

Exploring the Effects of Demographic Factors and Preferences on Family Walking Trips

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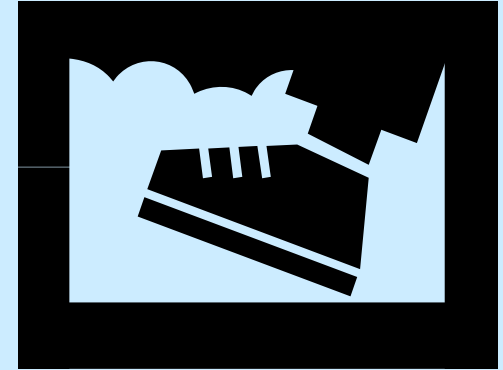
Primary Research Objectives

- Understand household characteristics and environmental factors influencing walking trips for households with children
- Determine if preferences for walking environments may influence walking trips for these households and why



Study Site and Methodology

- Urban and suburban neighborhoods in Seattle, WA
- Canopy Coverage
- % of Destinations with 1km network
- Postal survey to residences:
 - Walking Behaviors
 - Demographic Information
- Photo-questionnaire
 - Similarity
 - Preference
 - Rationale



Study Population:

617 respondents
21% response rate

250 households with children
41% of study sample

Independent of sampling strata

Study population :
More female respondents
higher education and
higher income than
Census data for
neighborhoods

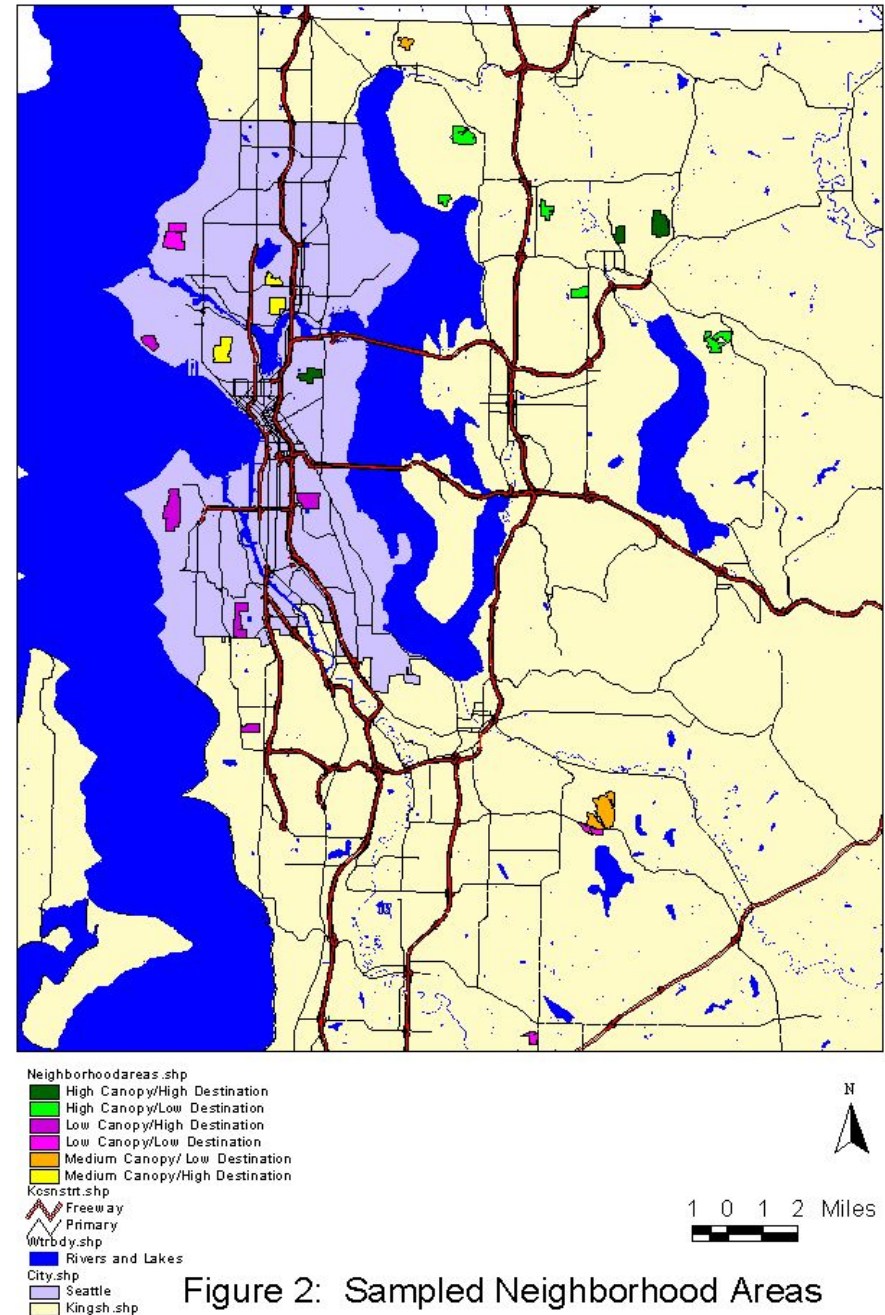


Figure 2: Sampled Neighborhood Areas

Households

With Children

- More frequent trips to schools

children mean=2.41 (1.67)

no children mean=1.27 (0.89)

and parks

children mean=3.49 (1.38)

no children mean=1.45 (1.08)

