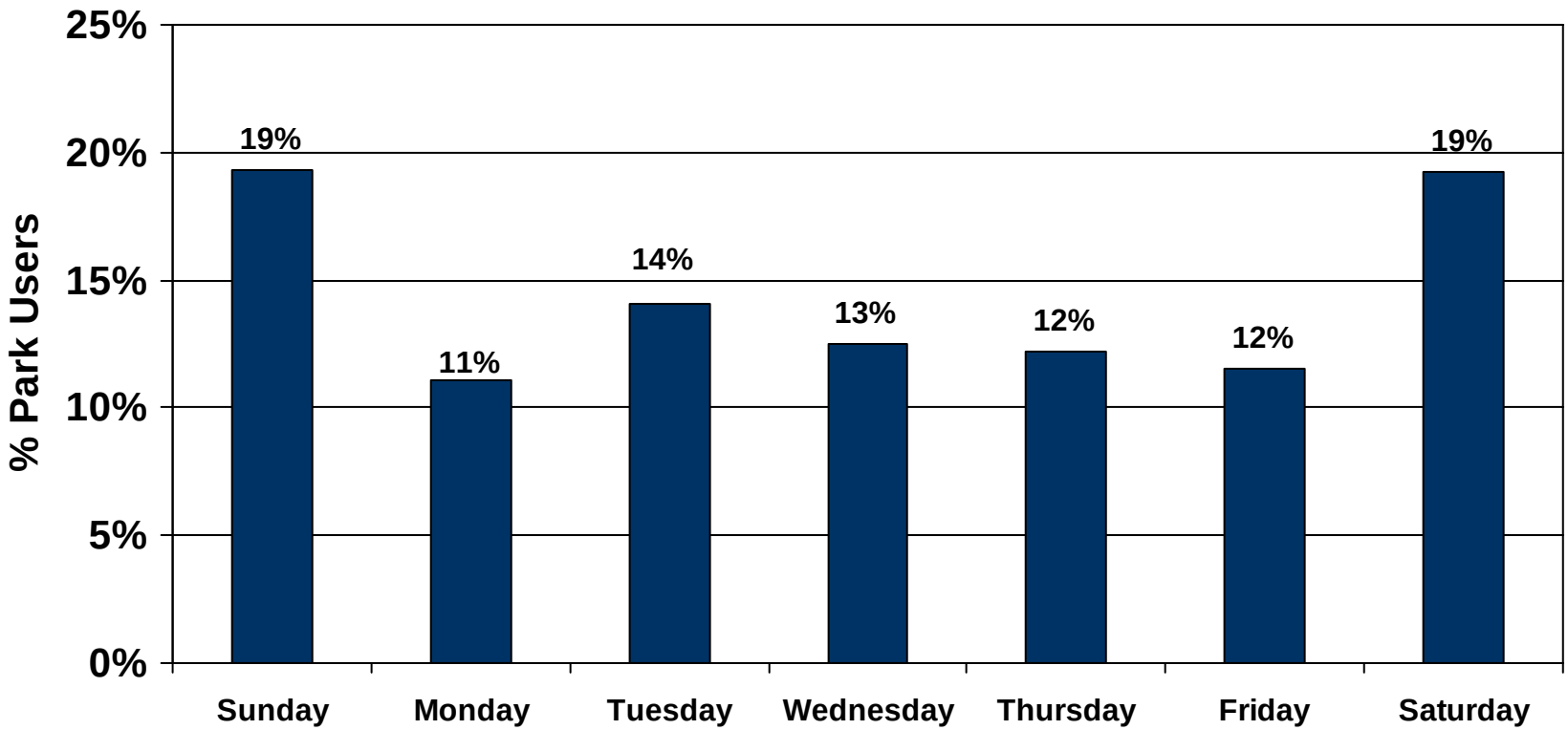


Residential Proximity Associated with Frequency of Park Use

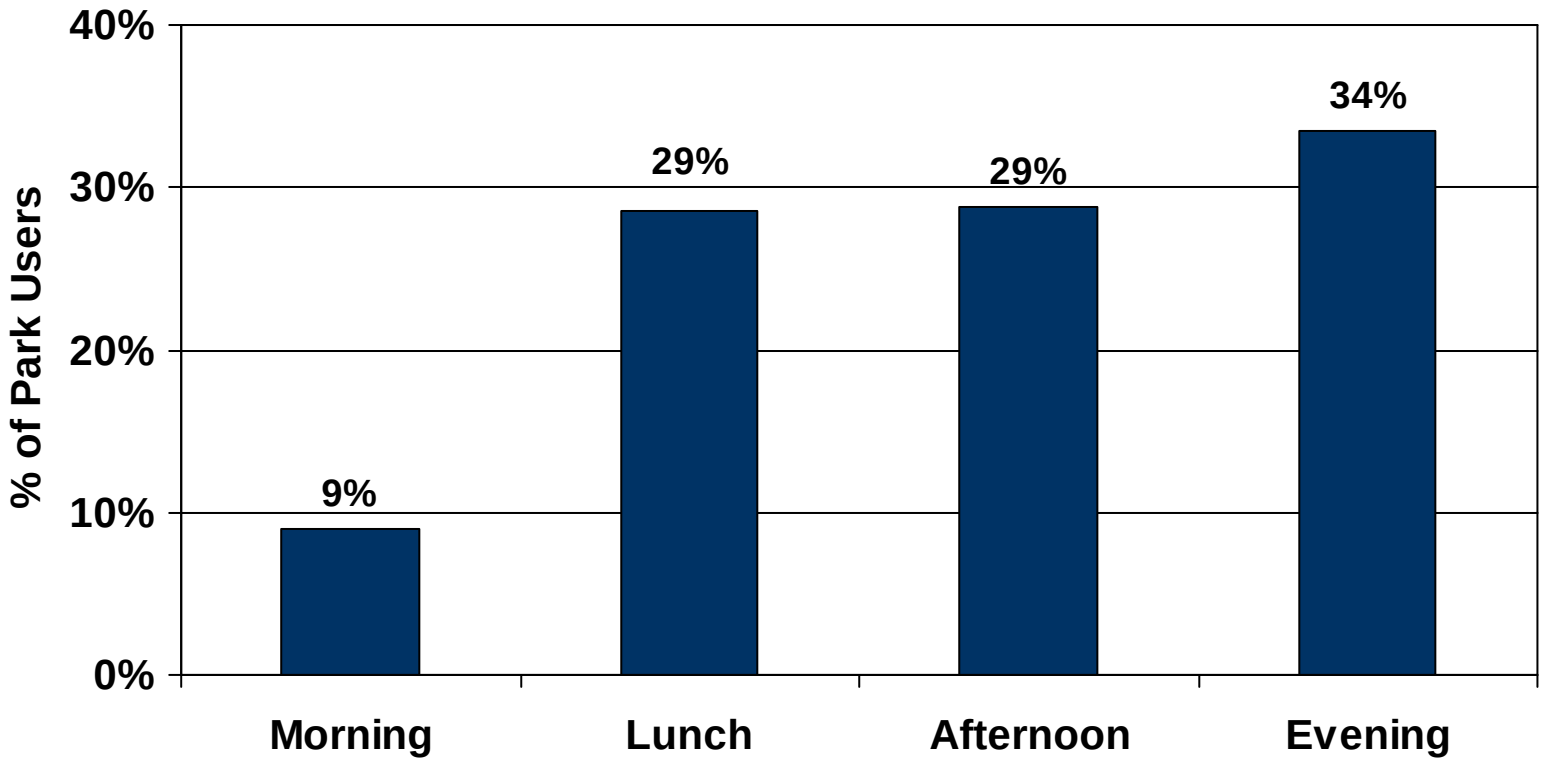


- People living within one mile of the park were four times as likely to visit the park once a week or more
- Those living within one mile had an average of 38% more exercise sessions per week than those living farther away

