



**The Association of Physical Activity with Park Safety and Park Use: Variations by Neighborhood Racial Composition**

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**Presenter Disclosures**

**Susan Babey**

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**Disparities in physical activity and access to resources**

- African American and Latino adolescents have higher rates of obesity and are less physically active than their white counterparts.
- Availability of places to engage in physical activity may influence levels of physical activity
- Low-income neighborhoods and communities of color have fewer resources to support physical activity



**Disparities in physical activity and access to resources**

- Research suggests that disparities in access to physical activity resources can contribute to socioeconomic disparities in physical activity among adolescents
- Because there are neighborhood disparities in access to physical activity resources, the relationship between availability of these resources and physical activity may vary as a function of neighborhood socioeconomic characteristics



**Research Questions**

- Does the relationship between availability of parks and physical activity vary by neighborhood racial composition?
- What other factors associated with physical activity vary as a function of neighborhood racial composition?
- What factors, if any, are consistently associated with physical activity across neighborhoods?



## Data Source – CHIS 2007

- **2007 California Health Interview Survey (CHIS)**
- Telephone survey of adults, adolescents and children from across the state conducted every two years
  - CHIS 2007 interviewed over 50,000 households in California. In households with adolescents, CHIS interviewed one randomly selected adolescent
- Interviews are conducted in five languages: English, Spanish, Chinese, Korean and Vietnamese



## Data Source – continued

- The data provide a representative sample of the state's non-institutionalized population,
  - health information on the overall population
  - a number of racial and ethnic groups
  - local-level health information for most counties



## Variable Definitions

- **Physical Activity: Number of days physically active for 60 minutes or more**
  - “In the past 7 days, on how many days were you physically active for at least 60 minutes total per day?”
- **Park availability**
  - “Is there a park within walking distance of your home?”
- **Park Use**
  - Adolescents reported whether they had visited a park in the past 30 days



## Variable Definitions

- **Perceptions of Park Safety**
  - Respondents reported whether they strongly agreed, agreed, disagreed or strongly disagreed that “the nearby park is safe during the day.”
- **Neighborhood Racial Composition**
  - Percent non-Latino white residents in Census Tract
    - <25%: Predominantly non-white neighborhood
    - 25-74%: Mixed-race neighborhood
    - 75%+: Predominantly white neighborhood



## Other Covariates

- **Individual characteristics**
  - Age, gender, race/ethnicity, nativity
- **Family factors**
  - Household income, parental education, parental nativity
- **Environmental factors**
  - Neighborhood urbanicity (urban, suburban, and rural), neighborhood income



## Analyses

- **Sample**
  - 3,638 adolescents ages 12-17
- **Descriptive analysis**
  - Key variables by neighborhood racial composition
- **Regression analyses**
  - Linear models examined the association of perceptions of park availability, perceptions of park safety, and park use with physical activity for adolescents living in predominantly white, mixed race, or predominantly non-white neighborhoods
  - Included individual sociodemographic, family, and environmental characteristics as covariates



## Study Population

- 49% female
- 34% non-Latino white, 46% Latino, 10% Asian, 7% African American, 0.4% American Indian/Alaskan Native, 0.6% Native Hawaiian/Pacific Islander, 3% mixed race
- 39% had household incomes below 200% of the Federal Poverty Level
- 66% in urban areas, 22% in suburban areas, 12% in rural areas
- 26% in predominantly non-white neighborhoods, 23% in predominantly white neighborhoods, 51% in mixed race neighborhoods



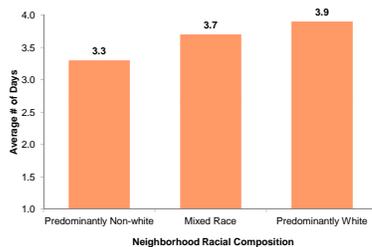
## Descriptive Results

- California teens were physically active for at least 60 minutes on an average of just 3.6 days in the last week
- Physical activity levels, park use, and perceptions of park safety vary by neighborhood racial composition



## Teen Physical Activity Varies by Neighborhood Racial Composition

Number of Days Physically Active for 60 min by Neighborhood Racial Composition, California Adolescents

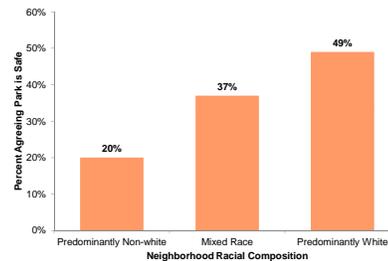


Source: 2007 California Health Interview Survey, US Census



## Teen Perceptions of Park Safety Vary by Neighborhood Racial Composition

Percent Who Strongly Agree Park is Safe by Neighborhood Racial Composition, California Adolescents

