

To Drive or Not to Drive: What influences walking and cycling to work?

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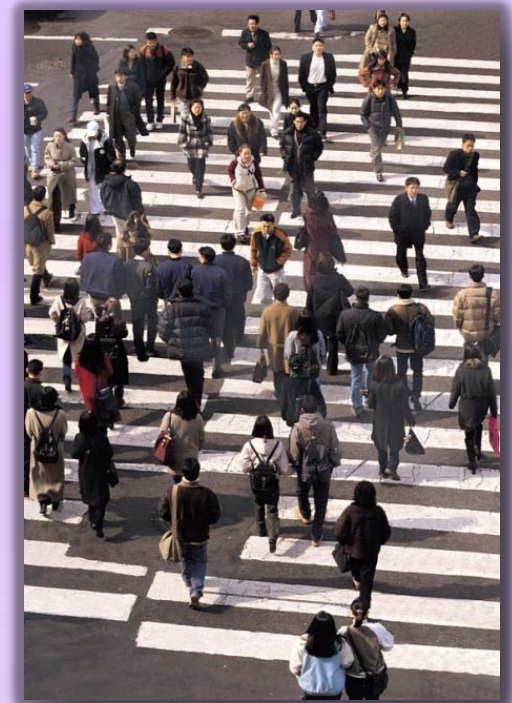


- Physical activity (PA) is associated with a reduced risk of numerous chronic diseases
- Recommendation: 30 minutes of moderate-intensity activity on most days of the week
- Moderate-intensity PA sufficient to achieve health benefits and maintain weight
- Minimum 10-minute bouts
- Active commuting (AC)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



Benefits of Active Commuting

- Environmental
- Safety
- Economic
- Social
- Psychological
- Physical



Health Benefits of Active Commuting

- Lower odds of obesity
(Lindstrom, 2008)
- Decreased risk of all-cause mortality
(Andersen et al., 2000)
- Protective cardiovascular effect
(Gordon-Larsen et al., 2009; Hamer & Chida, 2008)
- Lower HDL cholesterol (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 identified factors that 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, little consistent research exists on what influences AC among adults (Ogilvie et al., 2004)



Investigating Active Commuting at K-State and in Manhattan

- Two online surveys
 - K-State – April-May 2008
 - Manhattan – Sept-Nov 2008
- Assessed demographics, physical activity participation, AC behavior, AC influences (personal, institutional, community), etc.

Sample	N	% Female	Mean Age
KSU			
Students	457	57.5	22.0
Faculty/staff	441	54.0	44.5
Manhattan	431	60.5	39.6



Prevalence of Active Commuting at K-State and in Manhattan

Sample	Walk %		Bike %		Total AC %	
	None	Daily	None	Daily	None	Daily
KSU						
Students ¹	26%	54%	79%	10%	21%	62%
Faculty/staff ¹	79%	13%	86%	6%	69%	19%
Manhattan ²	85%	11%	81%	17%	73%	24%

1. Daily in KSU study = at least 4+ trips to campus per week
2. Daily in Manhattan study = at least 4+ days per week

- Students more likely to actively commute than faculty/staff or general 'Little Apple' residents
- Large percentage of avid bikers responded to the Manhattan survey



Factors Differentiating Active vs. Non-Active Commuters to Campus

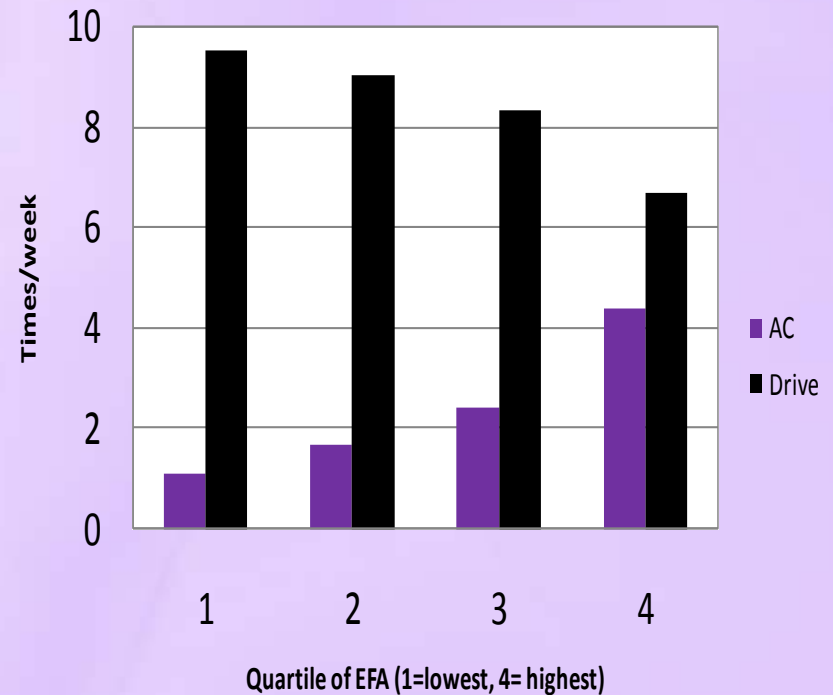
- Are certain people more likely to walk or bike to work (campus)?

