

THE ECOLOGY OF WALKING TO SCHOOL

THE EXPERIENCE OF CHILDREN IN INNER CITY
SAN DIEGO AND THE SAFETY OF ROUTES TO SCHOOL



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Why this Research Matters?

SOCIAL & COGNITIVE DEVELOPMENT

Growing up in cities

Personal agency and competency

Dyckman (1961), Carr and Lynch (1968), Lynch (1976), Ward (1978)

SAFETY

Traffic

(Un)Safe Routes to School

Boarnet et al. (2005), Wen et al. (2008)

HEALTH

Motorized travel

Walking to school as daily physical activity

Baig et al. (2009), Martin et al. (2016)

Literature Gap

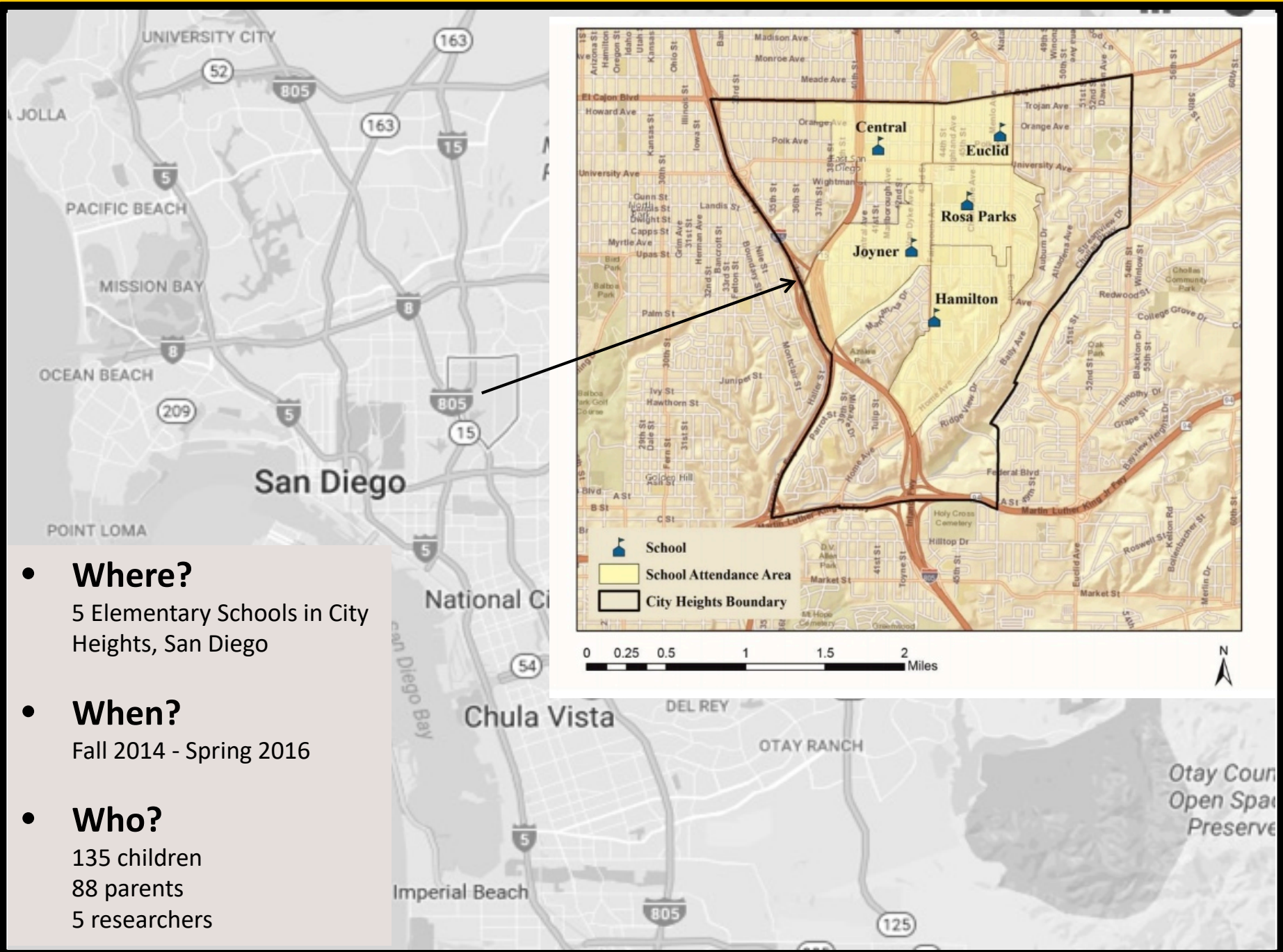
Children's eye-view?

