Population Survey of Pedestrian Activity in California Adults: Who is Active When, Where, and Why

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Background and Purpose

- Caltrans and CDHS were seeking to obtain population-based estimates of pedestrian activity levels, barriers, and influences.

- The objectives of this study were to assess:
  - Pedestrian activity levels among adults
  - Where and why adults engage in pedestrian activity
  - What factors adults consider when deciding where to engage in pedestrian activity
Methods (1)

- Random digit-dial telephone survey (39% response rate)

- Sample size = 12,036
  - At least 785 per region (12 Caltrans regions)
  - Over-sampling in small regions
  - Under-sampling in large regions

- Survey conducted June 2001-June 2002

- Weighted by age, race, sex and region to 1990 California population data
Methods (2)

- Survey questions assessed:
  - **Type** of ped activity engaged in typical week
    - walking, running/jogging, roller skating
  - How many days per week engaged in ped activity
  - How much time per week engaged in ped activity
  - **Where** they engaged in ped activity
    - neighborhood, school, park, work
  - **Why** (purpose) engaged in ped activity
    - work, run errands, exercise, transportation
  - **Factors** considered when deciding to engage in ped activity
    - existence of sidewalks, speed/amount of traffic, other people nearby
Methods (3)

- **Data Analysis**
  - Race categorized as white and nonwhite
  - Age: 18-29, 30-44, 45-64, and >65 years
  - Meet PA Rec: walk ≥150 min/wk, run/jog ≥60 min/wk
  - Logistic regression assessed:
    - Differences among those meeting vs not meeting the PA rec
    - Demographic differences in purpose for and location of ped activity
  - ORs and CI were derived to assess differences:
    - by age, race, and sex
    - Between those meeting vs not meeting the PA rec for factors respondents consider when deciding where to engage in ped activity
  - All analyses were adjusted for education level and employment status
# Demographics of Respondents (N = 12,036)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample size</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>8,372</td>
<td>69.6%</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>3,666</td>
<td>30.5%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>5,144</td>
<td>42.7%</td>
</tr>
<tr>
<td>Females</td>
<td>6,894</td>
<td>57.3%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>1,868</td>
<td>15.7%</td>
</tr>
<tr>
<td>30-44</td>
<td>3,979</td>
<td>33.5%</td>
</tr>
<tr>
<td>45-64</td>
<td>3,993</td>
<td>33.6%</td>
</tr>
<tr>
<td>65+</td>
<td>2,033</td>
<td>17.1%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;HS</td>
<td>4,189</td>
<td>34.8%</td>
</tr>
<tr>
<td>Some college</td>
<td>3,537</td>
<td>29.4%</td>
</tr>
<tr>
<td>College grad</td>
<td>4,299</td>
<td>35.8%</td>
</tr>
</tbody>
</table>
Results: Who

- 73% reported walking; 21% running/jogging
  (2.8 day/wk for 154 min) (1 day/wk for 49 min)

- 36% met mod PA rec; 18% met vig PA rec
  (based on self-reported ped activity)

- Walk in typical week
  - whites > nonwhites

- Run/jog in typical week, meet vig PA rec:
  - males > females
  - nonwhites > whites
  - 18-64 yr > 65+ yr
Results: Why

Planned exercise 74%
  - White > nonwhite, 18-64 yr > 65+ yr

Running errands 62%
  - females > males

Walking at work 32%
  - males > females, 18-64 yr > 65+ yr

Walking to public transportation 19%
  - 18-64 yr > 65+ yr

Walking to escort kids to school 19%
  - females > males, nonwhites > whites, 18-64 yr > 65+ yr

Walking to work 18%
  - 18-64 yr > 65+ yr
Results: Where

- On sidewalks/streets in neighborhood: 88%
  - White > nonwhite, females > males, 18-64 yr > 65+ yr

- On sidewalks/streets not in neighborhood: 45%
  - 18-64 yr > 65+ yr

- Walking trails/paths: 44%
  - 18-64 yr > 65+ yr

- At Workplace: 36%
  - nonwhites > whites, 18-64 yr > 65+ yr

- At park: 36%
  - males > females, nonwhites > whites, 18-64 yr > 65+ yr
Results: Factors Considered When Deciding Where to Engage in Pedestrian Activity*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of sidewalks</td>
<td>72%</td>
</tr>
<tr>
<td>- Do not meet Vig PA rec &gt; meet Vig PA rec</td>
<td></td>
</tr>
<tr>
<td>Presence of signals to stop or slow traffic</td>
<td>69%</td>
</tr>
<tr>
<td>- Do not meet Mod PA rec &gt; meet Mod PA rec</td>
<td></td>
</tr>
<tr>
<td>Speed of Traffic</td>
<td>68%</td>
</tr>
<tr>
<td>Amount of Traffic</td>
<td>65%</td>
</tr>
<tr>
<td>Push buttons at crosswalks</td>
<td>60%</td>
</tr>
<tr>
<td>- Do not meet Mod PA rec &gt; meet Mod PA rec</td>
<td></td>
</tr>
<tr>
<td>Painted crosswalks</td>
<td>58%</td>
</tr>
<tr>
<td>Curb cuts at corners</td>
<td>43%</td>
</tr>
<tr>
<td>Presence of other nearby pedestrians</td>
<td>42%</td>
</tr>
<tr>
<td>Audio cross signals</td>
<td>31%</td>
</tr>
<tr>
<td>Items that block passage (e.g., telephone pole)</td>
<td>30%</td>
</tr>
</tbody>
</table>

*adjusted for age, sex, and race
Limitations and Strengths

- Participants may have reported on walking or running/jogging during all PA, including sports and recreational activities, not just for ped activity.
- Self-report measures could involve recall bias and socially desirable responses
- Modest response rate
- Leading questions

- A relatively large sample size
- Random sampling
- Ability to stratify by age, sex, and race
- One of the few population studies concentrated solely on ped activities
Summary

- Older adults consistently reported substantially less ped activity for nearly all types, purposes, and settings.

- Many men and women perform ped activity while carrying out “traditional” gender roles.

- Whites primarily engage in leisure-time ped activity, and nonwhites more likely to engage in ped activity for transportation and work.

- The design and programming of parks may need reconsideration to increase ped activities among adults, especially women and older adults.

- Relatively simple and cost-effective strategies may promote more ped activity – sidewalks in neighborhoods, signs and signals to calm traffic, painted crosswalks, and push buttons.