Correlates of lifestyle physical activity in community-dwelling Latinos

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Background

- Older Latinos are:
  - Projected to increase to 17.5 million by 2050
  - Are at greater risk than non-Latino whites for chronic health conditions including diabetes and metabolic disorders
- One strategy to mitigate these risks is participation in moderate/vigorous physical activity (PA)
  - However, Latinos are less likely to participate in leisure PA than non-Latino whites (37% vs. 50%)
- It is essential to examine the correlates of PA in order to inform intervention development

Methods

Demographics:
- Age, gender, marital status, education, perceived income (BRFSS)

Current health:
- Perceived health
- Hypertension: DBP ≥140 or DBP ≥90, or taking blood pressure medications
- Chronic condition history

Environment:
- Perceived neighborhood problems
- Using geo-coded addresses:
  1) Concentrated disadvantage (American Community Survey)
  2) Rates of index crime (8 major crimes; Chicago Police Dept., Illinois State Police)
  3) Proximity to parks (linear distance using ArcGIS)

Acculturation:
- ARSMA-II: American and Latino orientation

Self-efficacy:
- McAuley’s 17-item Self-Efficacy Scale for Overcoming Barriers to PA

PA Measures

CHAMPS: Frequency and duration of 41 activities
- Total daily minutes of light PA
- Total weekly minutes of moderate/vigorous PA

Accelerometer:
- Actigraph GT1M
  - Total daily minutes of light PA
  - Total daily minutes of MVPA
  - Intensity cut-offs (Miller et al., 2010):
    1) Light: 100–1951 counts/min (< 3 METs)
    2) Moderate: 1952–5724 (3.0–6.0 METs)
    3) Vigorous: >5724 (>6.0 METs)

Data Analysis

3 linear regression analyses:
1. Total weekly minutes of MVPA (self-report) regressed on background characteristics
2. Total weekly minutes of total leisure MVPA regressed on background characteristics
3. Total daily minutes of MVPA (accelerometer) regressed on background characteristics

Results

Demographics (N = 157)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years, M, SD)</td>
<td>69.0 (9.1)</td>
</tr>
<tr>
<td>Woman (%)</td>
<td>72.0</td>
</tr>
<tr>
<td>Married (%)</td>
<td>40.0</td>
</tr>
<tr>
<td>Education (%)</td>
<td></td>
</tr>
<tr>
<td>HS graduate (%)</td>
<td>82.8</td>
</tr>
<tr>
<td>HS dropout (%)</td>
<td>17.2</td>
</tr>
<tr>
<td>Perceived income (%)</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>68.8</td>
</tr>
<tr>
<td>Medium</td>
<td>26.1</td>
</tr>
<tr>
<td>High</td>
<td>.6</td>
</tr>
</tbody>
</table>

*Calculated based on missing data

Regressions of self-report MVPA on background characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light physical activity (self-report)</td>
<td>.23*</td>
<td>.02***</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>2.91*</td>
<td>.001</td>
</tr>
</tbody>
</table>

Regressions of accelerometer MVPA on background characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.52*</td>
<td>.001</td>
</tr>
<tr>
<td>Gender</td>
<td>-.14.82**</td>
<td>.001</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>-13.43**</td>
<td>.001</td>
</tr>
<tr>
<td>Light PA (recall)</td>
<td>.20**</td>
<td>.001</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.35***</td>
<td>.001</td>
</tr>
</tbody>
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Discussion

- Consistent with previous research:
  - Being older, male, and more depressive symptoms were significantly related to MVPA per accelerometer
  - Greater light PA and higher self-efficacy are consistent predictors of greater MVPA
- Future intervention development should consider:
  - Individual differences in physical activity intensity (both light and MVPA)

Limitations:
- Cross-sectional design
- Sample limited to Latinos
- Volunteer sample