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**Associations of perceived
environment with walking
vary by gender and walking
purpose**



Background

- Studies have indicated gender differences in perceived environmental correlates of walking, but results are not clear.
- At a population level, both men and women are not walking enough (recommendation is 150 minutes per week of at least moderate intensity activity) to prevent cardiovascular and other disease conditions.
- It is important to understand variations in the relationship between the built environment and walking to tailor interventions to specific populations.
- Previous studies have not considered gender differences for leisure and transportation walking separately.



Objective

- To explore the pattern of associations between perceived environment and walking for transportation and leisure in men and women



Methods

- Adults (N=2199) were recruited from neighborhoods in 2 cities in the US selected for variation in walkability and income.

High walk High income	Low walk High income
High walk Low income	Low walk Low income



Measures

- Participants completed the Neighborhood Environment Walkability Scale (NEWS)
 - 8 perceived environment subscales:
 - aesthetics, walking/biking facilities, pedestrian safety, safety from crime, land use mix and access, residential density, street connectivity and access to recreational facilities.
- International Physical Activity Questionnaire (IPAQ) long version.
 - minutes walking per week for transport or leisure were calculated.



Analyses

- Regression analyses were performed separately by gender and controlling for age, ethnicity and education.
- The association between each perceived environment subscale and walking for transport or leisure were explored separately.
- In addition, the interaction between gender and specific destinations (e.g. work, stores, recreation facilities, public places) within a 20 minute walk was also explored for the 2 walking outcomes.



Sample

- Female 48%
- White 75%
- Married 62%
- College education 65%



Results

- 33% of men and 31% of women reported walking for transport for 150 minutes or more each week
- Significantly more ($p < .001$) women (27%) than men (22%) reported walking 150 or more minutes for leisure each week



Females

	Transport	Leisure
land use access	+ p<.003	
land use mix	+ p<.003	
street connectivity	+ p<.003	
residential density	+ p<.03	+ p<.03
pedestrian safety		
safety from crime		
walking/biking facilities		
aesthetics		+ p<.002
access to recreational facilities		+ p<.004



Males

	Transport	Leisure
land use access	+ p<.001	
land use mix	+ p<.001	
street connectivity	+ p<.001	
residential density	+ p<.003	+ p<.003
pedestrian safety	+ p<.02	
safety from crime	- p<.04	- p<.04
walking/biking facilities		
aesthetics	+ p<.001	+ p<.05
access to recreational facilities		+ p<.02



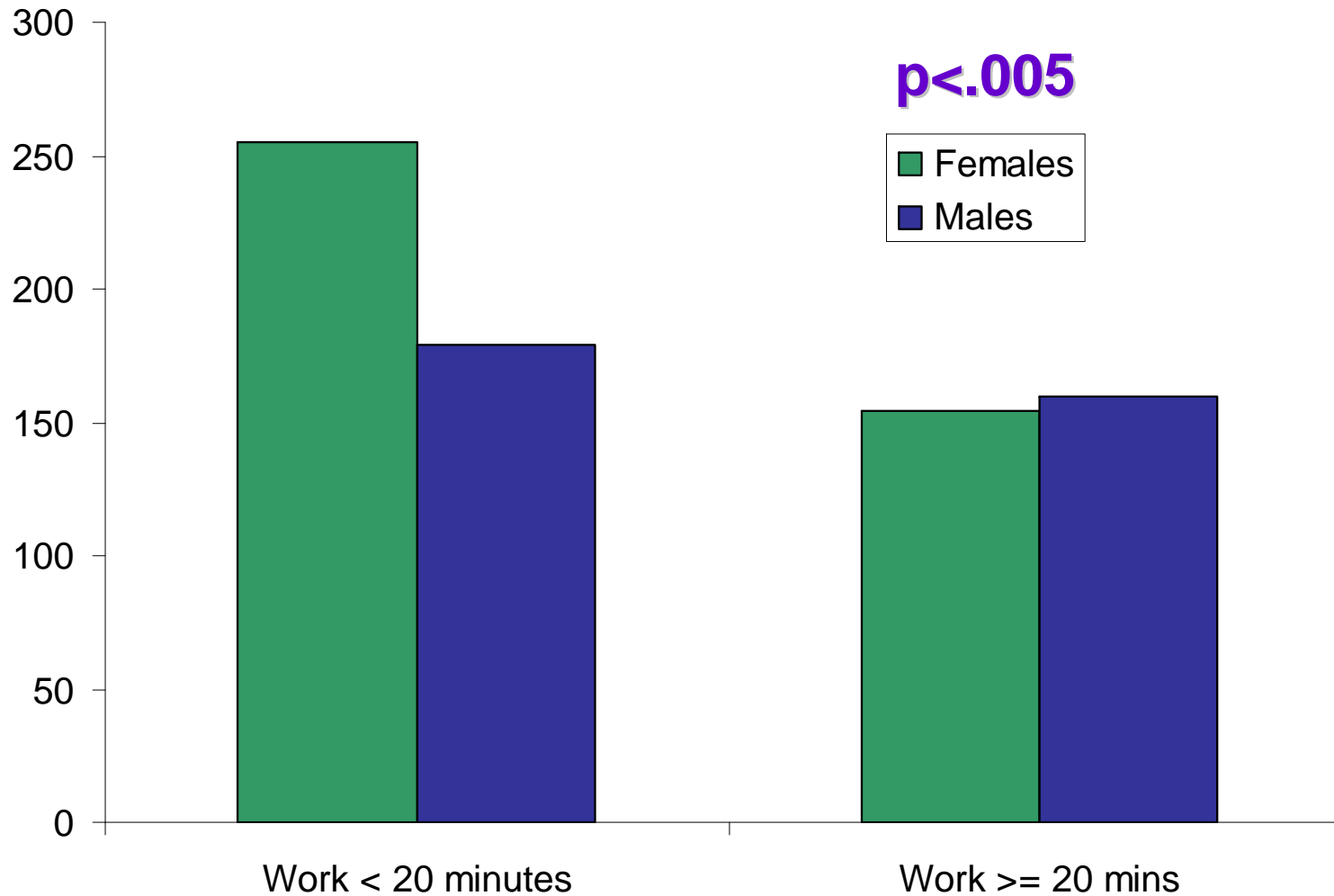
Males

Females

	Transport	Leisure	Transport	Leisure
land use access	+		+	
land use mix	+		+	
street connectivity	+		+	
residential density	+	+	+	+
pedestrian safety	+			
safety from crime	-	-		
walking/biking facilities				
aesthetics	+	+		+
access to recreational facilities		+		+



Walk for transport x distance to work x gender





Conclusions

- Traditional urban form variables are related to walking for transport in men & women
- Aesthetics & access to recreational facilities are related to walking for leisure in men & women
- Inconsistent results for safety
- Creating mixed land use neighborhoods with worksites within 20 minutes may increase walking for transport in women