

Promoting Active Living Among Persons with Physical Disabilities *Evidence for Distinct Neighborhood-level Determinants*

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Active Living Research Conference
February 24, 2007. Coronado, CA

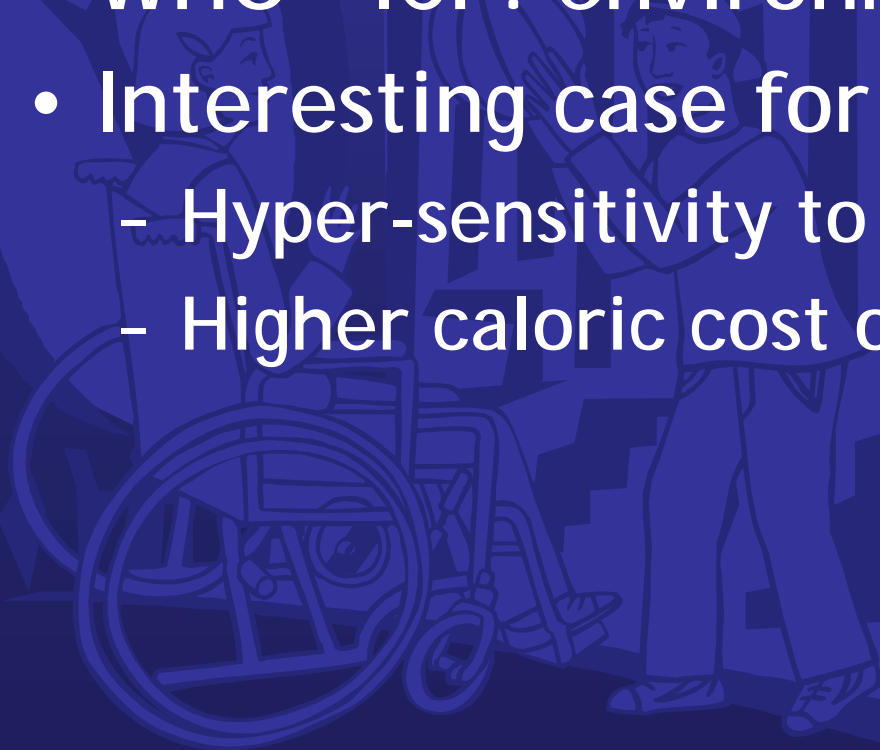


National
Défense

Défense
nationale

Underlying Principles

- Live in communities, not hospitals
- Less active than general population
- WHO - ICF: environments
- Interesting case for active living:
 - Hyper-sensitivity to environments
 - Higher caloric cost of basic ambulation



Determinants of Active Living Among Persons with Physical Disabilities

Individual Factors

Type / Severity of disability



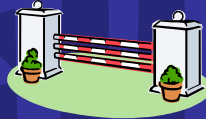
Socio-demographic variables



Social-cognitive variables



Perceived barriers / environment



Environmental Factors

Observed environment

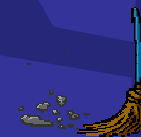


Active Living Among Persons with Disabilities

Physical activity



Activities of daily living



Adapted from Fougeyrollas et al (RIPPH 1998)

Potential Determinants

- Existing data from able-bodied population¹
 - Activity-friendliness
 - Density of destinations
 - Safety
- 3 specific items (buoys²)
 - Quality of walking surface
 - Adaptation of signage
 - Accessibility of surroundings

1. Gauvin L, Richard L, Craig CL, Spivock M, Riva M, et al. From Walkability to Active Living Potential. An "Ecometric" Validation Study. *Am J Prev Med* 2005;28(2S2):126-133

2. Glass TA, & Balfour JL, (2003). Neighborhoods, aging and physical disabilities. In I Kawachi, & L Berkman (Eds.), *Neighbourhoods and Health* New York: Oxford University Press.

WALKING SURFACE



SIGNAGE



SURROUNDINGS



Purpose

The main goal of this presentation is to describe the relationship between neighborhood-level determinants of active living and the active living practices of persons with physical disabilities living in a large urban area.



Methods



Recruitment of Persons with Physical Disabilities

- Active persons with physical disabilities:
 - VIOMAX adapted fitness centre in Montreal
- Matched 1-1 for age and disability :
 - archives and current patients of Lucie-Bruneau Rehabilitation Centre