Factor	Likelihood of Walking	Likelihood of Biking
Female		↓
Older than 25 years	↓	↓
Faculty (vs. student)	↓	
> 20 min distance	↓	↓
Meets PA reccs	↑	↑

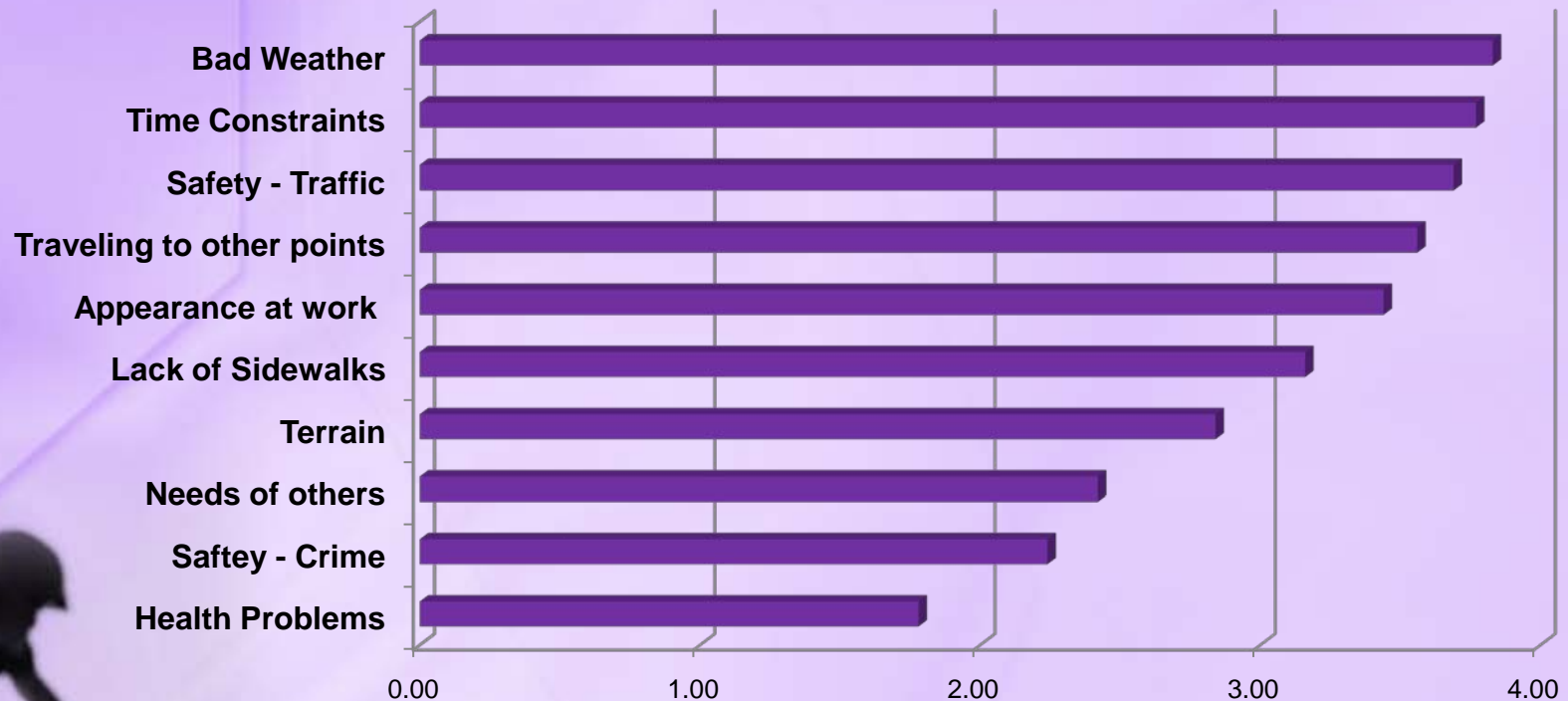


Ecological Attitudes and Active Commuting

- Are stronger ecologically-friendly attitudes related to AC behaviors and influences?
- Higher rates of AC with higher EFA (see graph)
- People with higher EFA also had greater self-efficacy for AC and perceived stronger motivations and fewer barriers for AC