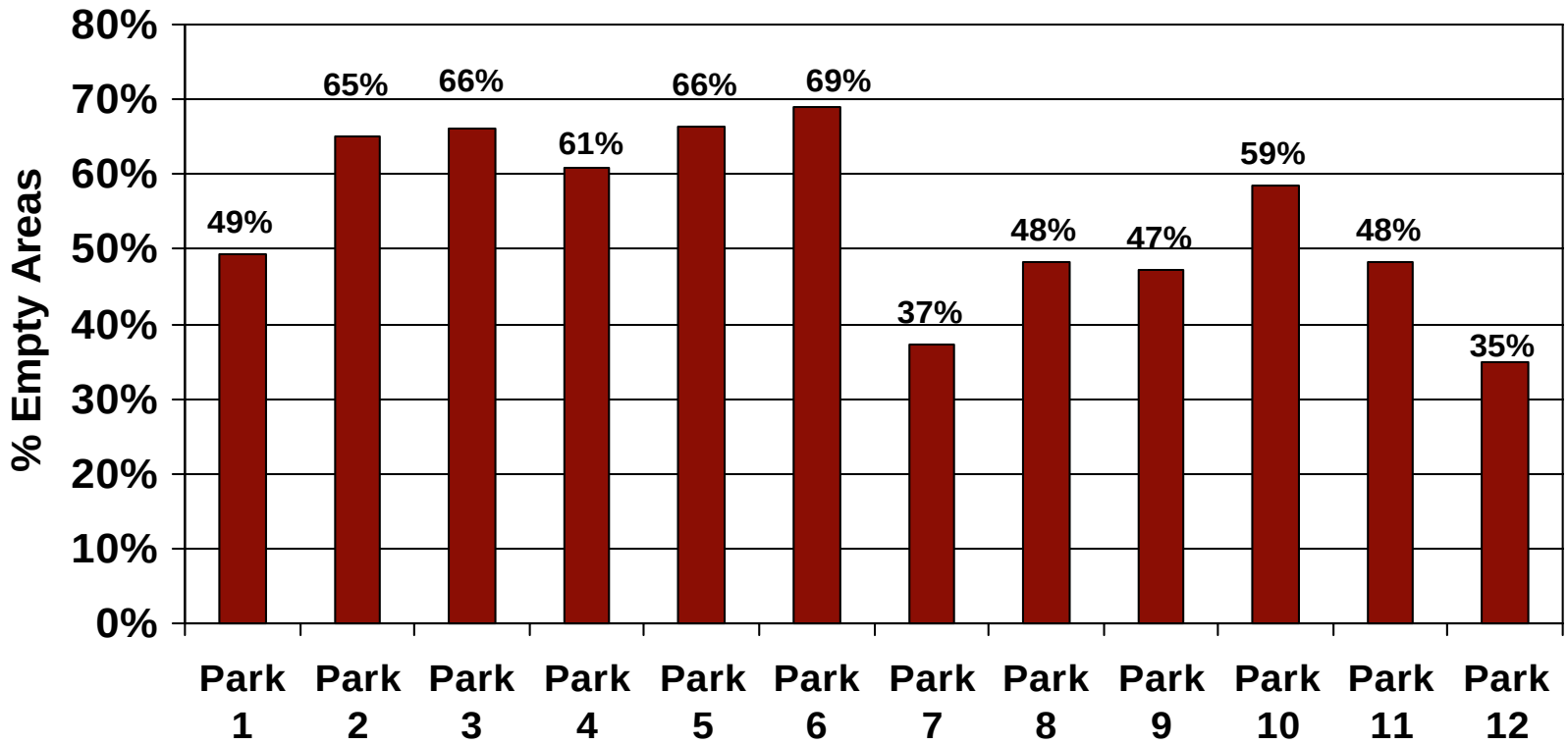
Percent of Park Users per Day of the Week