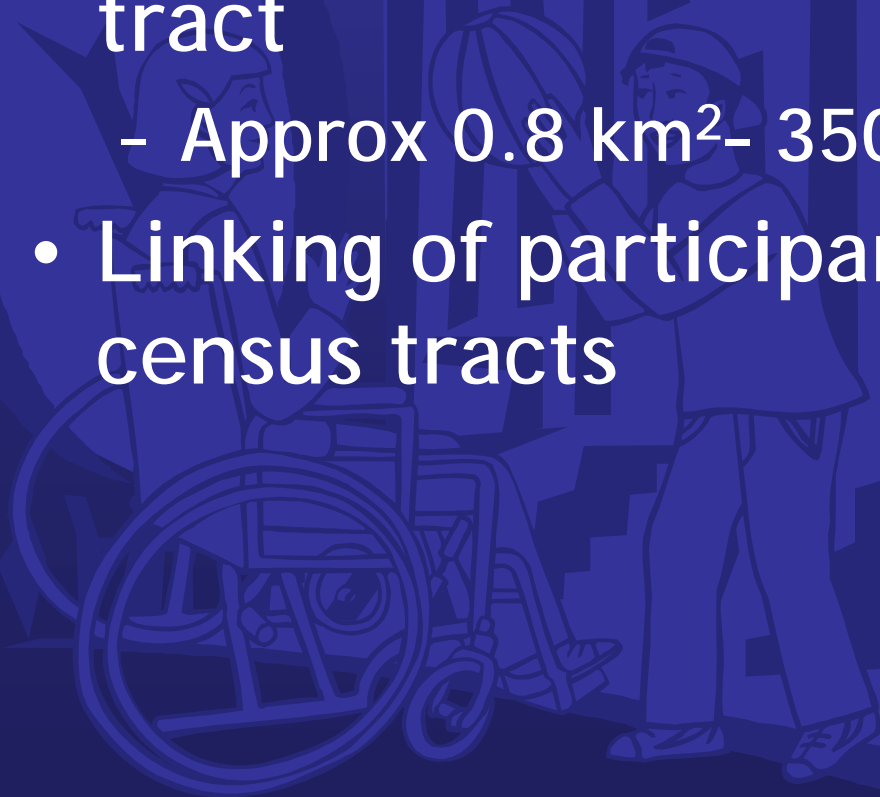


Individual Interviews

- Telephone interviews with persons living with physical disabilities
- Interview contained two indicators of involvement in physical activity:
 - Dichotomous indicator of performing at least 30 min/day of LTPA
 - Dichotomous indicators of use of active transportation

Identification of Residential Neighborhoods of Sample Participants

- Neighborhood operationalized as census tract
 - Approx 0.8 km²- 3500 people.
- Linking of participants' postal codes to census tracts

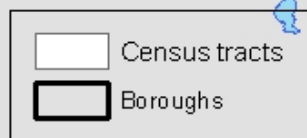


Census tracts

Montreal



0 1 2 4 Kilometers



Systematic social observation

- Teams of 2 observers - 3 day training
- 114 of 521 census tracts in Montreal
- Map and pre-constructed walking route

20) Is the path/sidewalk/walking surface accessible for people with physical disabilities?

Not at all accessible

Completely accessible

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9	10

21) Are the crossing signals and other signs adapted for people with physical disabilities?

Not at all adapted

Completely adapted

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9	10

22) Are the surroundings adapted for people with physical disabilities?

Not at all adapted

Completely adapted

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9	10

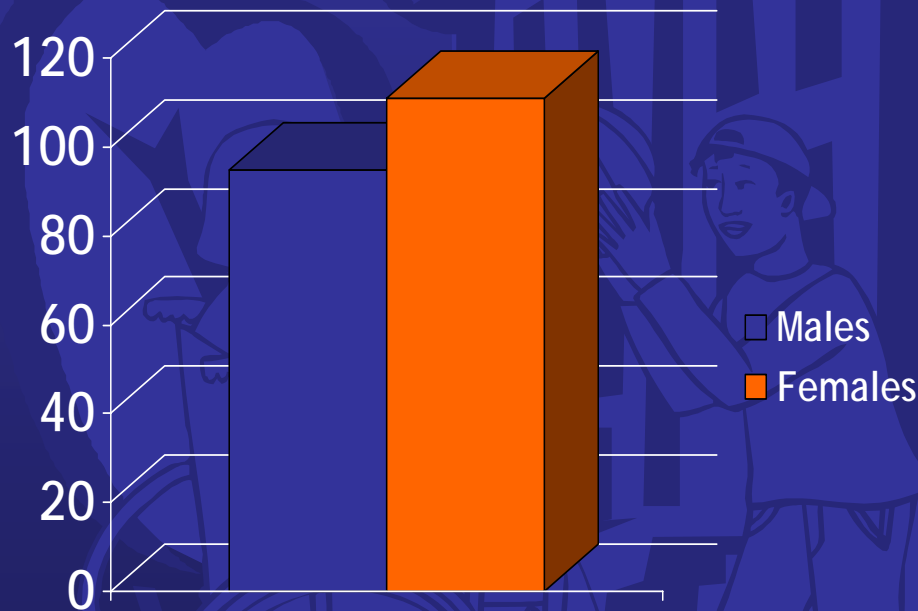
Results

(Sample of Persons)



