Association of Workplace Supports with Active Commuting

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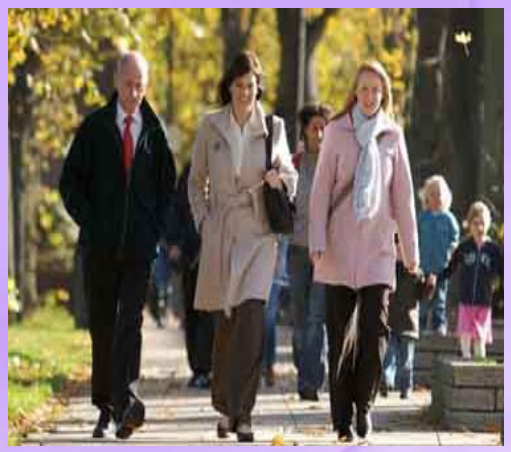
Background



- Physical activity (PA) is associated with a reduced risk of numerous chronic diseases
- Recommendation: 30 minutes of moderate-intensity activity on most days of the week
- Moderate-intensity PA sufficient to achieve health benefits and maintain weight
- Minimum 10-minute bouts
- Active commuting (AC) – walking or biking to work – offers a promising means to integrate PA into daily routines

Health Benefits of Active Commuting

- Lower odds of obesity (Lindstrom, 2008)
- Decreased risk of all-cause mortality (Andersen et al., 2000)
- Protective cardio-vascular effect (Gordon-Larsen et al., 2009; Hamer & Chida, 2008)
- Lower HDL choles-terol (Vuori et al., 1994)
- Improved VO_2 max (Vuori et al., 1994)

Prevalence of Active Commuting

- According to the 2001 National Household Transportation Survey, usual modes to work were:
  - 90.8% private automobile
  - 5.1% public transit
  - 2.8% walking
  - 1.3% other (including biking)

Previous Research on Active Commuting

- Large body of research on children's active commuting to school
- Among adults, some factors found to influence AC include:
  - Distance (Sisson & Tudor-Locke, 2008)
  - Environmental barriers (Craig et al., 2002)
  - Perceptions of potential benefits of AC (Merom et al., 2008)
- However, few definitive correlates or intervention points exist for promoting AC among adults (Ogilvie et al., 2004)

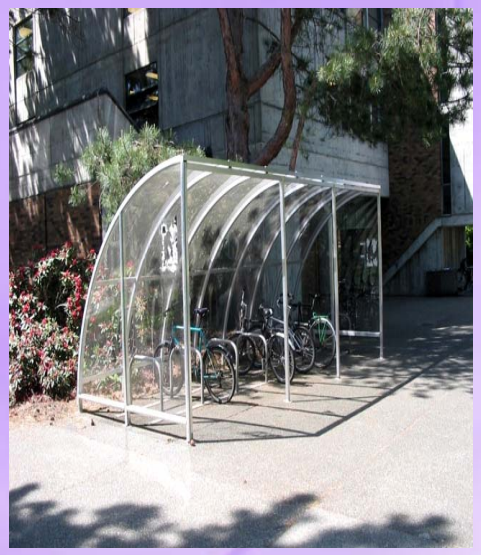
Study Purpose

- To examine the association of cultural and physical workplace supports for active commuting with employee active commuting behavior

Data Collection

- Study set in Manhattan, KS (pop: 50,737)
- Online survey with participants recruited through links from local websites, emails to area employers, fliers distributed to local businesses
- Eligibility included being employed and physically able to walk or bicycle
- N= 375 respondents
  - Mean age = 39.4 years
  - 60% female
  - 94% high school graduates
  - 90% White

Measures



- AC: Number of times walk or bike to or from work per week – dichotomized as zero trips vs. at least once per week
- Physical workplace supports for AC (yes/no)
  - Availability of bike parking
  - Bike storage policy
  - Availability of showers/lockers
- Cultural workplace supports for AC
  - Perceptions that employer encourages AC (recoded to yes/no)
  - Perceptions of number of coworkers who AC (recoded to none vs. some)

Analyses

- Binomial logistic regression predicting the likelihood of walking or biking to work at least once per week according to:
  - number of reported physical workplace supports
  - number of reported cultural workplace supports
- Separate analyses for full sample, for males vs. females, and for younger (18-39) vs. older (40+) adults
- Controlled for sex, age, race, education, and perceived walking time to work

Results

- 26% of the sample reported AC to work at least once per week – higher among males (37%) and younger adults (32%)
- 76% reported workplace possessed at least one *cultural* support for AC – higher among males (84%) but no difference across age groups
- 71% reported workplace possessed at least one *physical* support for AC – higher among males (77%) but no difference across age groups

Results

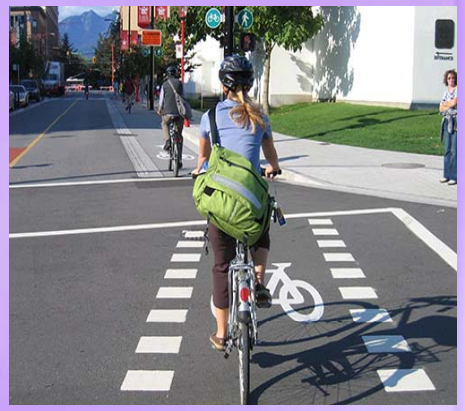
- Having both physical and cultural supports related to increased odds of AC, especially among women

Sample	Number of Physical Supports		One or more cultural supports	At least one of each type of support
	Two or more	One		
Full	3.62* (1.71-7.69)	0.97 (0.43-2.20)	2.56* (1.19-5.99)	6.42* (1.38-19.80)
Males	1.88 (0.67-5.28)	0.29 (0.08-1.00)	2.17 (0.69-8.87)	1.12 (0.17-7.25)
Females	10.30* (2.74-18.73)	3.74* (1.08-8.87)	2.83* (1.23-6.21)	5.39* (1.58-14.25)
18-39 yrs	3.45* (1.23-9.71)	0.73 (0.23-2.34)	2.38 (0.77-7.34)	2.49 (0.71-8.13)
40+ yrs	3.79* (1.17-12.29)	0.77 (0.20-2.97)	2.41 (0.65-8.99)	2.31 (0.45-11.72)

* significantly greater likelihood of AC at least once per week ($p<.05$)

Conclusions

- Both cultural and physical workplace supports associated with AC
- Effects of workplace interventions for promoting physical activity have been mixed (Proper et al., 2003; Dishman et al., 1998)
- Most previous studies have employed largely *individual-level* approaches focused on *leisure-time* physical activity
- A supportive cultural and physical workplace environment may facilitate greater *utilitarian* physical activity in the form of walking and biking to work



Conclusions

- Workplace supports for AC especially important among women
  - other research shows women have stronger preferences for community cycling infrastructure (e.g., off-road routes; Garrard et al., 2008)
- Need additional qualitative and experimental research to explore why AC supports differentially benefit women
  - safety, appearance, social support, etc.?

Conclusions

- Social support from coworkers actively commuting may be reinforcing (Wen et al., 2005)
- Need to foster AC within organizations via:
  - team challenges and other worksite events
  - physical changes including showers, bike racks, covered and secure bike parking
  - workplace policies – e.g., relaxed dress code
  - financial incentives – e.g., health insurance premium reductions, parking refunds, tax breaks
- Need to better monitor AC rates and document the costs of AC investments in comparison to the savings enjoyed by both employees and employers

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Preventing Chronic Disease, in press