Percent of Park Users by Time Period

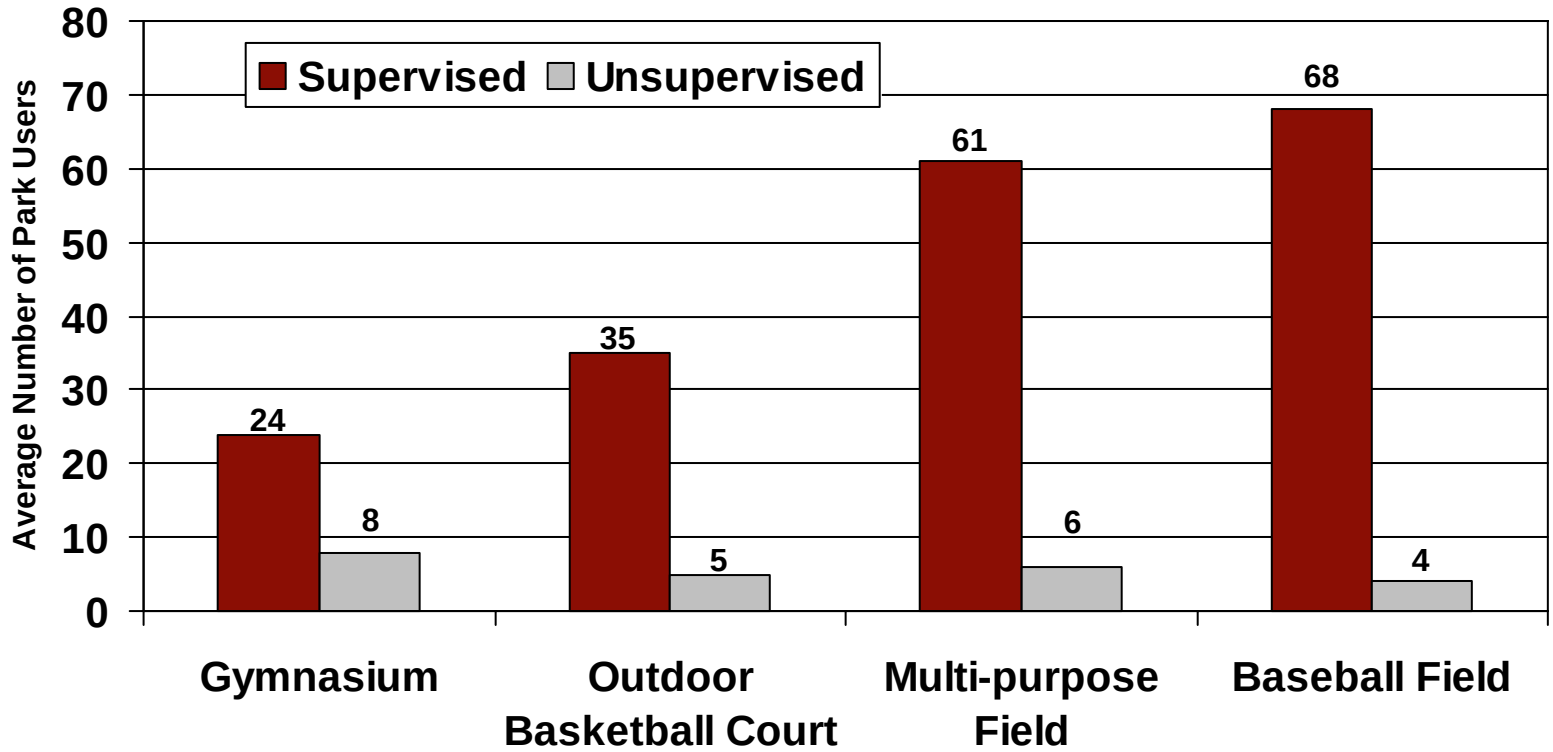


Many Target Areas in the Parks were Empty

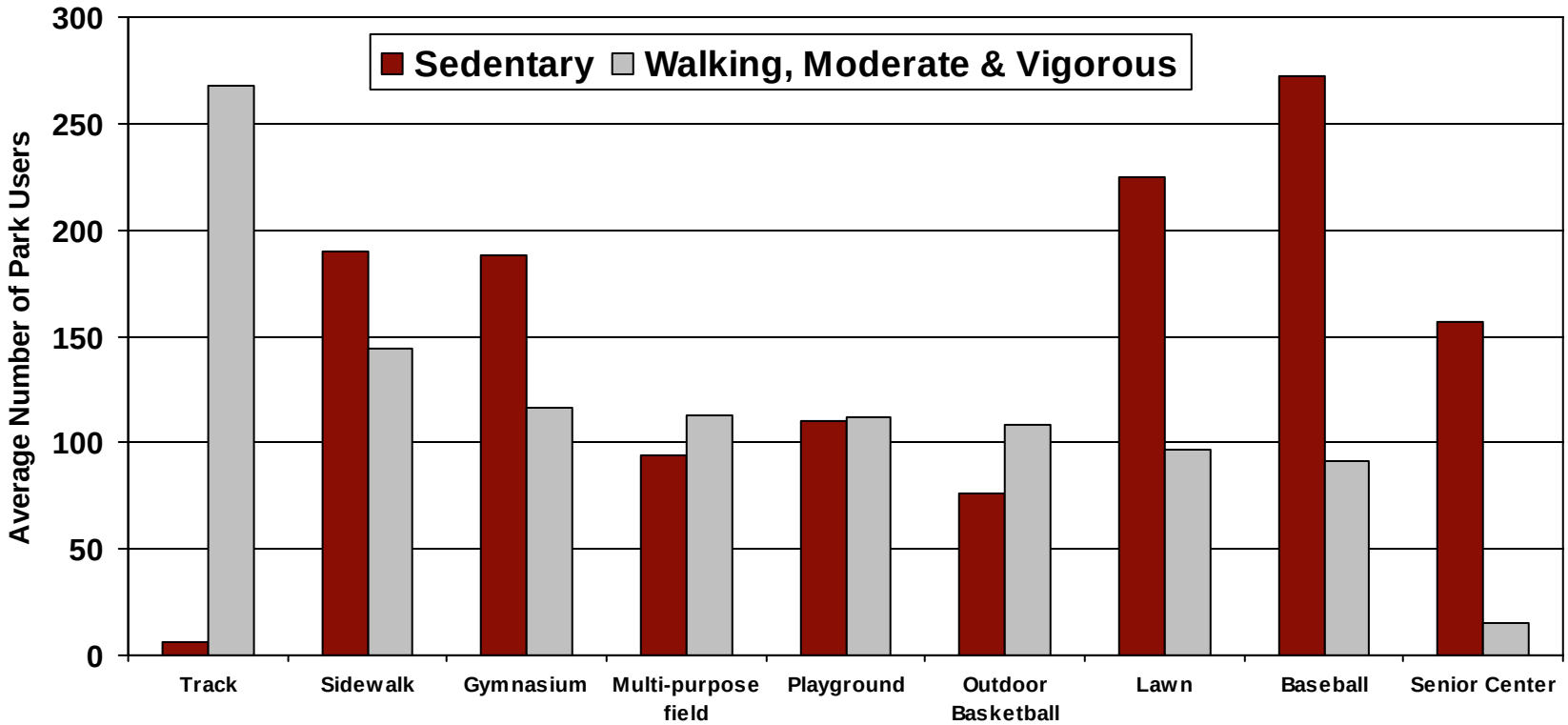


An average of 54% of park areas were empty during 28 observations/week.

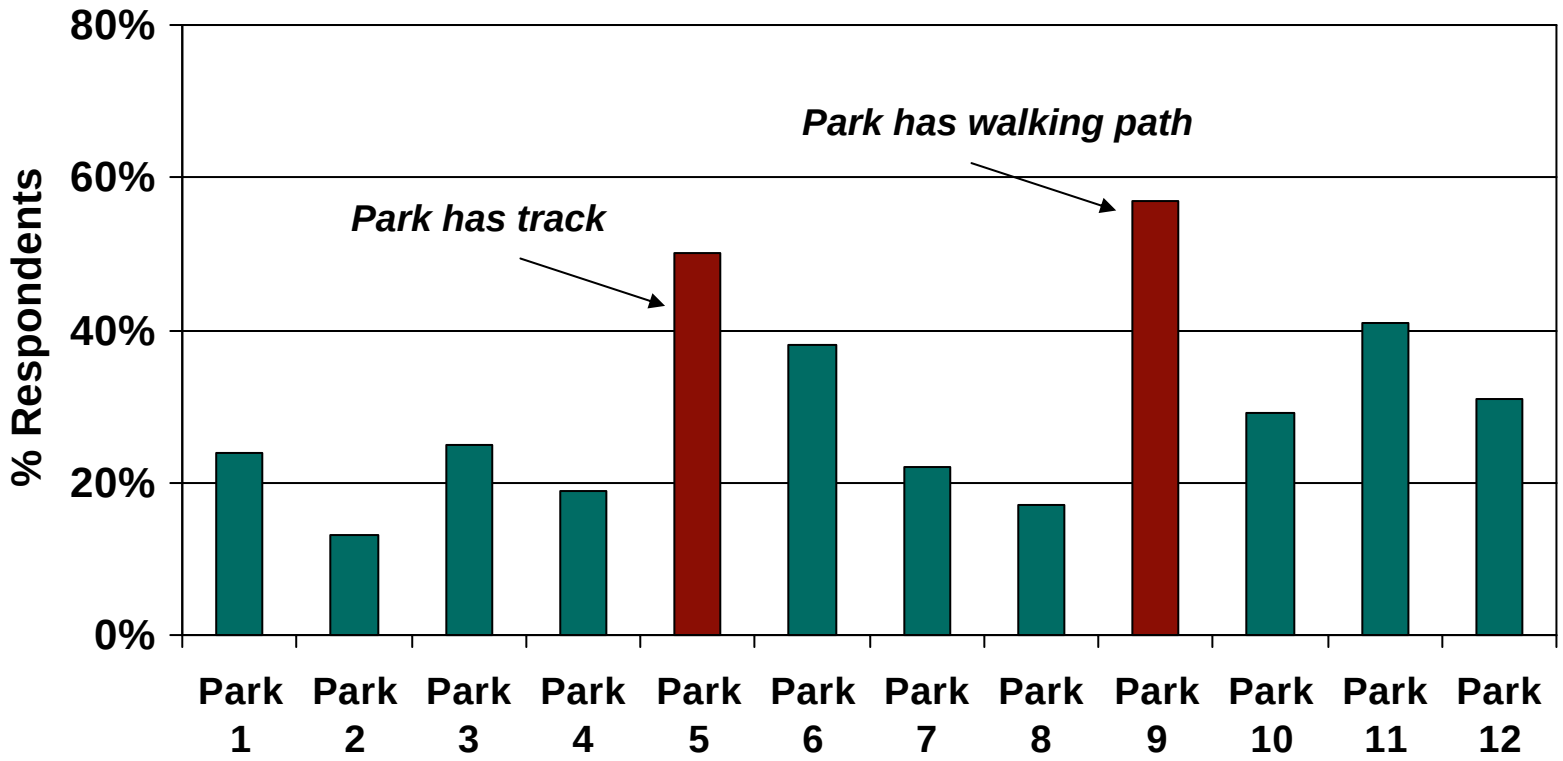
Supervised Activities Draw More Park Users



