Gender Differences in Self-Report Physical Activity and Park and Recreation Facility Use Among Latinos in Wake County, North Carolina

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Abstract

Background Lack of physical activity (PA) may be a cause of Latinos’ health problems. Latinas may be especially at risk, and public parks and recreation services may be a logical place to address PA deficiencies.

Purpose The objectives of our study were to investigate Latino gender differences related to (1) self-reported work/household and leisure-time PA, (2) perceptions about PA and parks/recreation services, (3) parks/recreation services behaviors, (4) and preferences for activities/programming.

Methods This is a cross-sectional survey completed by 457 Latinos.

Results Significant gender differences were found for work/household PA but not for leisure-time PA. Use of parks and recreation services were similar between genders, but Latinos stayed significantly longer per visit. Latinos and Latinas significantly differed on park activities and preferences for recreational services.

Conclusions Even though parks/recreation services are viewed as viable options for Latinos’ PA, the study identified gender differences that inform health promotion interventions to be more effective in targeting Latinos.

Keywords Gender differences · Latinos · Leisure · Parks · Physical activity · Recreation

Introduction

The obesity epidemic within Latino communities has reached a crisis [1], causing a flurry of healthcare and economic concerns. The prevalence of obesity is disproportionately greater among Latinos than other populations [2], and the rates vary by gender as Latinas’ obesity rates are higher than Latinos’ [3]. Latinas also have a 30 % greater chance of being overweight than non-Latina white women [4].

A poor diet and a lack of physical activity (PA) are fundamental causes for obesity [5]. Based on a socio-ecological framework, this study focused on PA through the use of parks and recreation services, a form of leisure-time physical activity (LTPA), with a goal of informing health interventions in Latino communities. Participation in LTPA among ethnic or racial minorities is significantly lower than whites [6]. Compared to all ethnic and racial minorities, Latinos had significantly more individuals reporting no LTPA [6], which may be due to their often physically demanding occupations. Self-reported and accelerometer-recorded daily PA with a Latino sample highlighted this concern as well as gender differences [7]. Latino men engaged in more moderate/vigorous PA, whereas Latinas’ PA consisted of mostly light-intensity household work [7]. Most PA was obtained through non-leisure activities, suggesting Latinos may not be getting the physiological and psychological health benefits associated with LTPA [7]. Furthermore, female youth of nearly every race/ethnic group spend significantly more time in sedentary behavior [8]. Consequently, LTPA in adult Latinas is also lower than whites [9], and 74 % of Hispanic women reported that they do not participate in any LTPA [10].

Research has indicated that Latinos grasp the perceived benefits of physical activity, but psychological constraints and environmental access often prohibits this knowledge from translating into PA participation [11]. Casper and
colleagues [12] reported that Latinos perceived a lack of partners/friends, accessibility to parks and recreation services, and time due to multiple responsibilities, as constraints to being more physically active. Additionally, barriers such as fear of deportation have noted to influence park use in Latino communities [13]. Key motivators for physical activity include a desire to be healthy and anticipated physical and psychological benefits [14]. Activity preferences may vary among cultures; therefore, culturally focused PA strategies have been advocated for Latinos. For example, dancing, walking, and family-oriented activities are preferred in the Latino population [15, 16], and parks may be a place to engage Latinos in these activities.

Public parks and recreation services are considered part of the healthcare system of the USA because of the role they play in physical health promotion [17]. A growing body of research demonstrates that the cumulative amount of physical activity (exercise) obtained from a park and recreation agency can be significant and provide health benefits. A majority of Americans use local government parks and recreation services and incorporate them into their daily lifestyle [18, 19]. In minority communities, public parks are often critical resources for physical activity [20]. However, parks vary in their built amenities such that park characteristics (e.g., field, playground, and picnic areas) can influence who uses the park and how much physical activity is gained from park use [20]. Similarly, availability and access to parks and recreation resources often differ by neighborhood depending on the socioeconomic status of residents [20]. Low-cost services and programming can be highlighted in PA interventions, but practitioners must also communicate solutions to perceived lack of availability and/or accessibility to such services.

The importance of parks and recreation services for Latinos is widely recognized, but research related to basic fundamental usage and behavior patterns within Latino communities is non-existent. Recognizing that Latinos’ LTPA rates are lower compared to whites, parks and recreation services are an ideal place for health-related interventions for Latino populations. Therefore, the purpose of our study was to investigate gender differences with Latinos related to (1) self-reported work and leisure-time PA, (2) perceptions about PA and parks/recreation services, (3) parks/recreation services usage, (4) and preferences for activities/programming.

