Associations between physical activity and two components of walkability vary by physical activity type, age, and population centre size

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Outline of Presentation

• Background
• Research Question
• Methods
• Results
• Discussion
Background

• Chronic disease is the leading cause of death worldwide
• The World Health Organization states that insufficient physical activity is the primary cause for approximately 30% of ischemic heart disease, 27% of diabetes, and 21-25% of breast and colon cancers
• Interventions that increase physical activity at the individual level often not sustained
Background
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Background
Background

• Findings from recent systematic reviews:
  • Consistent associations between walkability and walking for transportation
  • Inconsistent associations between walkability and leisure-time physical activity
  • Inconsistent associations between walkability and total physical activity
Background

  
  • Transport walking higher in more walkable areas
  
  • Among people aged 30-64, total physical activity significantly higher in more walkable neighbourhoods
  
  • Among people aged 18-29, leisure-time physical activity significantly lower in more walkable neighbourhoods
Walkability data: Street Smart Walk Score® (www.walkscore.com)

For given locations, SSWS algorithm based on number and proximity of amenities

- Grocery stores
- Restaurants/bars
- Coffee shops
- Clothing/gift shops
- Banks
- Entertainment
- Parks
- Schools
- Book stores
- Entertainment

Penalties for lower intersection densities and longer block lengths
Walkability data: Street Smart Walk Score® (www.walkscore.com)

For given locations, SSWS algorithm based on number and proximity of amenities
Methods

Walkability data: Street Smart Walk Score® ([www.walkscore.com](http://www.walkscore.com))

For given locations, SSWS algorithm based on number and proximity of amenities

- Parks
• Canadian Community Health Survey (CCHS):
  • The CCHS is a national survey of health, health determinants, and health care utilization among Canadians aged 12 and older

• Primary outcomes
  • Energy expenditure on walking for transportation
  • Energy expenditure on leisure physical activity
  • Energy expenditure on total physical activity

• Covariates
  • Age category, sex, immigrated in past 10 years, visible minority, household income, post-secondary graduate, number of children < 12 in household
Comparing highest to lowest restaurants/bars quintiles

Each analysis adjusted for sex, visible minority status, working or attending school, immigration to Canada in past 10 years, post-secondary graduate in household, household income quintile, number of children under 12 in household.
Discussion
Comparing park near residence to no park near residence

<table>
<thead>
<tr>
<th>Age category</th>
<th>Energy expenditure on transport walking (kcal/kg/day)</th>
<th>Energy expenditure on leisure physical activity (kcal/kg/day)</th>
<th>Energy expenditure on total physical activity (kcal/kg/day)</th>
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<tbody>
<tr>
<td>65+</td>
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<td>30-64</td>
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<td>18-29</td>
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Each analysis adjusted for sex, visible minority status, working or attending school, immigration to Canada in past 10 years, post-secondary graduate in household, household income quintile, number of children under 12 in household.
Discussion

• Limitations
  • Self-reported outcomes
  • Residential self-selection
  • Cross-sectional study design
  • Residual confounding

• Strengths
  • Large sample size
  • Accounted for many socio-demographic characteristics
  • Geographically diverse population
Thank you!

Questions?

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References


References


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