Walking to school in inner city neighborhoods?

(McMillan, 2005; Banerjee, Uhm & Bahl, 2014)

How does the **perception** of the **ecology of the neighborhood** (built environment & social milieu) affect **children's** walking **experience** to school

?



- **Where?**

5 Elementary Schools in City Heights, San Diego











- **When?**

Fall 2014 - Spring 2016

- **Who?**

135 children
88 parents
5 researchers

Study Area

	Street Network	School	Area (sq.m.)	Total Enroll.	Ethnicities (%) (1) Hispanic (2) Asian (3) African/Am	Free/Reduced Meal (%)
Central			0.31	789	78% 14% 6%	96%
Euclid			0.20	603	74% 14% 9%	91%
Hamilton			0.50	547	70% 13% 14%	84%
Joyner			0.43	699	79% 9% 9%	80%
Rosa Parks			0.39	928	80% 15% 3%	95%

Methods

CHILDREN



Cognitive and perception maps / focus group discussion / photo evaluation / surveys / activity diary

PARENTS



Survey questionnaires

RESEARCHERS



Field Reconnaissance / Geo-referencing

**Introduction
and Consenting**

Classroom session 1 - Children receive:

- Leaflet with explanations
- Parental consent form
- Parent survey questionnaire



**Visual
Representation**

Classroom session 2

- Cognitive maps: a) Neighborhood b) Route to school
- Perception maps



**External
Evaluation 1**

- Researchers take pictures of sites mentioned by children



**Structured and
Verbal
Representation**

Classroom session 3

- Children return parent survey questionnaire
(current travel mode, perception of environmental risks, preferences for travel mode)
- Complete children survey questionnaires
(current travel mode, experience, perception, preferences for travel mode)
- Group discussion: photo Evaluation