Methods

Design

The study protocol was reviewed and approved by the Human Subjects Review Board at the authors’ institution. A cross-sectional survey was designed by the authors in consultation with a nonprofit North Carolina (NC) Latino advocacy and public policy organization. The survey instrument was initially translated into Spanish and then back-translated into English. The Spanish version of the questionnaire was pilot-tested with a group of Latinos at the nonprofit organization to identify any potential wording ambiguities. Community leaders (i.e., promotores) representing Wake County, NC, assisted with data collection. Twenty promotores were recruited at a monthly meeting held by a community advocacy group in April 2010. Promotores were leaders from 15 communities (by zip code) within Wake County. Promotores were given 25 surveys during a monthly meeting, and they were verbally instructed to distribute surveys within their communities to one person per household and to split distribution between genders. They were asked to provide the English and Spanish version of the instrument to potential participants. On average, the completion of the questionnaire took about 30 to 40 min. After 1 month, the promotores returned the surveys to the researchers at the May 2010 monthly meeting at which the returned, completed surveys were examined to ensure that the aforementioned protocol was followed. Promotores received a $150 incentive for their help after data collection was completed.

Sample

The participants (N=457) who were self-identified Latinos living in Wake County, NC, completed a paper-pencil questionnaire with a 91 % return rate. Participants’ ages ranged from 18 to 69 (M=35 years old). The majority of the participants were female (58 %), married (61 %), had at least a high school education (74 %), were first-generation immigrants (78 %), and were primarily from Mexico (52 %). Our sample closely matched the 2010 US Census demographic percentages of Latinos living in NC.

Measures

The self-report Stanford Brief Physical Activity Survey (SBAS) [21] was used to measure work/household PA and LTPA. Since we wanted to distinguish between the two types of PA, both types of PA were analyzed separately. The SBAS consists of two items containing five choices per item describing global statements about the types of activity and the dimensions of frequency, intensity, time, and type of activities. For example, participants were asked if his/her current job requires them to spend most of the day sitting or standing. The items were coded from 1 = no PA to 5 = very hard PA. The SBAS has established face and content validity using metabolically equivalent categories of comparable activity: light (<2.9 METS), moderate (3.0–4.9 METS), and hard (≥5.0 METS) activity levels.
Perceptions of benefits of PA were assessed using three items that asked respondents how PA improves their health, strength and energy, and quality of life [22]. Perceptions of park and recreation’s importance consisted of three items, created by the authors and consultants, which asked about the general importance of having places to be active, if parks and recreation centers improve their community, and if parks improve overall quality of life. Each item was measured on a five-point Likert-type scale indicating level of agreement ranging from 1 (strongly disagree) to 5 (strongly agree).

Visitation patterns and facility use were assessed based on the number of times respondents had visited parks and recreation facilities during the last 30 days, and how long (in minutes) they stay at the locations during typical visits [23]. Participants were asked what activities they engaged in while in the parks [24]. Specific to recreational services, respondents were asked if they currently participate in recreational programming, and if so, what specific programming. All respondents were also asked to indicate what program/activity areas they would be most interested in on a three-point scale (1=not interested, 2=somewhat interested, 3=very interested). The survey also included demographic information including age, gender, marital status, education, yearly gross household income, and country of birth for those who were born abroad.

Data Analysis

All data analyses were conducted using PASW Statistics 18.0 for Windows. After the initial data analysis of descriptive statistics and scale assessment (Cronbach’s alpha), t tests were used to make comparisons between Latinos and Latinas on perceptions of PA, perceptions of park and recreational benefits, visitation patterns, and preferences on recreational services. Chi-square statistical analyses were performed to make comparisons on work-related PA, LTPA, park activities, and recreational service participation. Adjustments for sociodemographic characteristics and acculturation did not change the findings.

Results

Gender comparisons among activity levels (i.e., inactive to vigorous) showed a significant difference between Latinos and Latinas on work-related PA (Chi-square=97.165; p <.001; Eta=.467). However, no significant differences between Latinos and Latinas were found for LTPA levels (Chi-square=3.282; p=.512; Eta=.086). Table 1 contains the percentages of Latinos and Latinas in each activity level for work-related PA and LTPA.

No significant gender differences were found on perceptions of PA (improves health, quality of life, and strength/energy; Latinos M=4.6, Latinas M=4.7; r=-.945, p=.345) and parks and recreation benefits (improves health, quality of life, and the community; Latinos M=4.6; Latinas M=4.5; r=1.73, p=.863).