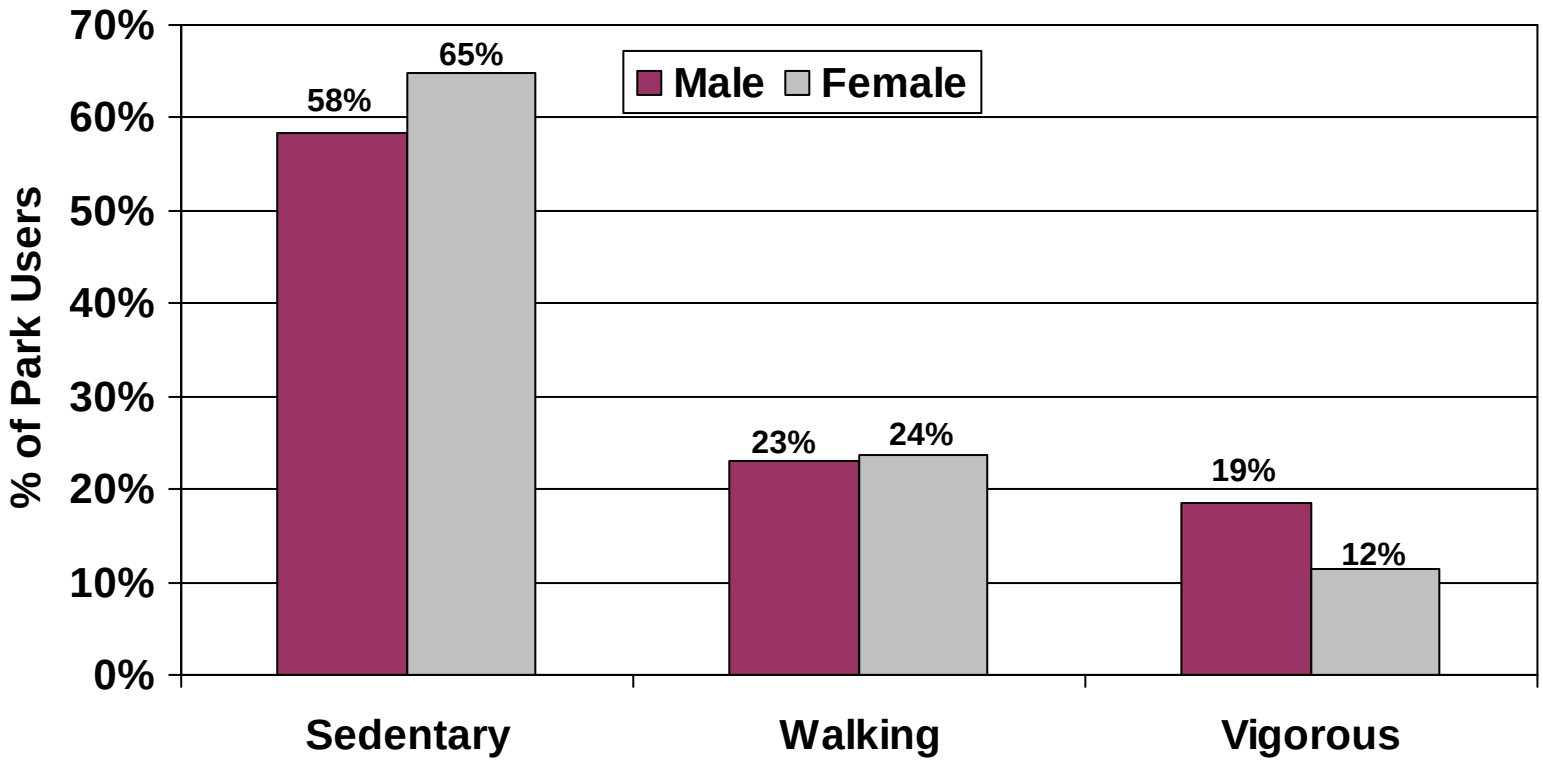
Average Number of Park Users by Target Area and Activity Level



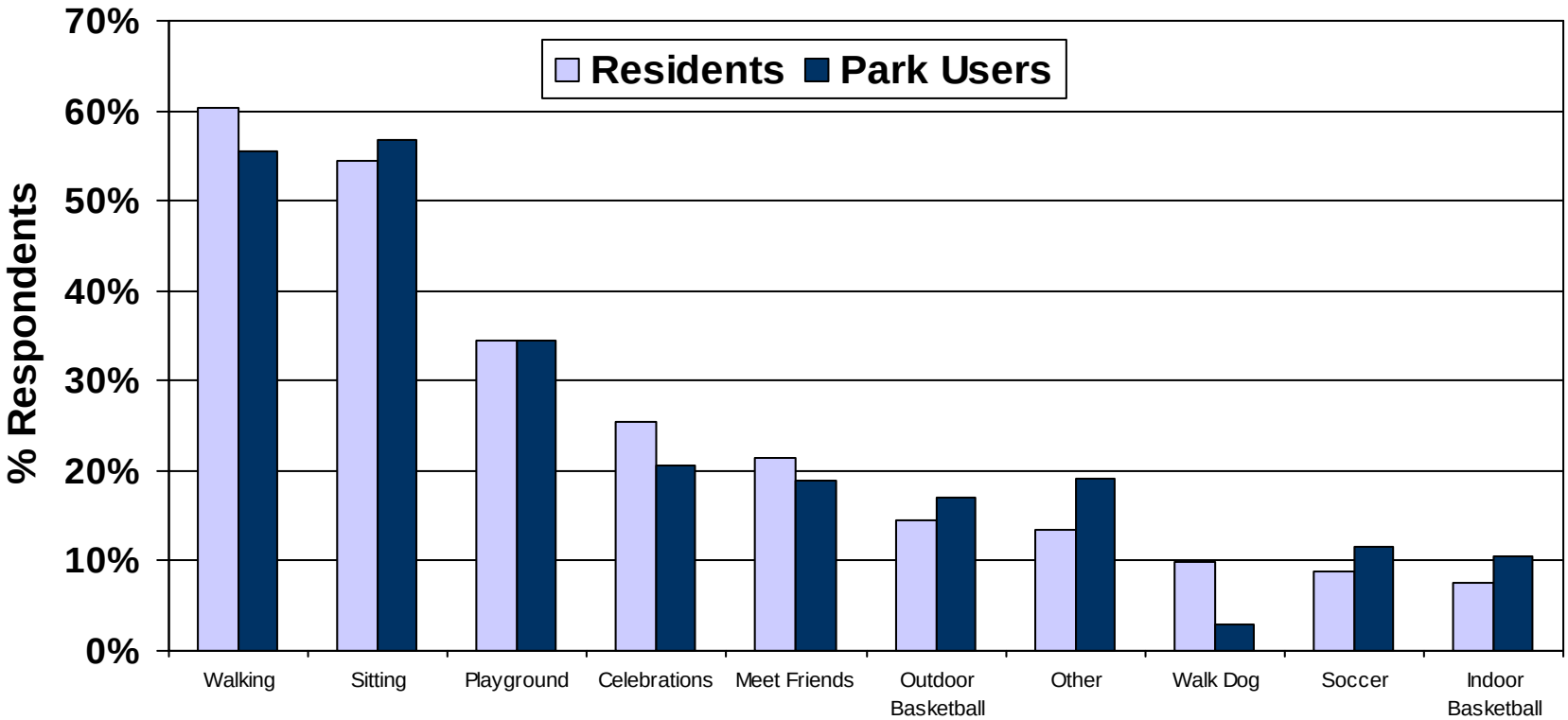
Percentage Walking Among Those Not Engaged in Specific Activities



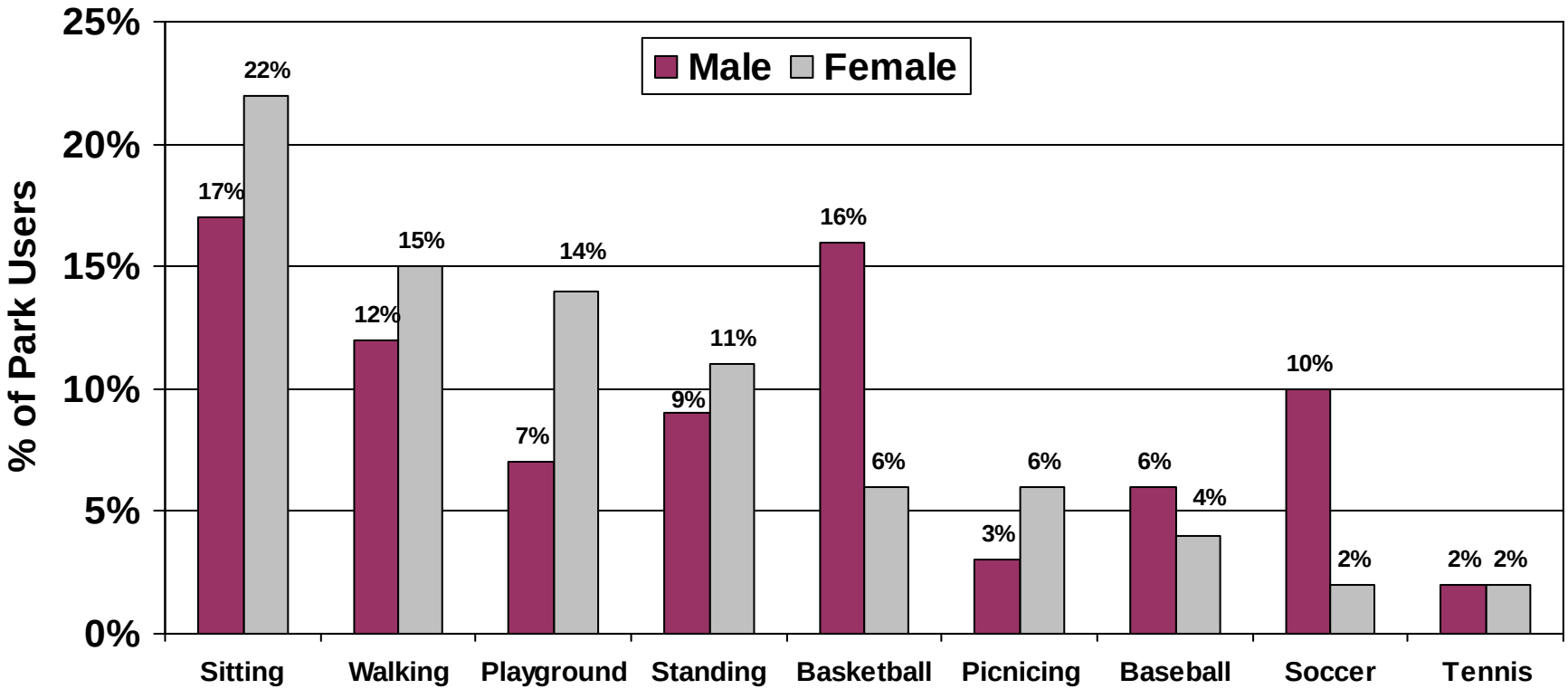
Males Are More Vigorously Active than Females