**External
Evaluation 2**

- Researchers return to sites: assessment of built environment



Preliminary Findings

1. Two distinct trips

- Walking to and walking from school are two different events

2. Acute awareness

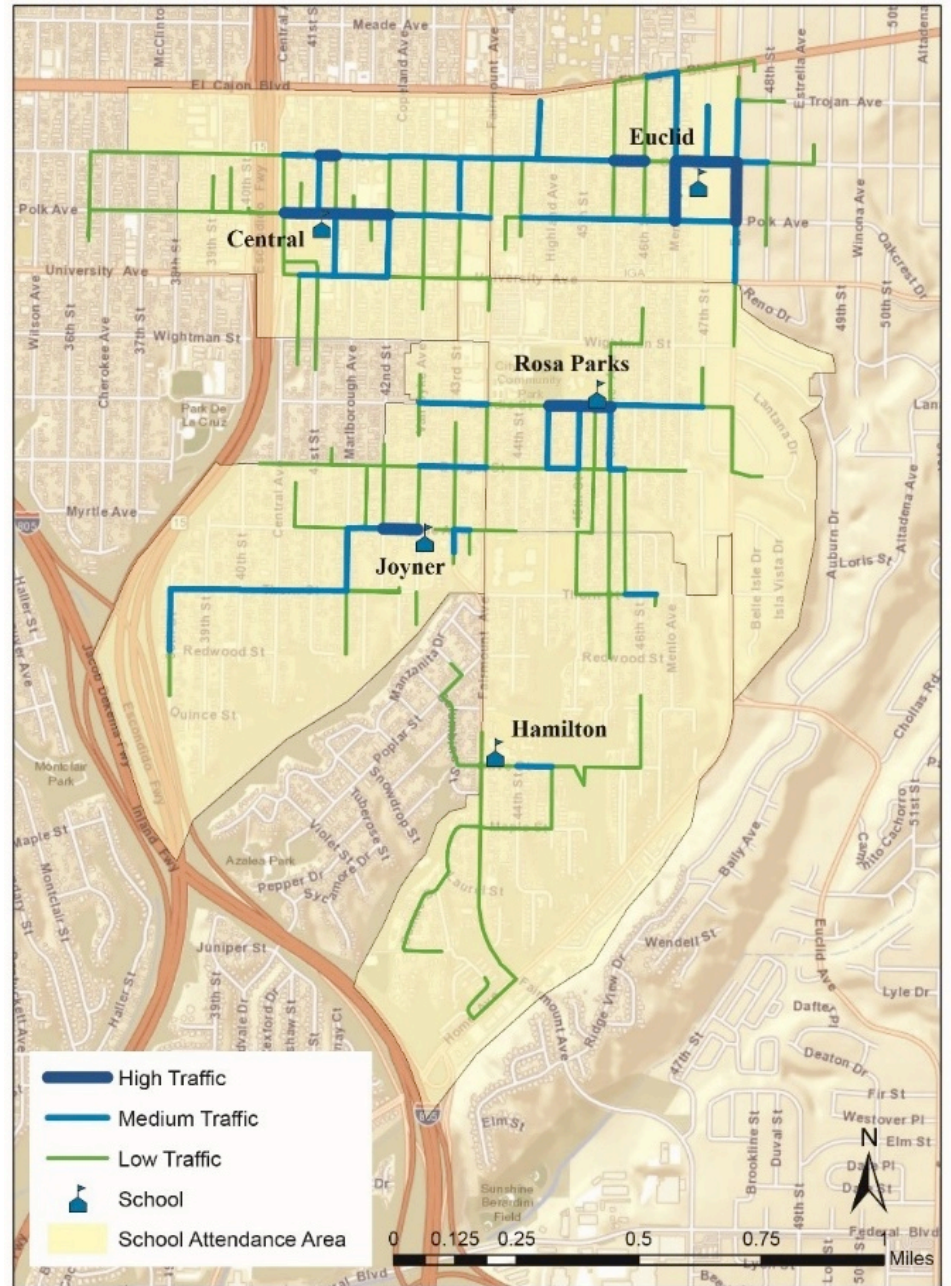
- Children show an acute awareness of risks and dangers

3. Different perceptions

- Children most concerned with social dangers vs. parents with traffic safety

1. Trips

- N = 78
- Average route = 0.43 mile



1. Two distinct trips

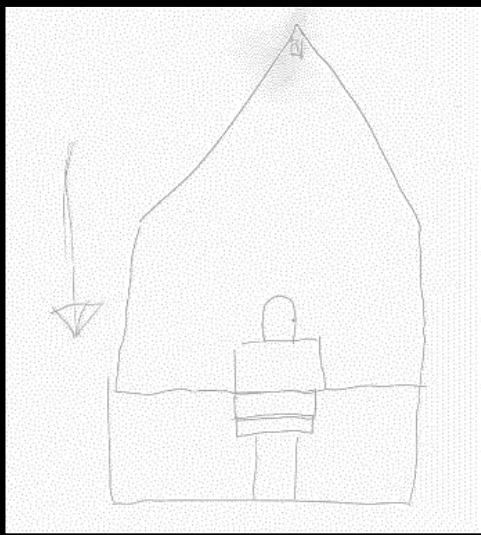
	To School		From School	
Walk	74	53%	80	58%
Car (incl. carpooling)	65	46%	56	40%
School Bus	1	1%	2	2%
Bike	0	0%	0	0%
Total	140	100%	138	100%