Sixty-six participants had not recently visited a park. For respondents that reported visiting park and recreation facilities within the past year, no significant gender differences

Table 1  Levels of work-related and leisure-time physical activity for men and women

<table>
<thead>
<tr>
<th>Physical activity category</th>
<th>Stanford brief activity scale activity level</th>
<th>Test statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inactive Light intensity Moderate Hard Very hard</td>
<td></td>
</tr>
<tr>
<td>Work/household physical activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>n=23 (12.8 %)</td>
<td>n=43 (24.0 %)</td>
</tr>
<tr>
<td>Women</td>
<td>n=108 (40.6 %)</td>
<td>n=98 (36.8 %)</td>
</tr>
<tr>
<td>Leisure-time physical activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>n=80 (44.7 %)</td>
<td>n=32 (17.9 %)</td>
</tr>
<tr>
<td>Women</td>
<td>n=142 (53.4 %)</td>
<td>n=41 (15.4 %)</td>
</tr>
</tbody>
</table>

Table 2  Recreational activities at parks for men and women

<table>
<thead>
<tr>
<th>Recreational programs</th>
<th>Men, %</th>
<th>Women, %</th>
<th>Chi square</th>
<th>P value</th>
<th>Eta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat or picnic</td>
<td>25</td>
<td>27</td>
<td>0.22</td>
<td>.637</td>
<td>.024</td>
</tr>
<tr>
<td>Look at scenery/relax outside</td>
<td>39</td>
<td>47</td>
<td>2.12</td>
<td>.156</td>
<td>.074</td>
</tr>
<tr>
<td>Play sports</td>
<td>43</td>
<td>23</td>
<td>24.85</td>
<td>&lt;.001</td>
<td>.255</td>
</tr>
<tr>
<td>Take children to the playground</td>
<td>35</td>
<td>48</td>
<td>6.49</td>
<td>.012</td>
<td>.130</td>
</tr>
<tr>
<td>Walk/jog</td>
<td>50</td>
<td>68</td>
<td>10.78</td>
<td>.002</td>
<td>.168</td>
</tr>
<tr>
<td>Watch sports</td>
<td>25</td>
<td>23</td>
<td>0.47</td>
<td>.494</td>
<td>.035</td>
</tr>
</tbody>
</table>
were found for the number of visits within the past month (n=391; Latinos M=4.75; Latinas M=4.38; r=0.612, p=.541). However, a significant difference between genders was found on total time spent per visit (Latinos M=97 min; Latinas M=76 min; r=3.37, p=.001, effect size r=.18). With respect to specific park activities, significant differences were found between Latinos and Latinas (Table 2). Latinas were significantly more likely to walk/jog and take children to the playground, while Latinos were significantly more likely to play sports.

Of the 16.4 % of participants (n=75) who reported using recreational services, the majority (72 %) took part in sports (n=54). No significant gender differences were found for those that reported engaging in park and recreation services/activities (n=75; Chi-square=.286; p=.593; Eta=.025). Latinos (n=27) and Latinas (n=27) equally engaged in sports, while only women (n=8) reported participating in dance classes.

Several significant gender differences were found based on preferences for recreational program services: aerobics programs, aquatic programs, dance, soccer, and walking programs (Table 3). No significant differences were found between genders for adventure programming, baseball, basketball, flag football, dodgeball, kickball, tennis, and volleyball. Figure 1 contains the percentages of Latinos who reported to be “very interested” in specific recreational services.

### Discussion

Parks and recreation services provide pleasurable physical activity opportunities by offering close-to-home, free or low cost, readily available areas, facilities, programs, and instruction [25]. This study focused on Latinos, whose use related to the aforementioned services is undocumented. A community-based survey instrument also captured information from non-park/recreation users whose behaviors/perceptions/preferences related to parks and recreation services are important for future interventions.

Understanding physical activity patterns is important for planning health interventions. Confirming previous PA findings with Latinos [26], results revealed that 63 % of Latinos were moderate to vigorously active at work/household activity compared to only 22 % of Latinas. LTPA was reported to be similar between genders with 60 % of all respondents indicating they were inactive or partaking in only light LTPA. These results magnify the challenge of PA promotion among Latinos. If Latinos believe they are getting enough PA at their job and/or at home, then it will be difficult to encourage them to be active on their own. Agencies need to find ways to communicate their message to facilitate more LTPA. Incorporating structured programs as well as more facilities (e.g., walking paths) may also attract more users and promote more LTPA [20]. For Latinas in particular, providing PA programs that have child care availability, bilingual instructors, transportation availability, and are free or low cost may decrease barriers and increase exercise levels [26]. Consistent with previous research [11], our respondents had favorable attitudinal perceptions about the benefits of PA and the role of parks and recreation services. As a result, efforts to promote PA do not need to change affective feelings about PA or parks. Instead efforts can focus on structural (e.g., cost or transportation) or interpersonal (e.g., forming partners and friends) factors to increase participation in PA programs at parks and recreation agencies.