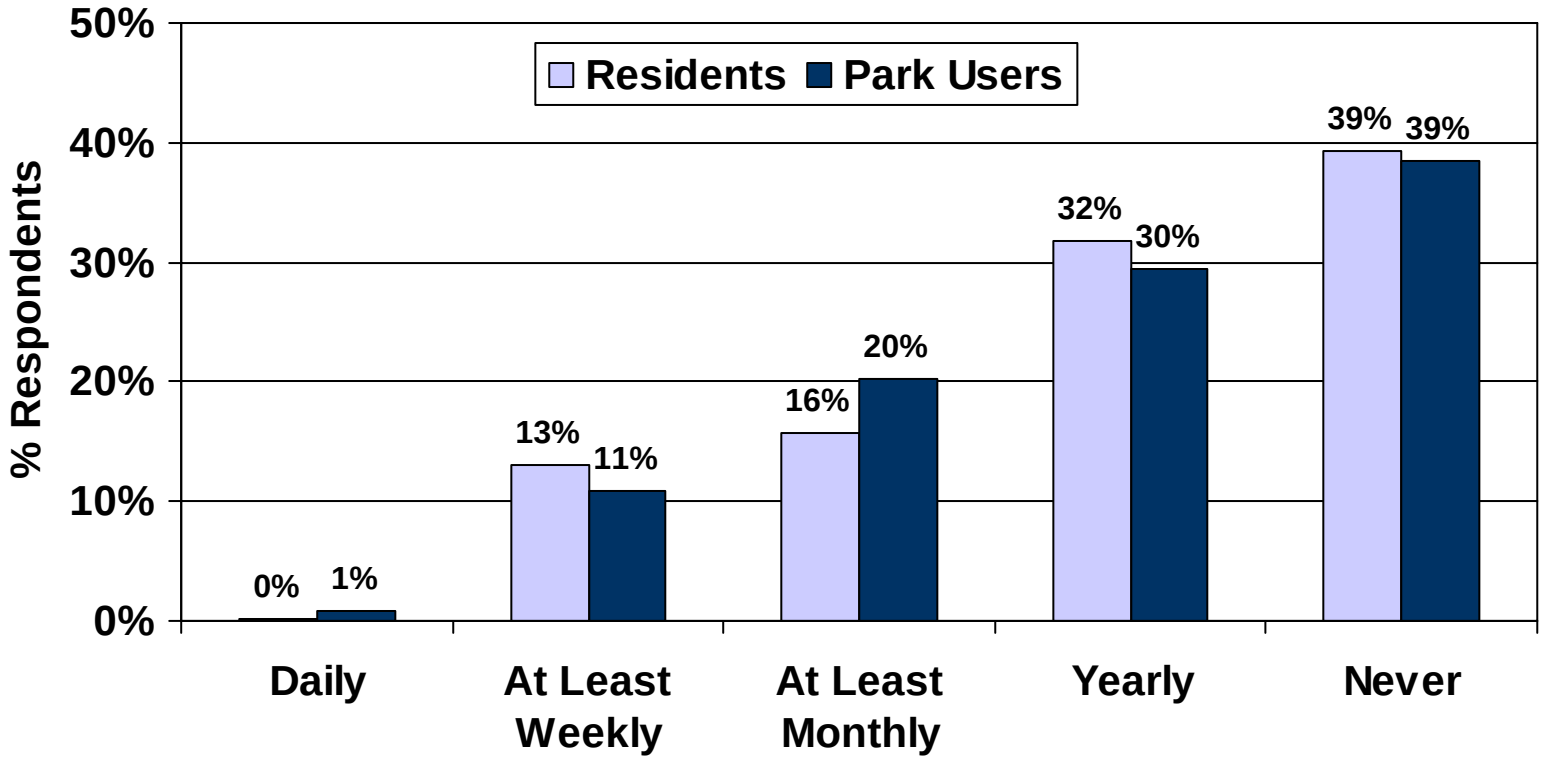
Walking and Sitting Are the Most Common Self Reported Activities