- 85% walk most days, including 45% every day
- Most children walk with at least one parent:
54% to and **42% from** school

2. Acute Awareness

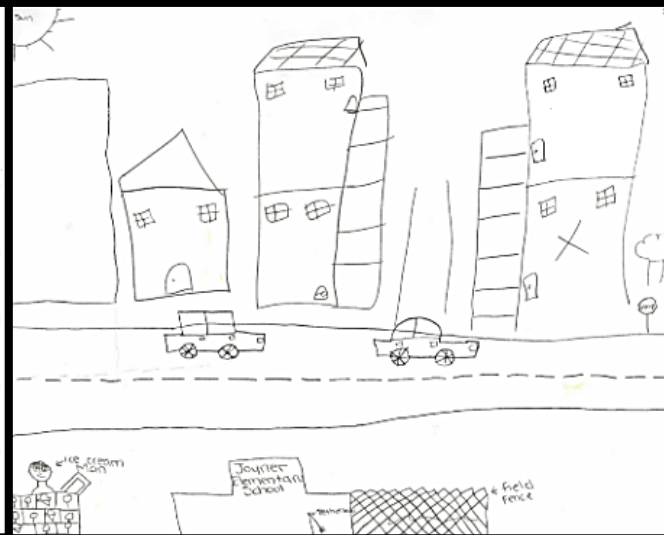
Total N = 122

Place



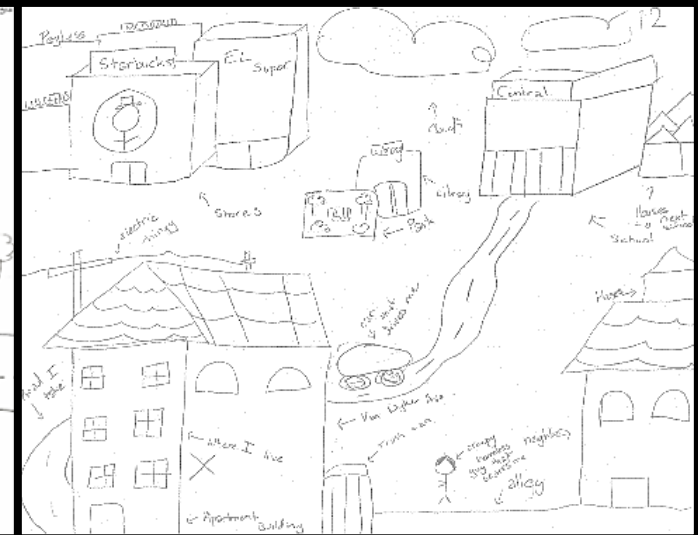
N = 7

Street



N = 60

Community



N = 55

- On average, children drew **23 “items”**

2. Acute Awareness

	Content Description	Content Prevalence (Number of Maps)	Frequency (%)
Urban context and form	Streets	116	95%
	Other houses/apts.	109	89%
Personal Cognitive Anchors	My home	93	76%
	School	90	74%
Streetscape/functional	Fence/gate	59	48%
	Retail stores	54	44%
	Cars	50	41%
Landscape/Appearance	Park/playground	44	36%
	Trees	43	35%
	Parking lot	42	34%
	Shrubbery	40	33%
	Signs	35	29%

"Starbucks because there
coffee or hot chocolate
and camel frappino"

"I don't like Vandyke
Avenue because there is a
lot of gang members"

"I like that street because
my fried lives there and it
is a safe street"

"I don't like the parking lot
because you might get ran
over"

"I don't like because I see
strangers hanging around
there"

271 places were identified

- 67% liked (mostly commercial)
- 23% disliked
- 10% unsafe

2. Acute Awareness

Examples of disliked places



“I don’t like because I see strangers hanging around there”



“I don’t like because when I’m crossing there there is a lot of cars passing”