Park visitation for our sample mirrored the rates of US population estimates. Furthermore, when comparing our findings with Cronan et al. [27], Latino men and women in our sample participated in similar park activities (e.g., playing with kids, relaxing, picnicking, walking/jogging, and play sports) as Latinos in Chicago, Los Angeles, and Minneapolis, but with some variation. For example, group sports was the fifth most frequent activity among Cronan et

### Table 3 Differences on preferences levels for recreational program services for men and women

<table>
<thead>
<tr>
<th>Recreational programs</th>
<th>Men</th>
<th>Women</th>
<th>t test</th>
<th>P value</th>
<th>Effect size r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerobics programs</td>
<td>1.7</td>
<td>2.4</td>
<td>8.66</td>
<td>&lt;.001</td>
<td>.39</td>
</tr>
<tr>
<td>Aquatic programs</td>
<td>2.0</td>
<td>2.2</td>
<td>3.13</td>
<td>.002</td>
<td>.15</td>
</tr>
<tr>
<td>Dance</td>
<td>1.6</td>
<td>2.4</td>
<td>10.09</td>
<td>&lt;.001</td>
<td>.45</td>
</tr>
<tr>
<td>Soccer</td>
<td>2.4</td>
<td>1.9</td>
<td>6.05</td>
<td>&lt;.001</td>
<td>.29</td>
</tr>
<tr>
<td>Walking programs</td>
<td>2.1</td>
<td>2.5</td>
<td>5.74</td>
<td>&lt;.001</td>
<td>.30</td>
</tr>
</tbody>
</table>
al.’s Latino sample, but playing sports was the second most common activity among Latinos in our sample, which could be credited to more green space in Wake County, NC compared to these larger metropolitan cities. Unlike Cronan et al.’s sample, biking was not a popular activity among Latinas in our sample, but walking/jogging was the most popular. Considering Minneapolis and Chicago are in the top ten most bicycle friendly cities rated by Bicycling.com, this shows support that geographic culture and built amenities (e.g., bike paths) may influence PA activities (e.g., 20). Unfortunately, both genders in our sample and Cronan et al.’s sample reported a high frequency of inactive activities such as watching kids at the playground and relaxing, which does not lead to many physical health benefits. As a result, park usage does not necessarily equate to high levels of PA for Latinos, and activity preferences vary by gender. In our study, recreation service use was considerably lower than park use. Some evidence suggests that preferred recreational physical activities may differ and be influenced by race/ethnicity, culture norms, significant others, and opportunity structure [28, 29]. As such, identifying activities that are preferred and culturally relevant are keys to satisfying leisure needs and preferences of Latinos. In our study, recreational service preferences differed by gender. Soccer was the only activity that a majority of Latinos preferred. In contrast, majority of Latinas preferred walking, aerobics, and dance. The parks and recreation departments within the respondents’ geographic area offered such activities, but aside from having brochures in Spanish, there was not specific programming or marketing efforts targeted at Latinas. More effective communication strategies could include partnering with English as a Second Language programs run by the parks and recreation departments to promote and disseminate information on low-cost, gender-specific PA opportunities.

Strengths and Limitations

This study was limited to one county in NC; therefore, the results may not be generalizable to all Latino communities. Measurement of PA was self-reported and may be overestimated and/or skewed, and the SBAS validated total score was not used. The PA measures have not been previously validated within the Latino population; however, the original validated English version of the measure was translated to Spanish using a back-translation method [30]. In this study, we did not ask about the condition of parks. However in a previous study by the authors [12], we found that the participants felt safe at the parks and amenities at the parks were not constraints for visiting. Lastly, selection of the participants was not random and may have been subject to selection bias by promotores. Strengths of this study include help from promotores to assist with obtaining a representative sample within Latino communities, a large sample, and reporting of novel findings to the population under study. Future research may seek to quantify LTPA using more objective measures and assessing park and recreation programs specific to PA for both Latinos and Latinas.

Conflict of Interest The authors have no conflict of interest to disclose.

References


