Parental safety concerns and active school commute: correlates across multiple domains in the home-to-school journey.

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T-COPPE
T-COPPE:

Purpose

- Conduct a statewide evaluation of Safe Route To School (SRTS)

Design

- Quasi-experimental design comparing 3 groups – Infrastructure, Non-Infrastructure, Control

Measures

- Student
- Parent
- School/Community
CURRENT STUDY

GOAL/OBJECTIVES
... relationships between WTS and measures of **traffic** and **personal** safety

... in elementary schoolchildren from different parts of Texas (US).

... across **multiple environments** in the *home-to-school* journey.
Evidence of relationship btw. safety and walking to school (WTS) growing

... limited understanding of the multiple domains of parental safety concerns and specific mechanisms through which parents articulate safety concerns.

... relationships between WTS and measures of traffic and personal safety

... in elementary schoolchildren from different parts of Texas (US).

... across multiple environments in the home-to-school journey.
STUDY OBJECTIVE

traffic safety

- perceived traffic safety concerns

personal safety

- perceived personal safety concerns

... relationships between WTS and measures of **traffic** and **personal** safety

... in elementary schoolchildren from different parts of Texas (US).

... across **multiple environments** in the *home-to-school* journey.
**STUDY OBJECTIVE**

**multiple environments**
- Home
- En-route to school
- School

... relationships between WTS and measures of traffic and personal safety... in elementary schoolchildren from different parts of Texas (US).

... across **multiple environments** in the *home-to-school* journey.
STUDY SETTING
STUDY SETTING: SITES

- 81 schools participated
- from 58 cities
- in 43 counties

(Texas DOT approved SRTS projects)
 STUDY SETTING: POPULATION

- All 4th grade students and their parents (n=6,500 pairs) in study schls.
- 2,053 (31.6%) parent surveys and 3,315 (51%) student surveys returned,
- of which there were 1,635 parent-student dyads.
- 80% (n=1,305) of the dyads’ home addresses successfully geocoded (GIS)
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of which there were 1,635 parent-student dyads.
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857 in 2-mile distance ( - ) 27 no outcome data ( = ) 830 dyads for analysis.
MEASURES
Parent reported

question from the National Safe Route To School Survey.

Question – “On most days how does your 4th grade child arrive at school and leave after school?”
**Perceived Traffic Safety Concerns**

**Home neighborhood environment**

(1) Availability and quality of sidewalks  
(2) Safe road crossings  
(3) Observance of other people walking or bicycling

**En-route environment**

(4) Availability of sidewalks/pathways  
(5) Safety at intersections/crossings  
(6) Crossing guards; and the amount/speed of traffic

**School environment**

(7) Availability and quality of sidewalks  
(8) Availability and quality of bike lanes/paths and bike racks  
(9) Trees along the streets; and safe road crossings.
### PERCEIVED PERSONAL SAFETY CONCERNS

<table>
<thead>
<tr>
<th>Home neighborhood environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(10) Safety of their child to walk or bike</td>
</tr>
<tr>
<td>(11) Personal sense of fear when walking outside alone after dark</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>En-route environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(12) Availability of adults or other children to walk with</td>
</tr>
<tr>
<td>(13) Violence or crime (e.g. Bullying/gangs)</td>
</tr>
<tr>
<td>(14) And stray or dangerous animals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15) Attractive buildings or natural things to see</td>
</tr>
<tr>
<td>(16) Abandoned houses or vacant lots</td>
</tr>
<tr>
<td>(17) Condoms and drug-related paraphernalia</td>
</tr>
<tr>
<td>(18) Well-maintained homes/apartments and gardens</td>
</tr>
<tr>
<td>(19) Other people who walk/bike</td>
</tr>
</tbody>
</table>
ANALYSIS
ANALYSIS

Covariates:
- SES
- Acculturation
- Medical Condition
- School Policy
- Social Capital

Chi Square Test

WTS

student's ethnicity, any type of public assistance (family), car ownership (family).