Descriptive Data on Sample

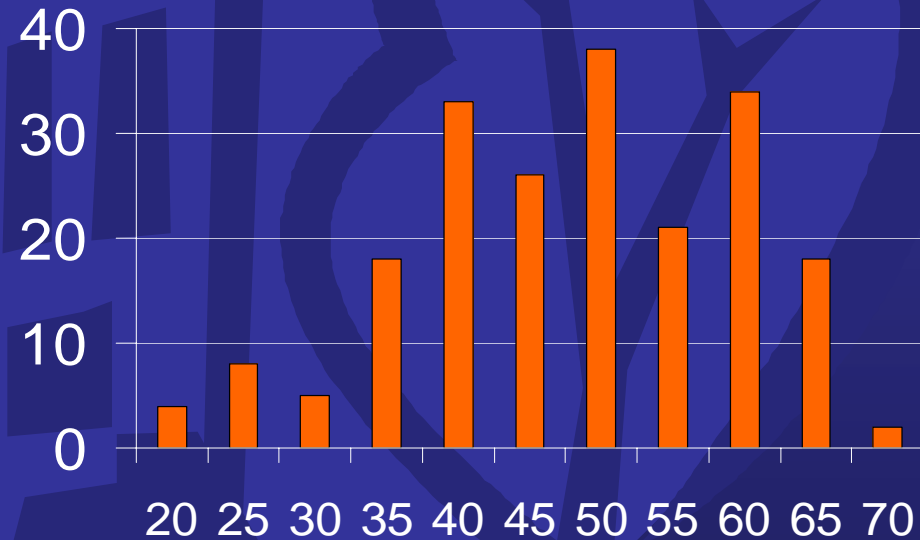
Gender



Gender

95 males; 111 females

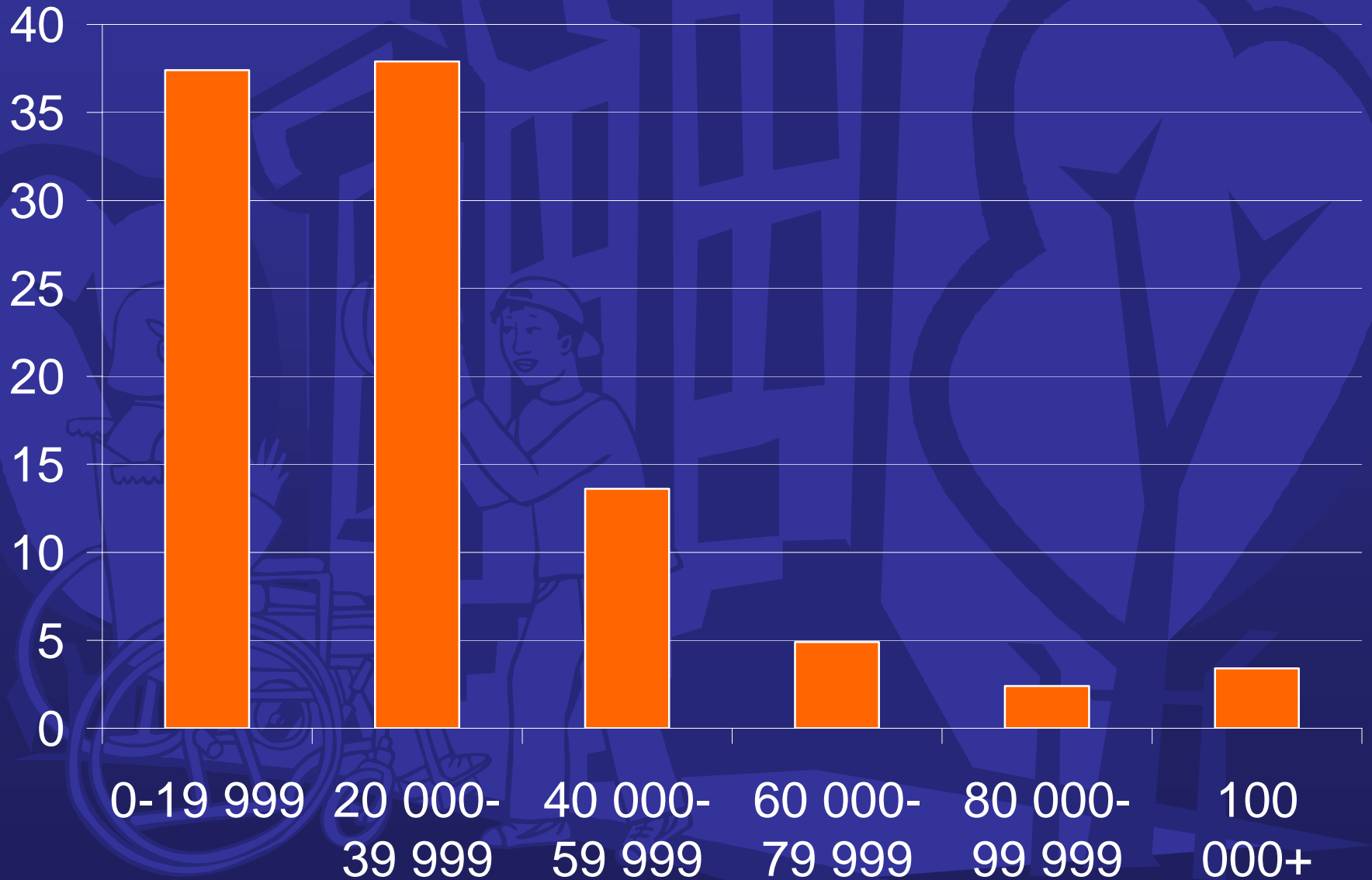
Age