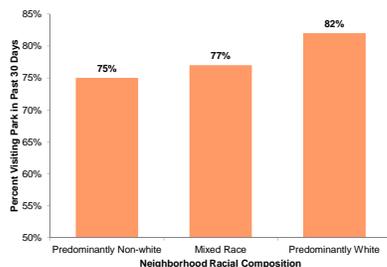


Source: 2007 California Health Interview Survey, US Census



## Teen Use of Parks Varies by Neighborhood Racial Composition

Percent who Visited Park in Past 30 Days by Neighborhood Racial Composition, California Adolescents



Source: 2007 California Health Interview Survey, US Census



## Correlates of Teen Physical Activity in Non-White Neighborhoods

Factor	Coefficient	p-value
<b>Gender (male)</b>		
Female	-1.13	<0.01
<b>Race/ethnicity (white)</b>		
Latino	-0.34	ns
Asian	-0.71	ns
African American	0.33	ns
American Indian	-1.83	<0.05
Multi-racial	-0.52	ns
<b>Family Income (200%FPL and above)</b>		
0-99% FPL	0.61	<0.05
100-199% FPL	0.34	ns
<b>Nativity (US born)</b>		
Foreign born	0.35	ns
<b>Park walking distance from home (No)</b>		
Yes	0.07	ns
<b>Nearby Park Safe (Strongly disagree)</b>		
Strongly agree	0.62	ns
Agree	0.47	ns
<b>Have been to park in last 30 days (No)</b>		
Yes	0.99	<0.01

Model also adjusted for age, parental education, parental nativity, urbanicity, and neighborhood income

Source: 2007 California Health Interview Survey



## Correlates of Teen Physical Activity in Mixed Race Neighborhoods

Factor	Coefficient	p-value
<b>Gender (male)</b>		
Female	-0.65	<0.01
<b>Race/ethnicity (white)</b>		
Latino	-0.76	<0.01
Asian	-0.64	<0.05
African American	-0.21	ns
American Indian	0.53	ns
Multi-racial	0.02	ns
<b>Family Income (200%FPL and above)</b>		
0-99% FPL	0.04	ns
100-199% FPL	0.02	ns
<b>Nativity (US born)</b>		
Foreign born	-0.24	ns
<b>Park walking distance from home (No)</b>		
Yes	0.14	ns
<b>Nearby Park Safe (Strongly disagree)</b>		
Strongly agree	0.95	<0.05
Agree	0.74	ns
<b>Have been to park in last 30 days (No)</b>		
Yes	0.83	<0.01

Model also adjusted for age, parental education, parental nativity, urbanicity, and neighborhood income  
Source: 2007 California Health Interview Survey



## Correlates of Teen Physical Activity in Predominantly White Neighborhoods

Factor	Coefficient	p-value
<b>Gender (male)</b>		
Female	-0.68	<0.01
<b>Race/ethnicity (white)</b>		
Latino	-0.97	<0.01
Asian	-0.20	ns
African American	0.90	ns
American Indian	-0.28	ns
Multi-racial	0.23	ns
<b>Family Income (200%FPL and above)</b>		
0-99% FPL	-0.44	ns
100-199% FPL	0.37	ns
<b>Nativity (US born)</b>		
Foreign born	-0.84	<0.05
<b>Park walking distance from home (No)</b>		
Yes	-0.05	ns
<b>Nearby Park Safe (Strongly disagree)</b>		
Strongly agree	-0.14	ns
Agree	-0.33	ns
<b>Have been to park in last 30 days (No)</b>		
Yes	1.21	<0.01

Model also adjusted for age, parental education, parental nativity, urbanicity, and neighborhood income



## Correlates of Physical Activity

- In adjusted analyses among CA teens, the following were physically active on **fewer** days per week in **all three neighborhood types**
  - Girls
  - Teens who had not been to a park recently
- The following were physically active on **more** days per week in **predominantly non-white neighborhoods**
  - Adolescents from low-income families



## Correlates of Physical Activity

- The following were physically active on **fewer** days per week in **mixed race neighborhoods**
  - Latinos and Asians compared to whites
  - Adolescents who perceived their nearby parks were unsafe
- The following were physically active on **fewer** days per week in **predominantly white neighborhoods**
  - Latinos compared to Whites
  - Foreign-born compared to US-born adolescents



## Summary

- Regardless of neighborhood racial composition, visiting a park is associated with greater physical activity among adolescents
- Perceived safety of parks may be more important for youth living in mixed race neighborhoods than for youth in predominantly white or non-white neighborhoods



## Limitations

- Physical activity level is self-reported and may be subject to some bias, however, the measure has been shown to be strongly related to objectively measured PA
- Park availability is self-reported and may not correspond to actual park availability
- Cross-sectional analysis does not allow us to draw causal conclusions



## Conclusions & Implications

- Efforts to increase use of existing parks may be a promising strategy for promoting physical activity for youth in a variety of different neighborhoods
  - These efforts could be more successful if they are targeted to particular groups such as Latinos or Asians
- More research is needed to understand the factors associated with physical activity and use of parks in different types of neighborhoods



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