Regression adjusting for confounders:
- Perceived Traffic Safety
- Perceived Personal Safety

UTHealth
School of Public Health
Austin Regional Campus

MICHAEL & SUSAN DELL CENTER for HEALTHY LIVING

Texas A&M Health Science Center
School of Rural Public Health
RESULTS
RESULTS: STUDY PROFILE

- 18.7% of parents reported WTS for child, 1.8% biked.
- Girls & boys equally represented, majority Hispanics.
- 1/3 of families received public assistance, most parents high school/GED, almost every family had a vehicle.
- Majority of parents born in US, thought/spoke in English, small proportion of students born outside US.
RESULTS: PERCEIVED TRAFFIC SAFETY CONCERNS - HOME

- Sidewalks on most of neighborhood streets
- Sidewalks in neighborhood well maintained
- Safe road crossings in your neighborhood
- People walk/bike in your neighborhood

Odds Ratio

No
Yes, a few
Yes, many

1.00
1.87
1.95
2.61
2.69

1.45
1.68
2.20
RESULTS: PERCEIVED TRAFFIC SAFETY CONCERNS – EN-ROUTE
RESULTS: PERCEIVED TRAFFIC SAFETY CONCERNS - SCHOOLS

- Sidewalks on streets near child’s school
- Trees along streets near school
- Bike lanes/paths or trails well maintained
- Safe road crossings
- Sidewalks well maintained
- Bike lanes/paths or trails near school
- Bike racks at or near school

Odds Ratio

No | Yes, a few | Yes, many
---|----------|------
1.00 | 2.15 | 3.07
2.05 | 2.07 | 2.06
1.80 | 1.88 | 1.75
1.00 | 1.00 | 1.00
RESULTS: PERCEIVED PERSONAL SAFETY CONCERNS – EN-ROUTE

- Adults, other children to walk/bike with
- Violence or crime a problem
- Stray or dangerous animals a problem

Odds Ratio

Not a problem | Sometimes a problem | Always a problem

- 1.00
- 0.56
- 0.49
- 0.42
- 0.69
- 0.46
- 0.16
RESULTS: OTHER PERCEIVED PERSONAL SAFETY CONCERNS

**Home Environment**
- Safe for child to walk/bike in neighborhood
  - Most/all of the time: 2.42 (CI: 1.47-3.99)

**School Environment**
- none
RESULTS: PERCEIVED PERSONAL SAFETY CONCERNS – EN-ROUTE

[Graph showing odds ratios for different scenarios of personal safety concerns, including adults, other children to walk/bike with, violence or crime a problem, and stray or dangerous animals a problem.]
CONCLUSIONS
CONCLUSIONS – TRAFFIC SAFETY

Traffic safety
In general, WTS depended on...

parental perceptions of the following...

Neighborhood:

*sidewalks* and safe road *crossings*

En-route:

*sidewalks*, speed & amount of *traffic*, and *intersections*

School:

*sidewalks*, *crossing* guards, and availability of *trees* along streets
CONCLUSIONS – TRAFFIC SAFETY

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sidewalks, crossing guards, and availability of trees along streets
CONCLUSIONS – PERSONAL SAFETY

Personal safety
In general, WTS depended on...

parental perceptions of the following...

Neighborhood:
*general* neighborhood safety

En-route:
stray or dangerous *animals*, and availability of *adults* with whom child can walk
CONCLUSIONS – PERSONAL SAFETY

Personal safety

In general, WTS depended on...

parental perceptions of the following...

Neighborhood:

general neighborhood safety

En-route:

stray or dangerous animals, and availability of adults with whom child can walk
Specific safety concerns in the home-to-school journey explained some of the variance in WTS.

Of particular importance to parents is traffic safety along the route to the school.

Increased focus on, and investment in, pedestrian-centric transportation infrastructures may result in increased WTS.
OTHER ITEMS
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Abstract
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THANK YOU

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