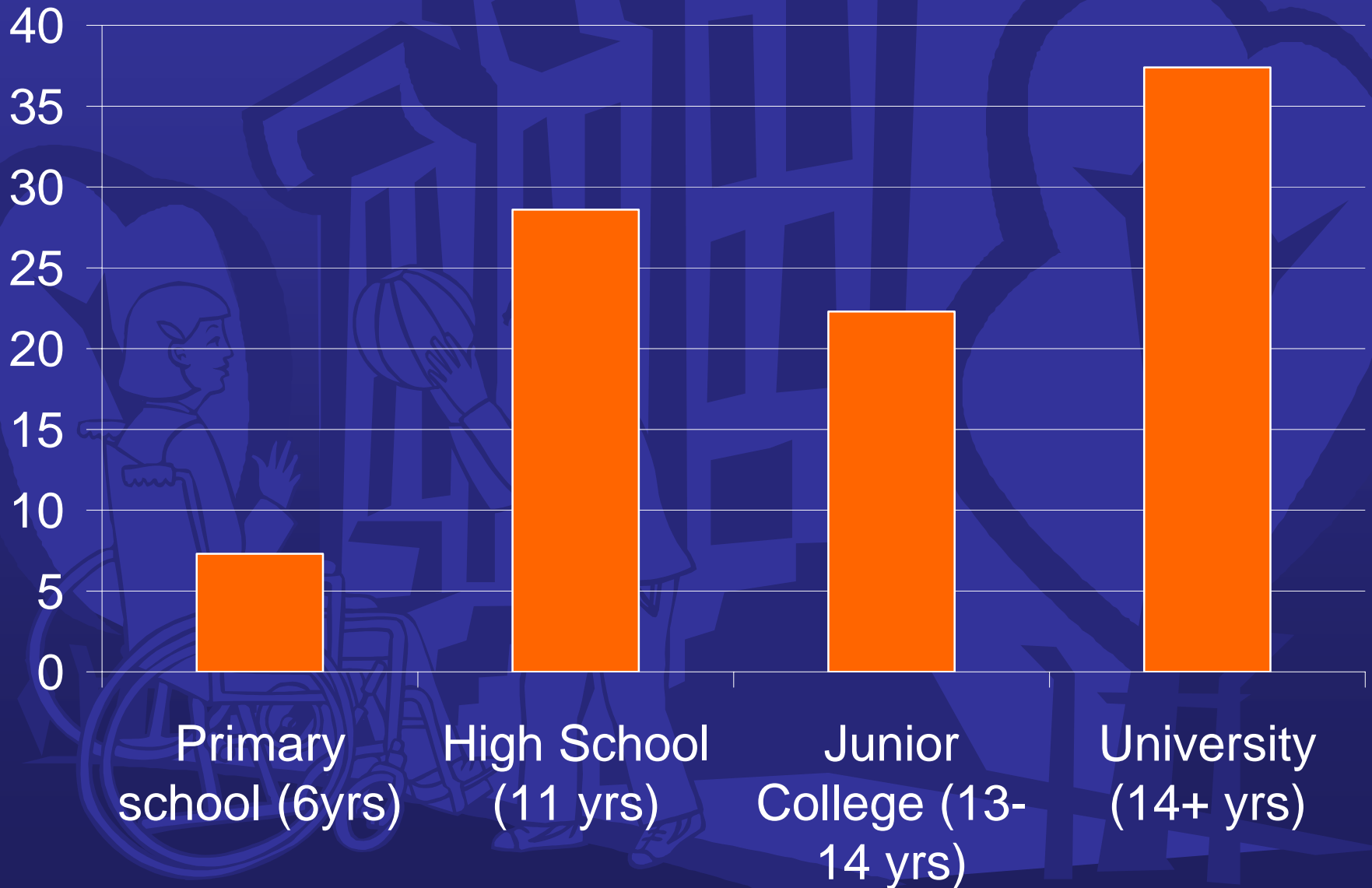
Age

Mean: 48.1; SD 11.1

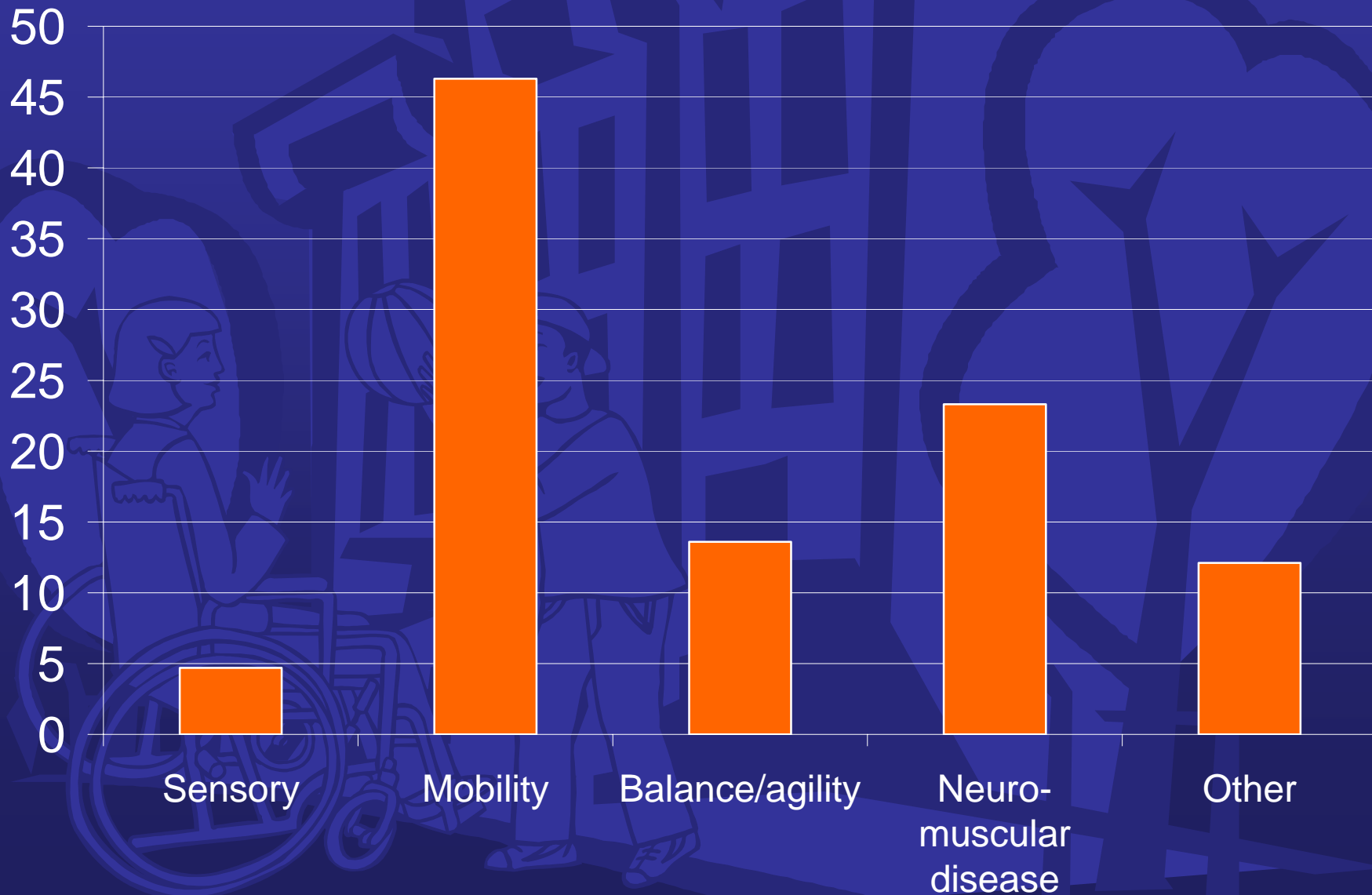
Income Distribution



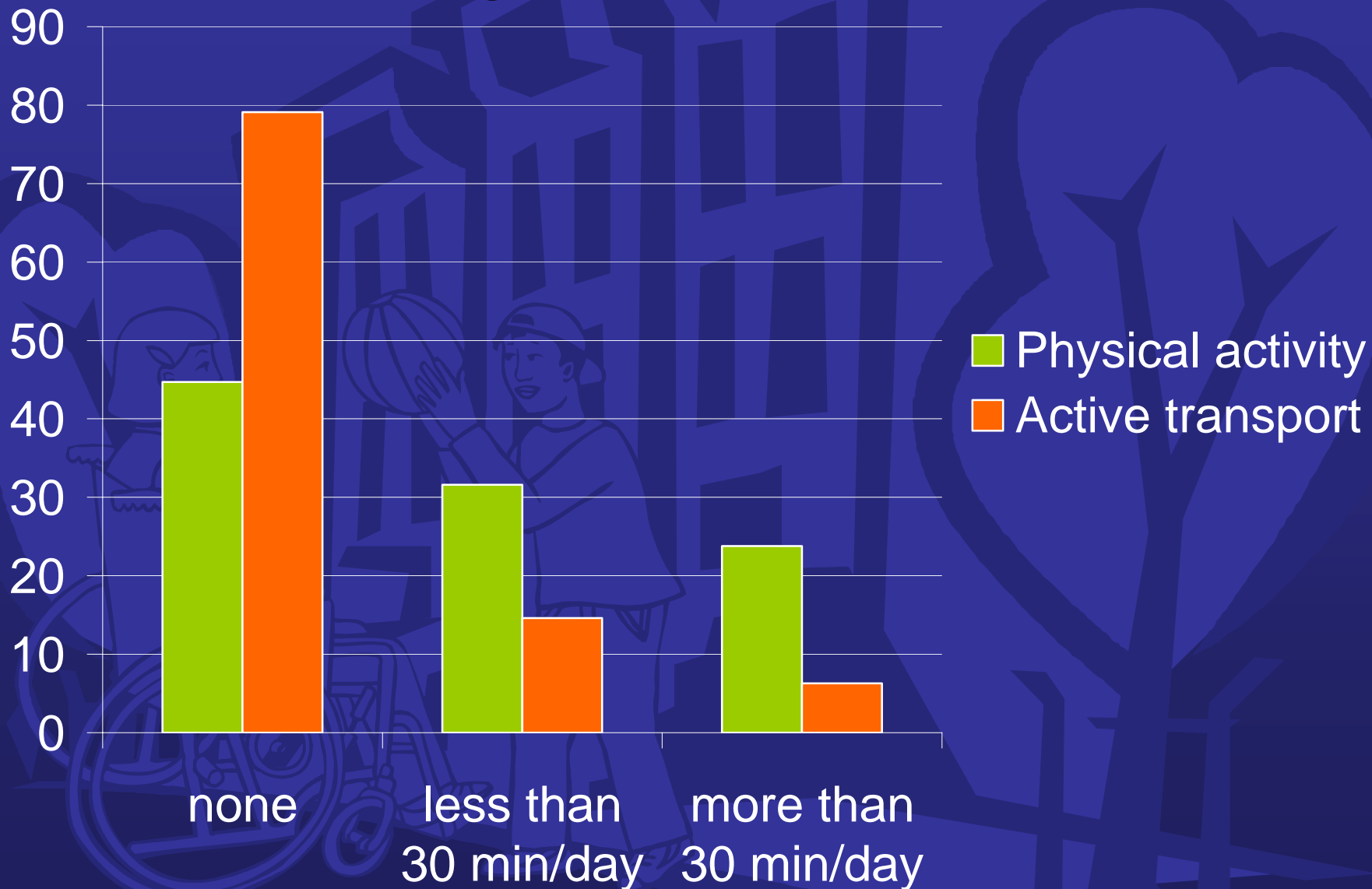