No difference with vegetation level
and % of accessible destinations

Without Children

- More frequent trips to bars

no children mean=1.57 (1.02)

children mean=1.44 (0.81)

Covariates:

Male

> Age

< Dog

< Education

< Health

< Income

< Car

Demographic Factors

Households with Children

General Demographics

- Age
- # of Cars in Household
- Dog Ownership
- Income



Child Household Characteristics

- Number of Children
- Age of Children

Environmental Factors

- Neighborhood % of Destinations
- Neighborhood Canopy Coverage (objective green measure)
- Similarity Factors (subjective green measure)



High Vegetation Scene



Low Vegetation Scene



Medium Vegetation Scene

Walking to Schools

Variables	Step 1:	Step 2:	Step 3:	Step 4:
	Demographics	+ Child Household Characteristics	+ Accessibility	+ Vegetation
	β	β	β	β
Age	n/s	n/s	-.168*	n/s
# of cars in household	-.238***	-.234***	-.183**	-.160*
# of children in household		.172*	n/s	n/s
Age of children in household		n/s	n/s	n/s
% of destinations			.222**	n/s
Canopy Coverage				n/s
<i>High Veg. Similarity</i> Factor				n/s
<i>Medium Veg. Similarity</i> Factor				n/s
<i>Low Veg. Similarity</i> Factor				n/s
R^2	.076***	.105*	.146**	.139
F change	8.448	3.971	9.490	.620

Walking to Parks

Variables	Step 1:	Step 2:	Step 3:	Step 4:
	Demographics	+ Child Household Characteristics	+ Accessibility	+ Vegetation
	β	β	β	β
Age	n/s	n/s	n/s	n/s
Dog ownership	.164*	.159*	.180**	.162**
Income	.150*	.155*	n/s	n/s
# of children in household		n/s	n/s	n/s
Age of children in household		n/s	n/s	n/s
% of destinations			.215**	n/s
Canopy Coverage				n/s
<i>High Veg. Similarity Factor</i>				.164*
<i>Medium Veg. Similarity Factor</i>				n/s
<i>Low Veg. Similarity Factor</i>				-.221**
R^2	.050**	.044	.089**	.153**
F change	4.381	.411	10.023	4.493

Preferences

High Vegetation Factor



Overall Factor
Preference
Mean=**4.08**, SD=0.86

Scene Preference
Mean=**3.97**, SD=1.24

Medium Vegetation Factor



Overall Factor
Preference
Mean=**3.04**, SD=0.82

Scene Preference
Mean=**2.95**, SD=1.03

Low Vegetation Factor



Overall Factor
Preference
Mean=**2.22**, SD=0.93

Scene Preference
Mean=**1.91**, SD=1.07

Walking to Parks

Factor Preference

High Preference (>3.7) =**3.71**
SD=1.31 (n=164)
Low Preference (<3.2) =**2.59**
SD=1.30 (n=34)

Scene Preference

High Preference (>3.7)=**3.67**
SD=1.30 (n=156)
Low Preference (<3.2) =**3.11**
SD=1.39 (n=65)

Qualitative Themes for High Vegetation Scene

Theme	Sample Concepts from Each Theme	High Preference (>3.7) n=177	Low Preference (<3.2) n=67
High Vegetation	Lots of: vegetation, greenery, gardens; mature plants and trees; lush, wild, natural, native, dense, wooded	89 (50.3%)	7 (10.4%)
Interesting	Interesting, variety, diverse, changing, lots for the kids to explore	55 (31.1%)	2 (3%)
Isolated	Too secluded, isolated, too enclosed, claustrophobic, no visibility, dark, overgrown, too many trees, can't see, crowded, poor access for stroller	3 (1.7%)	22 (32.8%)
Safety Concerns	Not safe, creepy, hiding places for people, vulnerable, frightening	4 (2.3%)	18 (26.9%)

Vegetation Pattern is Important



Mean=3.97, SD=1.24



Mean=4.18, SD=0.96



Mean=4.27, SD=0.92

Conclusions

- A few differences in walking behavior between households with and without children
- Demographic and environmental factors were associated with walking trips for households with children
- High preference for high vegetative walking environments were also related to walking trips to parks



- However, pattern of that vegetation may prove to be a more important factor in understanding walking trips for these households.