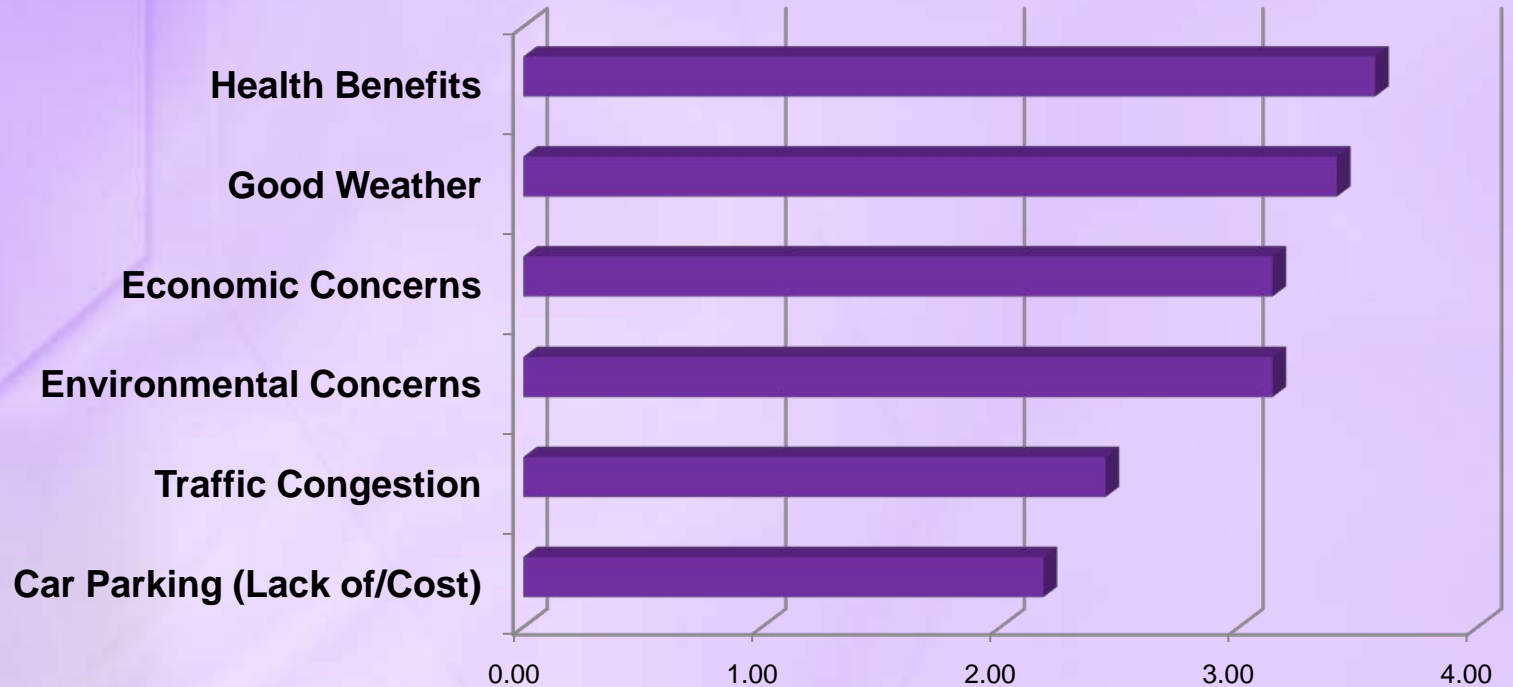
Perceived Barriers to Active Commuting



- Safety from traffic, traveling to other points, appearance at work, lack of sidewalks = modifiable!



Motivators for Active Commuting



- Health, economic, and environmental concerns all important
- Traffic and lack of/cost of parking not pushing people to AC



Workplace Supports and Active Commuting

- Does having **cultural** and **physical** workplace supports affect the likelihood of AC?
 - cultural – co-workers AC, employer encourages AC
 - physical – bike parking, bike storage, showers
- Presence of both cultural & physical supports related to walking/biking to work at least once/week, *but more so amongst women*



Recommendations to Promote AC

- **Individual-level strategies**
 - driver and cyclist education about AC
 - promotional media campaigns
- **Social strategies**
 - ‘bikepooling’
 - active commuting challenges
 - involve community opinion/behavior leaders
- **Environmental strategies**
 - improved community infrastructure for walking and biking (sidewalks, bike lanes, trails, etc.)
 - mixed use destinations
 - workplace renovations and policies
 - economic (dis)incentives



AC Research and Practice Needs

- Better surveillance of AC rates before and after changes
- Understanding of Complete Streets policy-making
- More collaboration between disciplines and between researchers and professionals
- Study and communicate the ‘cross-fertilization’ of AC benefits to individuals and communities



For more information:

- www.bikebelong.org
- www.onelesscar.org
- www.resourceconservation.mb.ca/gci/walknroll/what



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