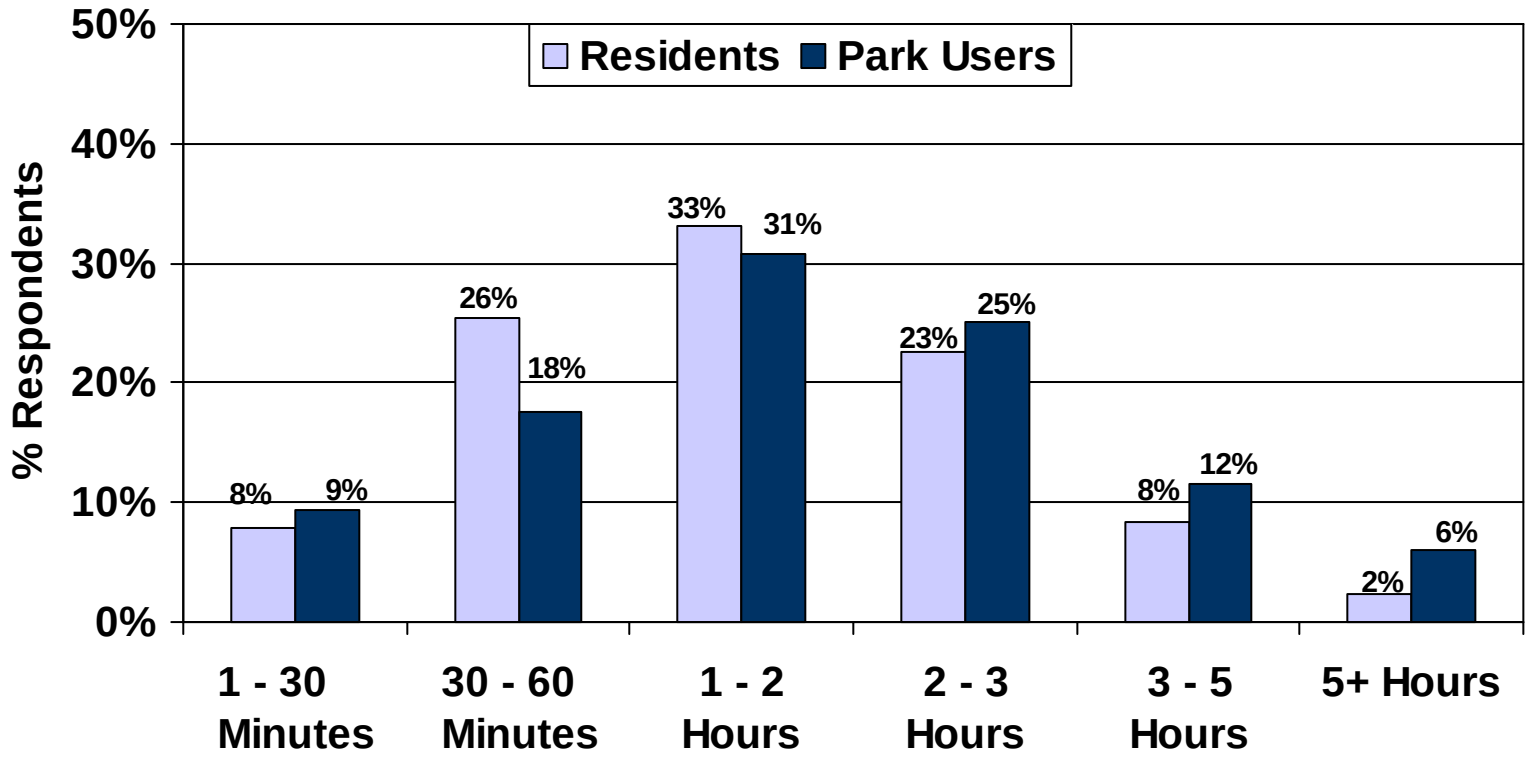
Observed Activities Reflect Self-Report



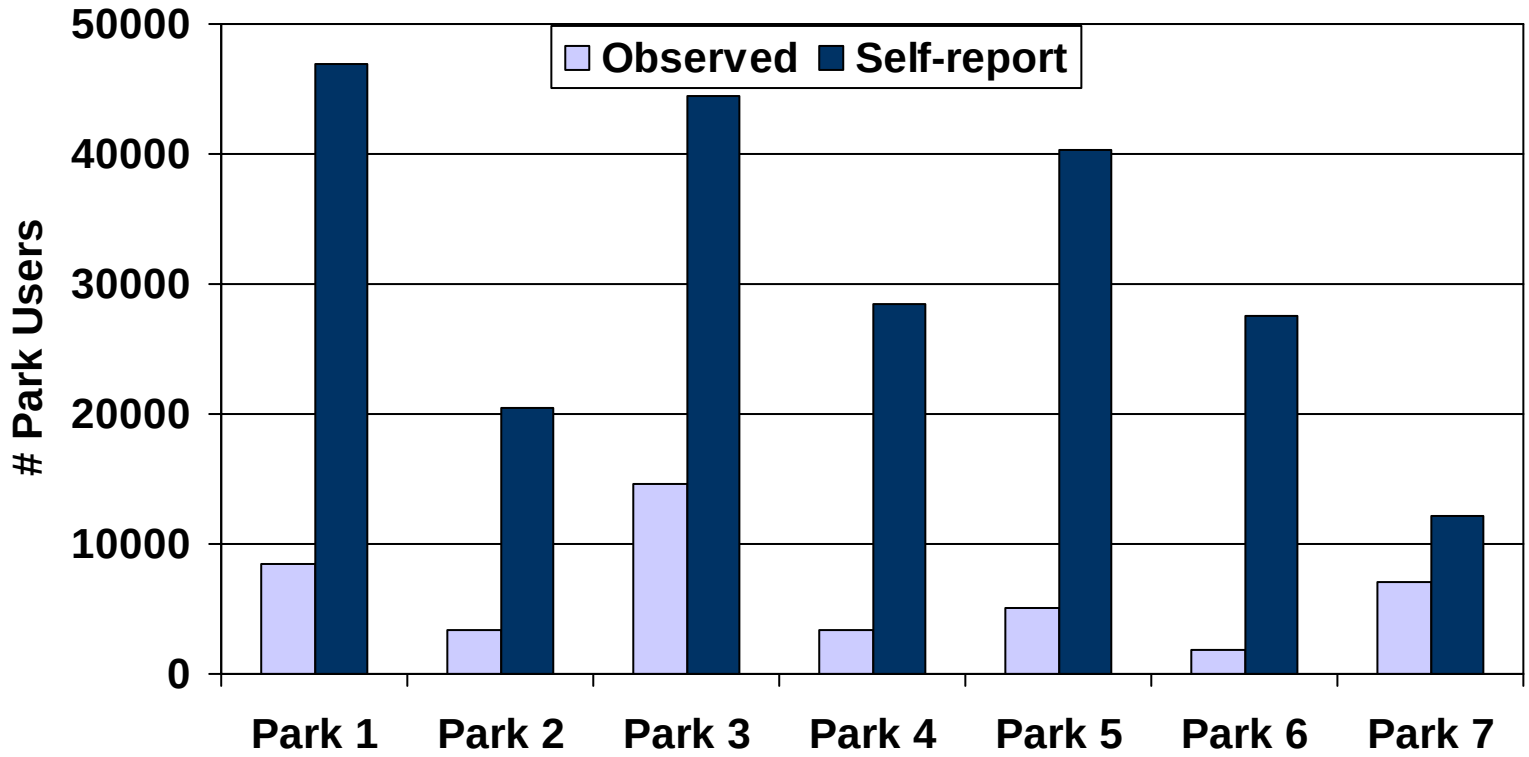
Respondents Rarely Visit Other Neighborhood Parks



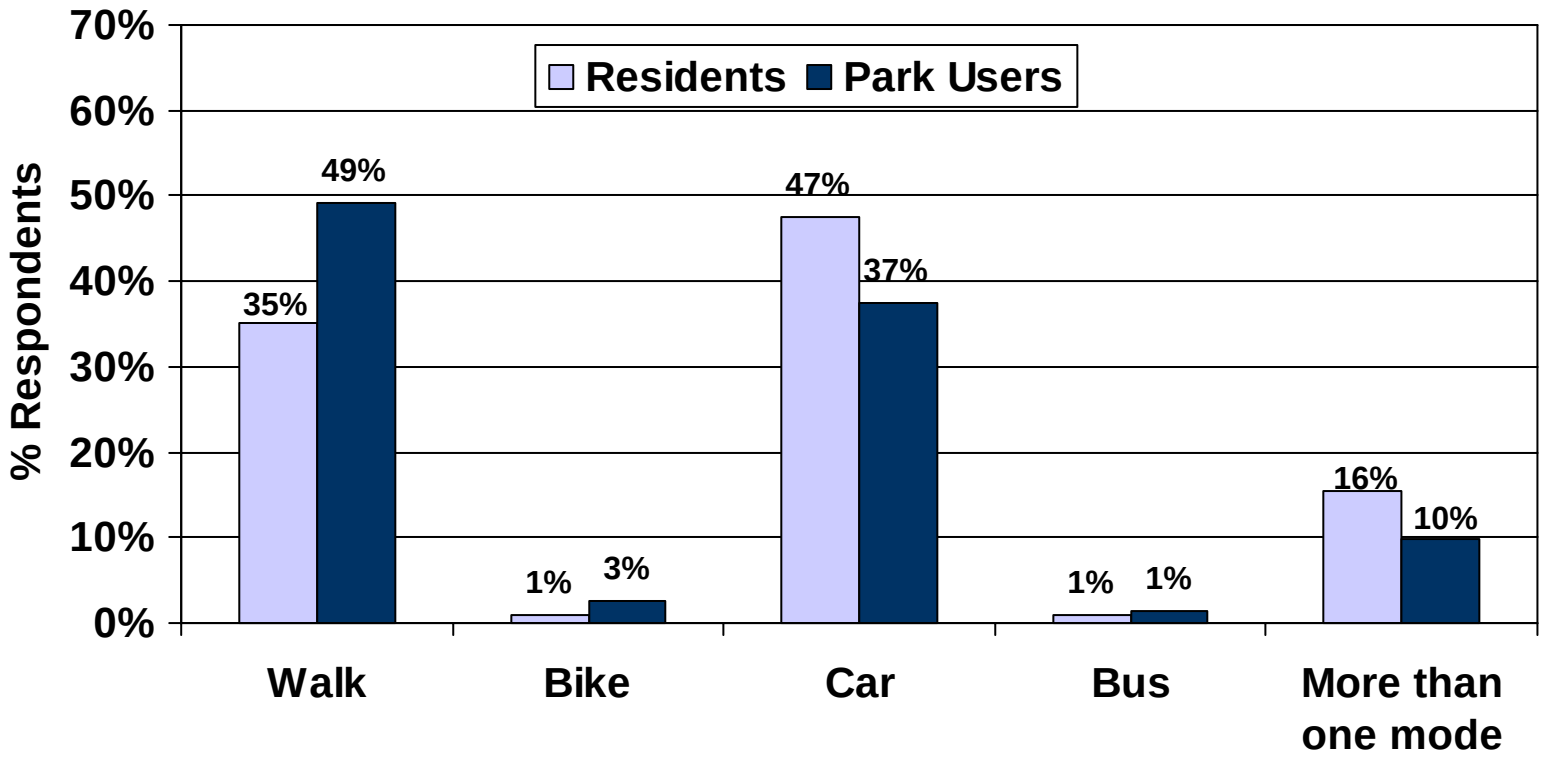
Respondents Report Long Visits to the Parks