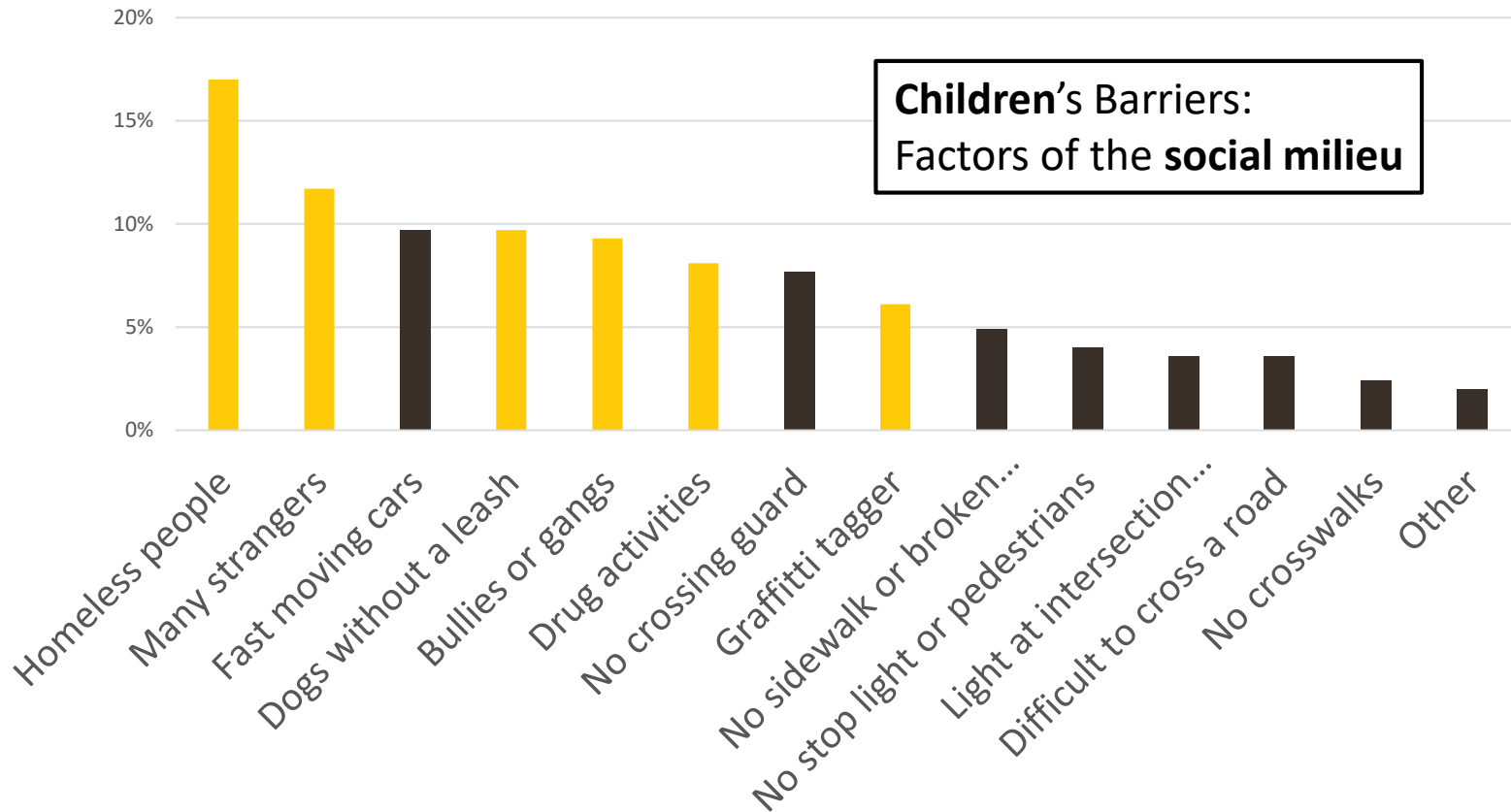


“I don’t like Van Dyke Ave because there are a lot of gang members”