Highest Level of Education



Primary Impairment / Disability



Activity Level (overall)

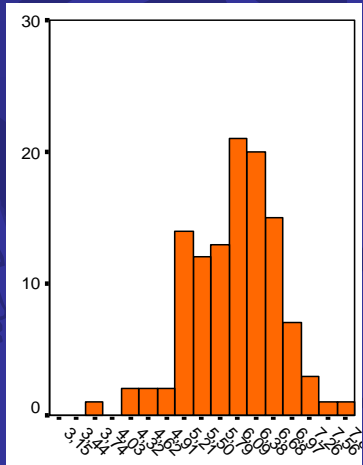


Results

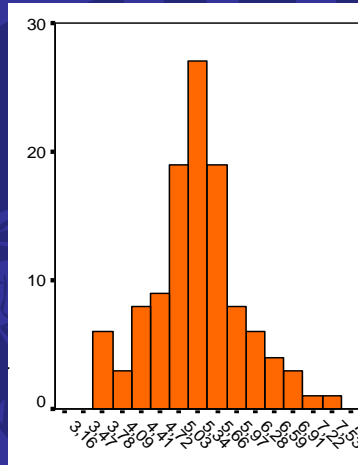
(Sample of Neighborhoods)



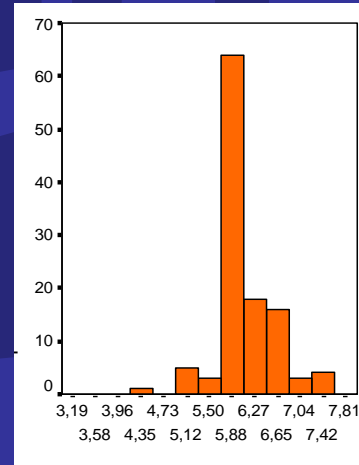
Systematic Social Observation in 114 Neighborhoods