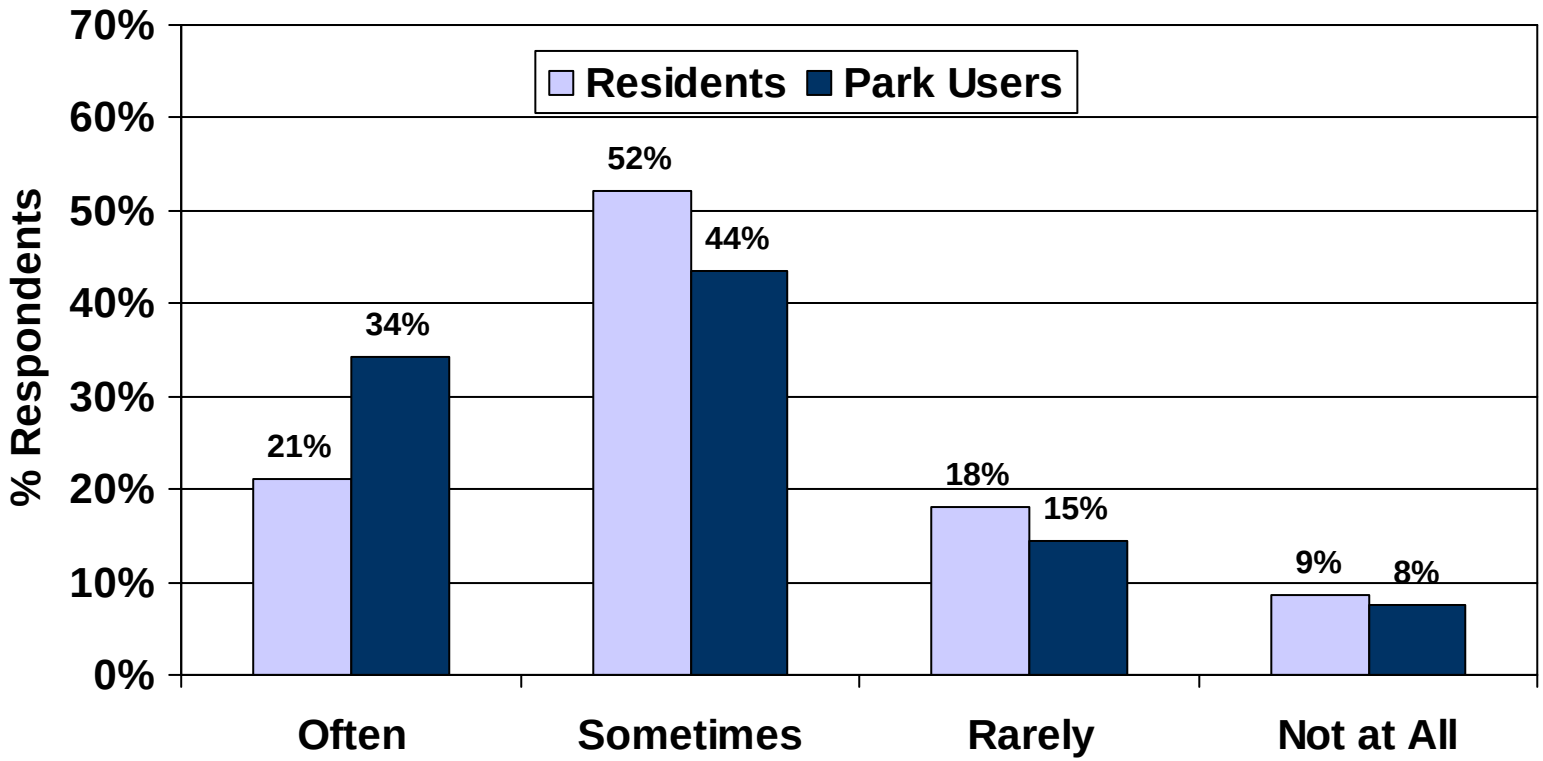
People Must be Overestimating Park Use



Most Park Users Walk to the Park

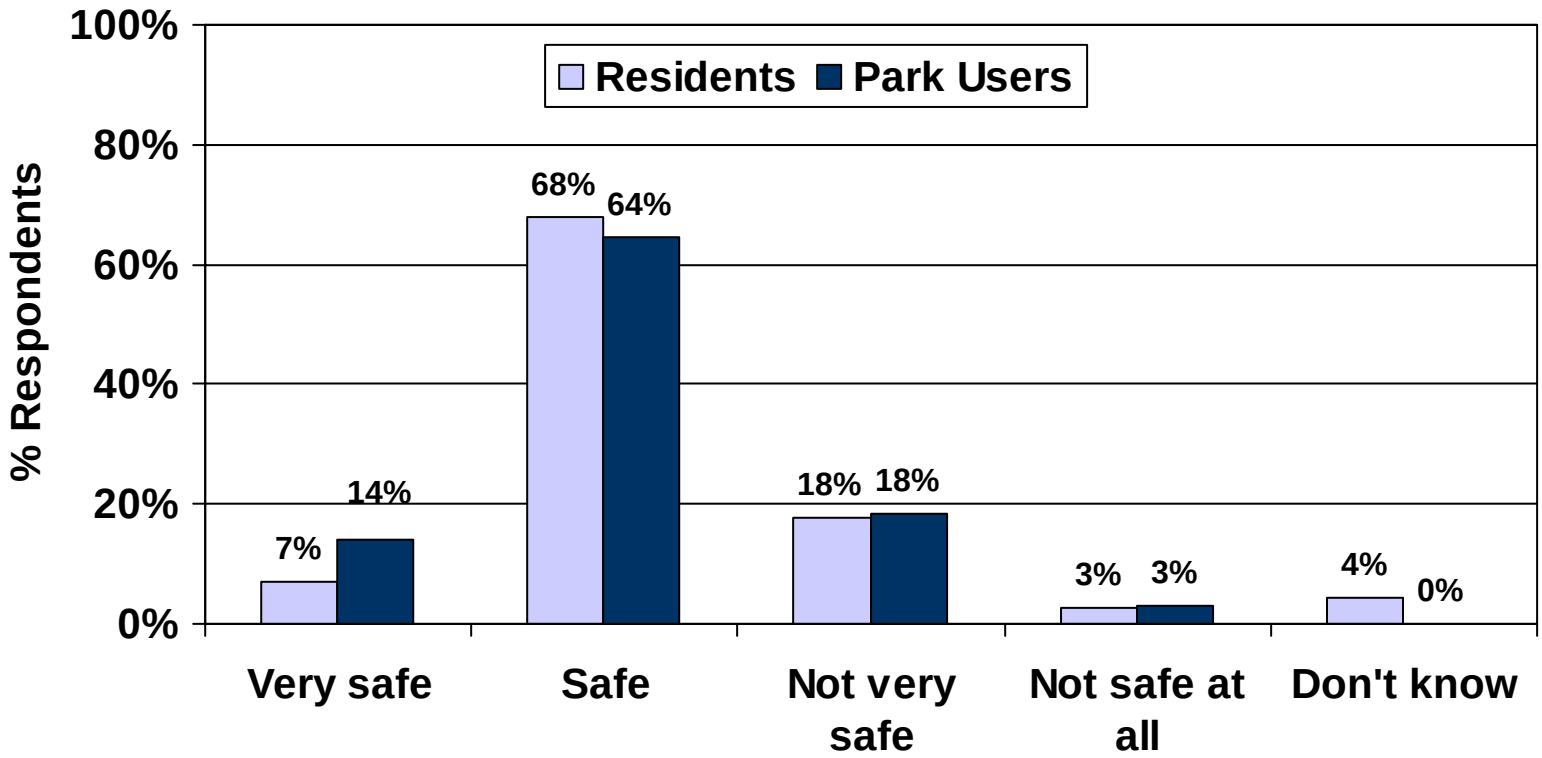


Parks Are Social Venues



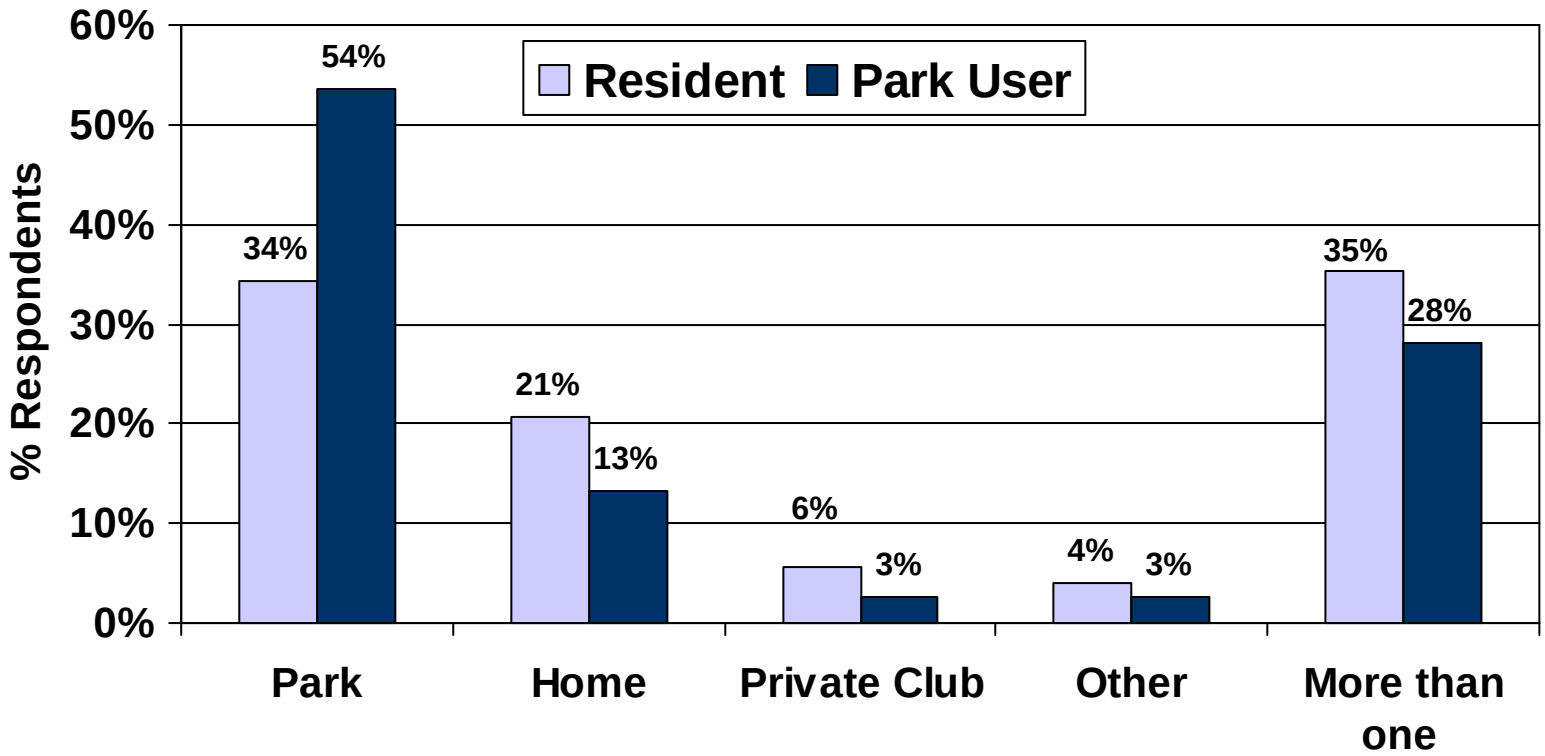
How often do you meet people you know?

Most Thought Parks Are Safe

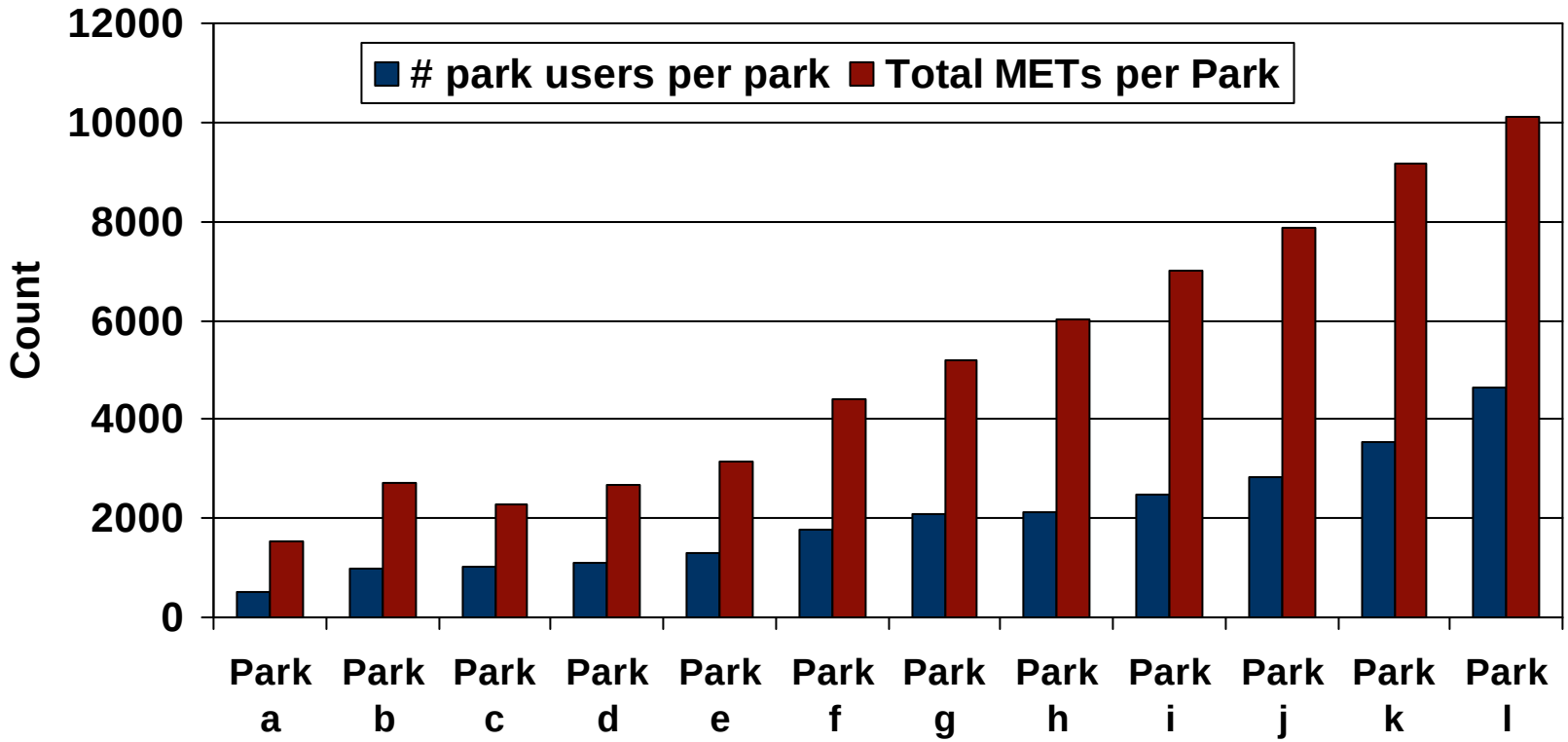


Perceptions of safety did not predict park use.

People Exercise in Parks



More Users Correlates with Greater Energy Expenditure per Park



Summary

- Residential proximity to parks is a critical determinant of park use and leisure exercise
- Males use parks more than females
- Children and teens use parks more than adults and seniors
- Most people in the parks are sedentary

Summary

- People report using parks frequently, yet we observed many areas in the park to be largely unused during substantial portions of the week
- Supervised activities draw more people to the park
- Walking paths associated with more walking
- More park users correlated with more energy expended

Conclusion

- Parks already play a significant role in people's lives
- Parks have the potential and capacity to do more to facilitate physical activity
- Future research will document the impact of Prop K improvements