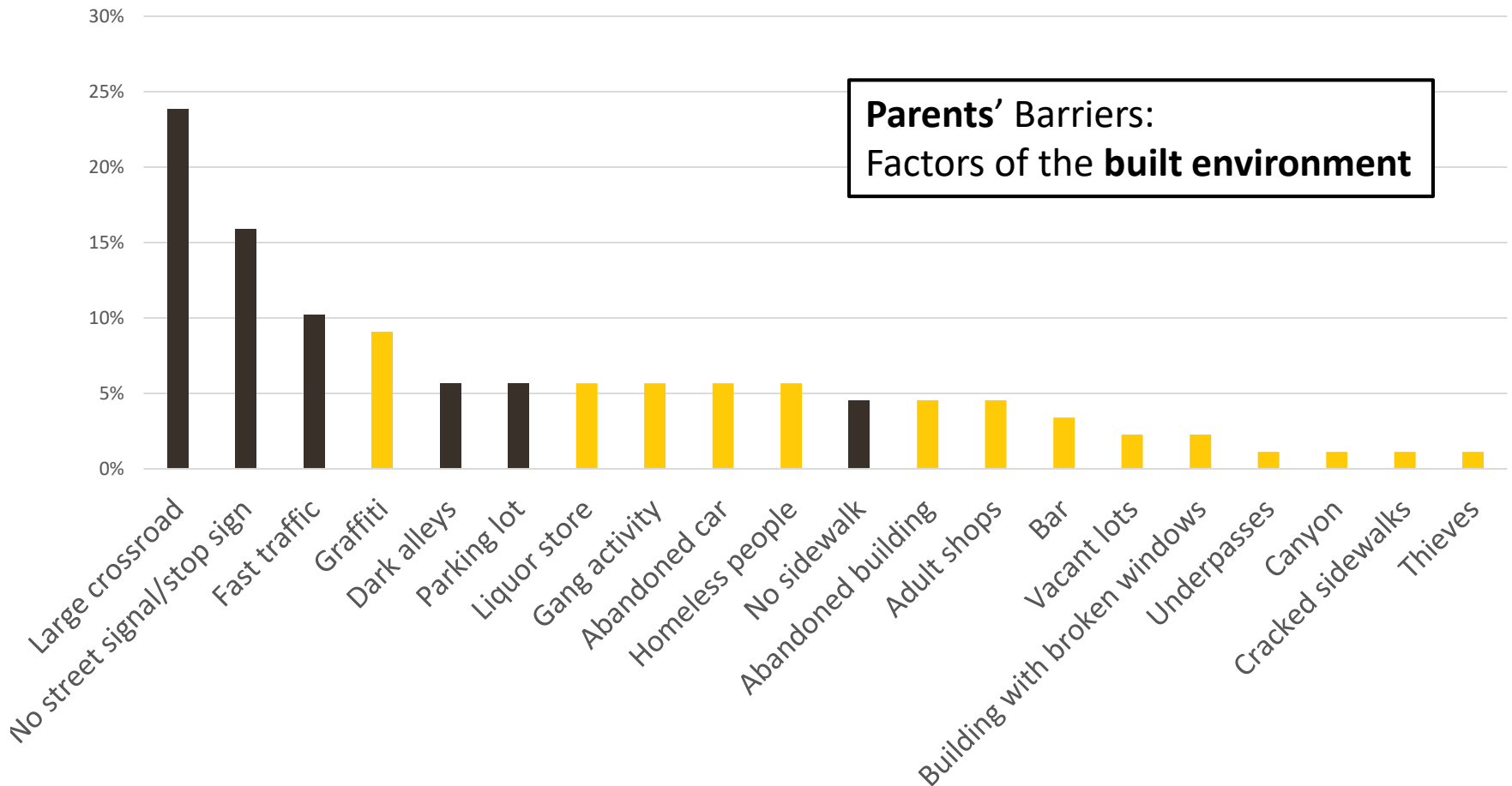
69%

Reported feeling **UNSAFE**
when walking to school

Different Perceptions



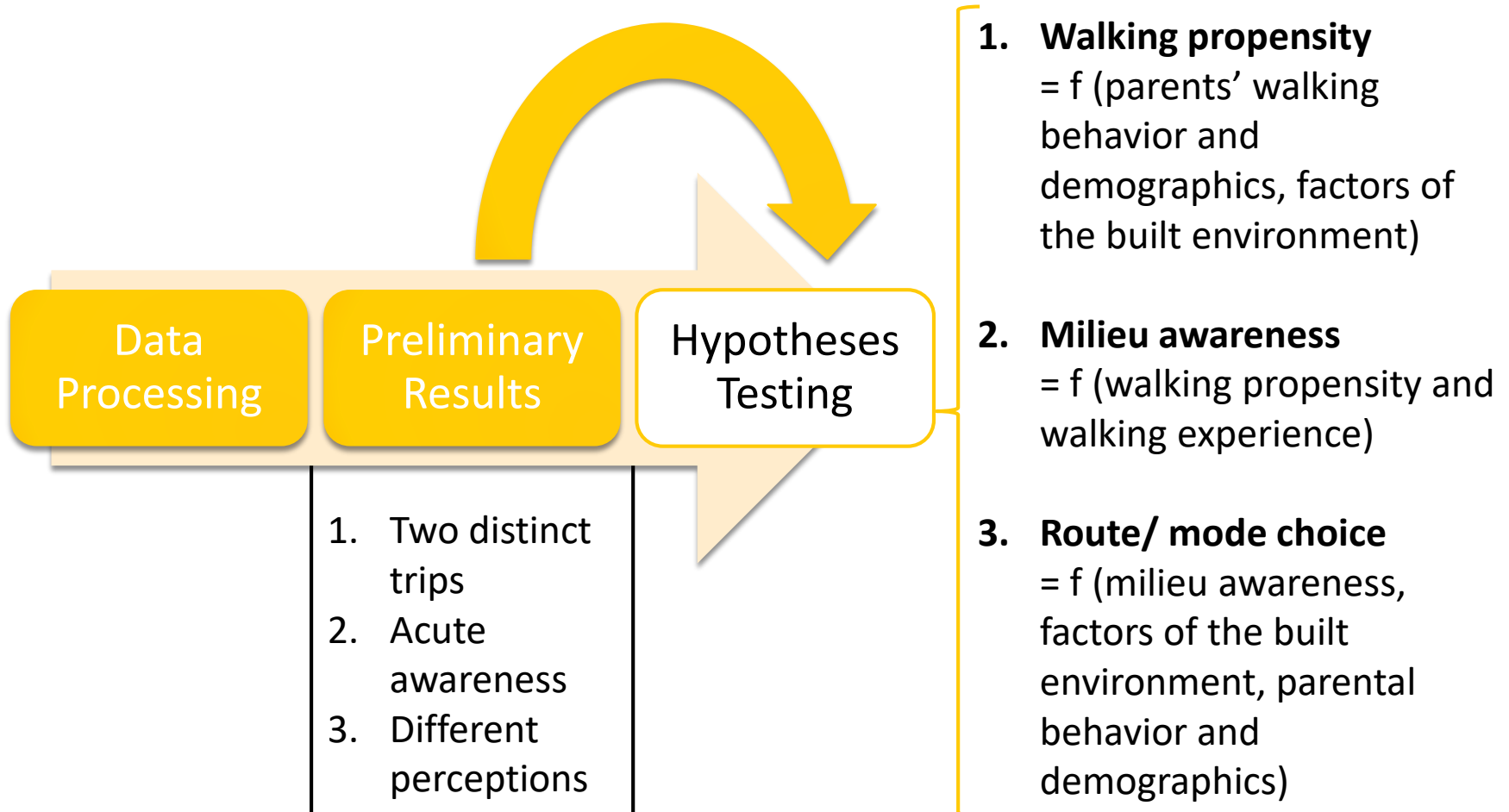
Different Perceptions



Policy Recommendations

1. Target trips to and from school differently
2. Address children's concerns about gangs, drugs and crime

Progress and next Steps



Thank you!

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