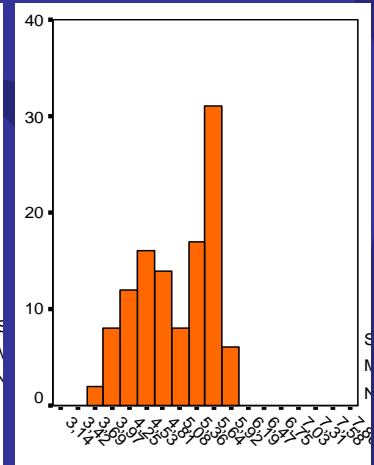
Activity
f-lines



Dens of
Destin



Safety



Buoys

Mean

6.0

5.3

6.1

5.0

SD

0.7

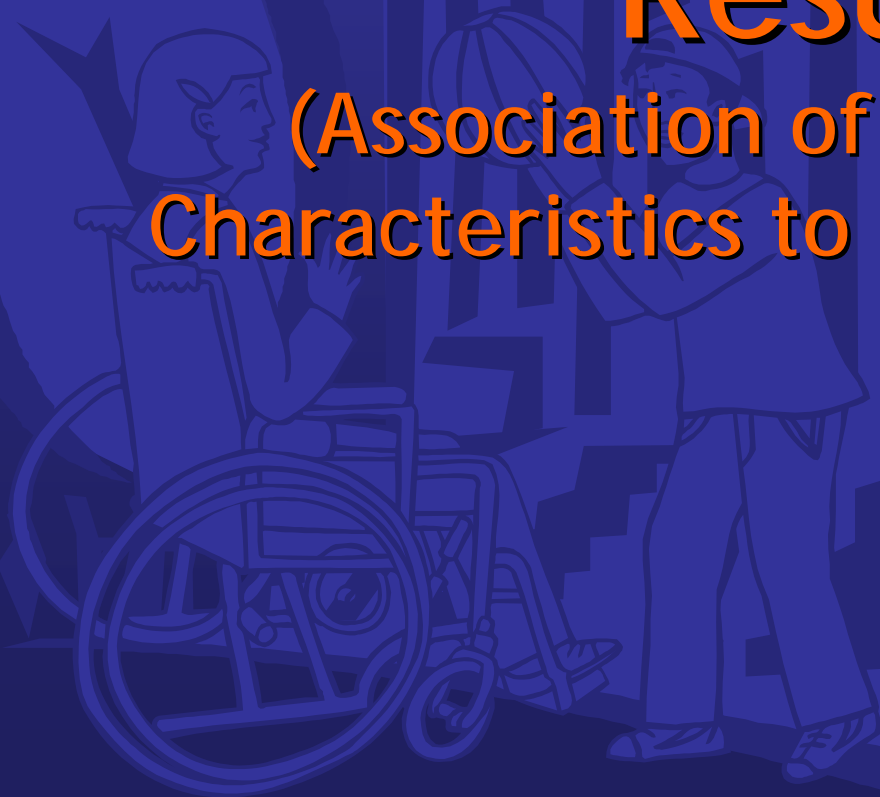
0.8

0.5

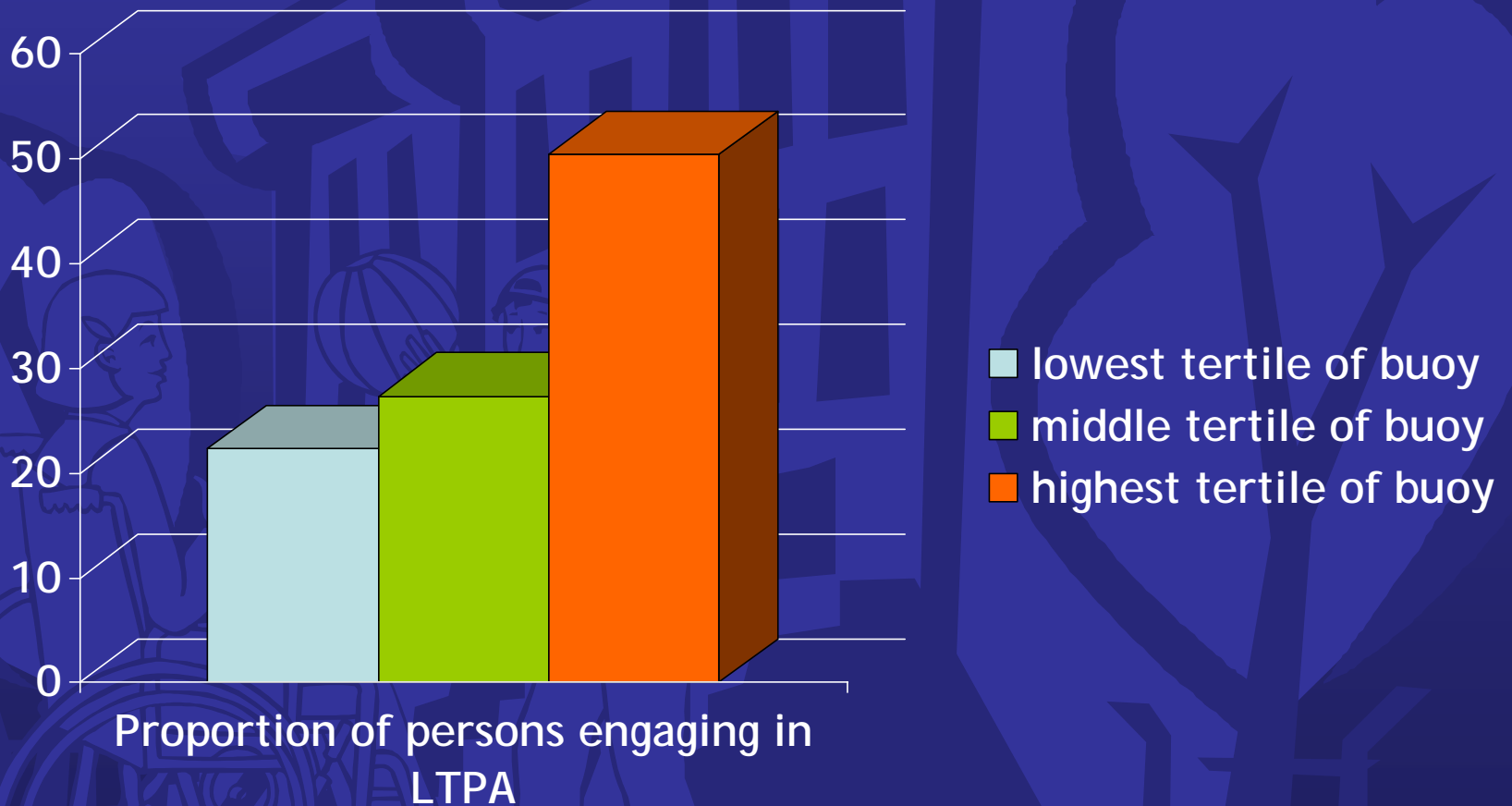
0.6

Results

(Association of Environmental Characteristics to Physical Activity)

