Physical Activity Levels in an Urban New Immigrant Latino Community

Linda S. Martinez, PhD, Alyssa Koomas, MS/MPH Candidate, Flavia C. Peréa, PhD, MSEd

Presentation for the 2011 Active Living Research Conference
February 23, 2011

Flavia C. Peréa, Ph.D., M.S.Ed.
Department of Public Health and Community Medicine
Tufts University School of Medicine

Funded by the Robert Wood Johnson Foundation, Active Living Research, grant #67308
Background

- Research has found an association between elements of the built environment, such as parks and playgrounds, physical activity, and poor health outcomes.

- Parks and playgrounds have been associated with physical activity among children and adolescents.

- Urban Latino children and youth are particularly at high risk for obesity and related chronic diseases and conditions.
  - However extant research focused on people of Mexican-origin.

- Understanding who uses the parks and how can inform the development of culturally and community specific efforts to encourage physical activity among children and youth.
Lawrence Community Priorities

• Prioritization of the improvement of outdoor and recreational spaces, such as parks and playgrounds.

• Parks improvement plan implemented since 2004.

• The youthfulness of the city’s population has placed emphasis on outdoor spaces to meet the needs of children and youth.

• Actively seeking ways to get youth involved in the community and engage youth in public health improvement efforts.

• Reduce the prevalence of obesity in the community.
  – Increasing physical activity as important for mitigating obesity, especially among children and youth.

• How local policy can increase utilization of outdoor spaces to increase physical activity among residents and improve health
About Lawrence

- Has the highest obesity rate in MA, notably among children and adolescents
- Lags behind the rest of the state on virtually all health status indicators. Coronary heart disease, hypertension, and diabetes are higher than MA state rates.
- Population: 72,000
- 43% of the population is under age 24
- 46% of the population is foreign born
- 69.4% of the population is Latino (predominantly Puerto Rican and Dominican)
- Highest unemployment rate in the state: 17.6% in Dec 2010
- Per capita income=$14,753
- Approximately 51% of residents live under 200% of the federal poverty level
- Over 40% receive some form of public assistance
- Over 90% of students receive free or reduced price lunch
- High School graduation rate is 40%
- 30% of the population over age 25 has graduated from high school
Study Design
Aims and Goals

• To assess park and playground
  – Quality and conditions
  – Utilization

• To inform efforts to improve the quality and condition of parks and playgrounds and increase their utilization

• To inform community health improvement efforts to increase physical activity, reduce sedentary behaviors, and decrease obesity, particularly among children and youth
Approach

- Community engaged
  - Partnership with the Community Development Department and Groundwork Lawrence
- Youth engaged
  - Youth were recruited from the community as research assistants
    - Application process
    - 5 were selected and trained to administer park assessments.
Methods

- Observational assessment tools:
  - Utilization
    - The System for Observing Physical Activity and Recreation in Communities (SOPARC) tool
  - Quality and conditions
    - Physical Activity Resource Assessment (PARA) tool.
- Photography to document conditions and issues in need of attention in the parks
- Observations May-Oct 2010, 1 week and 1 weekend day each week, 3x/day during the morning, afternoon and evening.
Data collection: SOPARC

• A one-page direct observation tool to assess:
  – the number of people engaged in physical activity
  – the type of physical activity individuals are engaging in
    • Eg: sitting, jogging, playing baseball, playing tag/chase games, reading
  – The physical activity level of individuals (low, medium, high):
    • Sedentary= lying down, sitting, or standing in place
    • Walking= walking at a casual pace
    • Vigorous= an activity more vigorous than walking that increases heart rate
  – Gender and estimated age (child, youth, adult, senior)
Park Selection and Characteristics

- All city parks and playgrounds under city jurisdiction
- Conducted an inventory of all city parks
- Excluded state-run parks, large open green spaces, pocket parks, and school-based parks.
- Selected from 40+ parks in the city
- Focus on 24 parks
Limitations

• Youth were assigned parks for the duration of data collection
  • No random assignment

• Not all parks included

• Modification of tools:
  • Simplified for ease of use
Preliminary Results
Park Attendance

- During the months of May through July of 2010 a total of 3,869 individuals were observed in the parks.

- Of those observed the majority (67%) were male.
## Estimated Age of Park Goers

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child (&lt;12 years)</td>
<td>34.8%</td>
</tr>
<tr>
<td>Teen (13-20 years)</td>
<td>28.1%</td>
</tr>
<tr>
<td>Adult (21-59 years)</td>
<td>35.7%</td>
</tr>
<tr>
<td>Senior (&gt;60 years)</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
Activity Levels

• 45.4% of individuals observed were engaging in vigorous activity.

• 22.3% of individuals observed were engaging in moderate activity.

• 32.3% of individuals observed were sedentary.
Activities

Top 5 activities in the parks:
1. Sitting
2. Basketball
3. Walking
4. Playing around in playground
5. Standing

Top 5 activities for women and girls:
1. Sitting (26%)
2. Walking (22%)
3. Playing on playground equipment (13%)
4. Standing (9%)
5. Swings (7%)

Top 5 activities for men and boys:
1. Basketball (25%)
2. Sitting (17%)
3. Walking (10%)
4. Baseball (8%)
5. Playing on playground equipment (8%)
Variations by Age and Gender

- Average activity level by gender:
  - Women/girls 1.84
  - Men/boys 2.19

- Average activity level by age group
  - Children 2.52
  - Teens 2.16
  - Adults 1.77
  - Seniors 1.31

 1=low/sedentary, 2=medium/walking, 3=high/more than walking)
Key Finding

- Girls were less active than boys.
- The older park goers were, the less physically active they were.
Possible Explanations

- Boys were more often engaged in teams sports.
- Adults as well as girls were more likely to be spectators at sporting events, such as baseball games.
- Organized team sports target young boys.
Youth’s Insights

• Culturally based gender roles
  – Girls hair and make-up

• Boys more interested in the activities going on in the parks

• Expectations of girls and boys
Our Take-Away Message

• To increase the utilization of parks and playgrounds:
  – Increase community awareness of the many great parks in Lawrence
  – Address safety and sanitation issues in the parks
  – Ensure equipment is functioning and well maintained
  – Increase community ownership and appreciation of parks