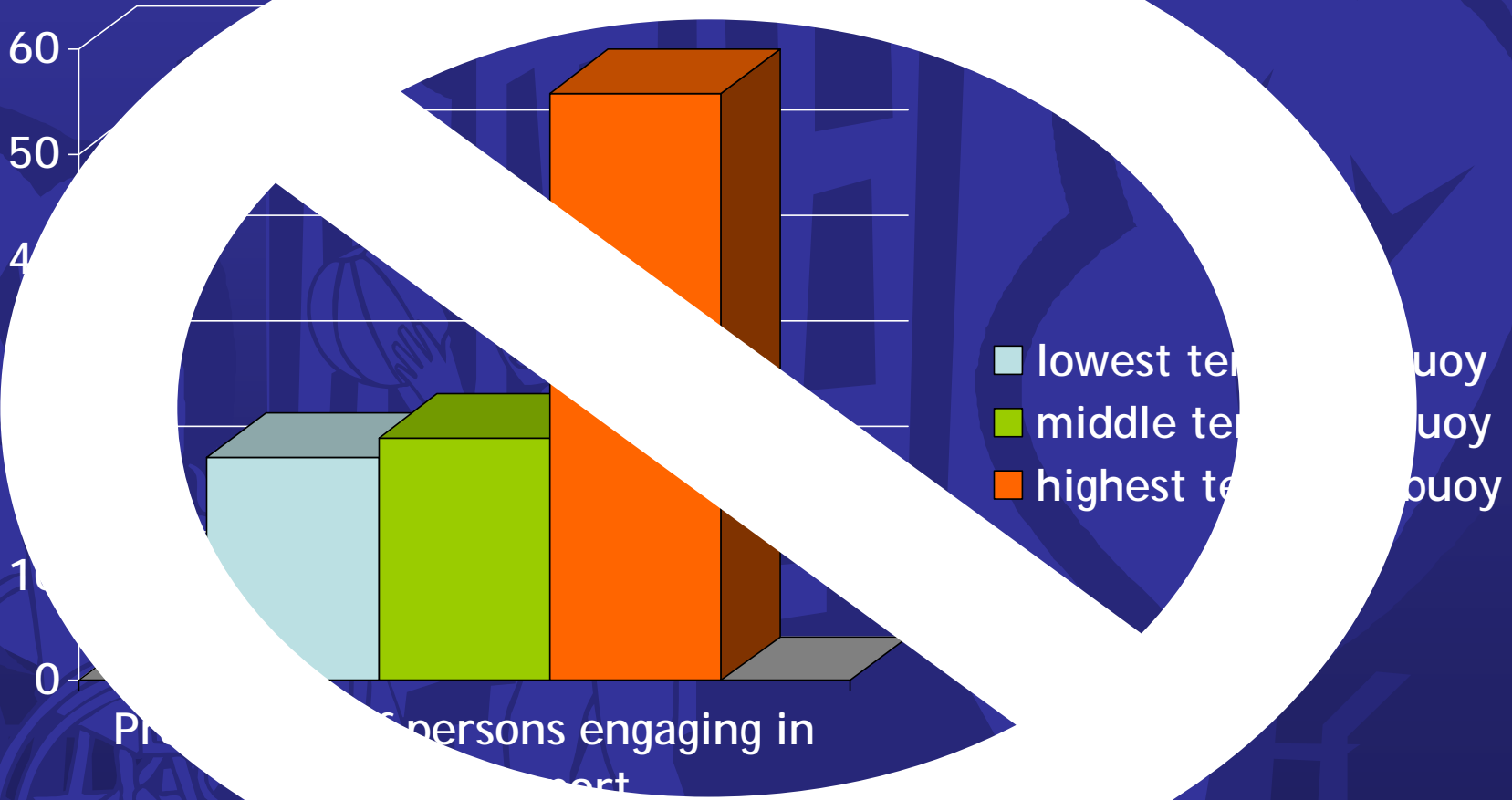


Relationship Between Observational Data and Self-Reports of LTPA



After adjustment, OR:3.80; 95% CI of 1.1-13.0

Relationship Between Observational Data and Self-Reports of Active Transport



Interpretations

- Greater likelihood of LTPA related to presence of buoys
- Greater likelihood of active transportation associated with presence of buoys though probably confounded with other dimensions of the environment and the person
- Location of buoys not always where persons with disabilities reside

Conclusion

- Active living among persons with physical disabilities: influenced by distinct neighborhood-level buoys
- Future directions
 - Interventions to retrofit environment with buoys
 - Alternative activity measures beyond self-report

