

# Exploring school transportation modes in rural, northern Ontario – challenges and future directions

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## BACKGROUND

- ❖ Currently, only 24% of Canadian children and youth use active modes of transportation to and from school (1).
- ❖ Rural children are presumed to face unique challenges and barriers to active transportation to school (ATS) (2).
- ❖ An initiative that has been used to identify and reduce barriers to ATS is School Travel Planning (STP) (3).
- ❖ There is limited research exploring barriers to ATS and experiences of various travel modes in rural environments.

## PURPOSE

- ❖ To describe and explore barriers to ATS, and non-active travel experiences in rural elementary school students.



## METHODS

### Setting

- ❖ A rural community (population 54,000) located in Northeastern Ontario, Canada.

### Participants and Procedures

- ❖ Questionnaire data were collected from a sample of parents (n= 179) with one or more children attending an elementary school (student population = 500).
- ❖ School travel measures included method of transportation, distance from school, and parental perceptions of neighbourhood safety.
- ❖ Other questions included reasons for continued driving, as well as an open-ended question about school transportation related comments or concerns.

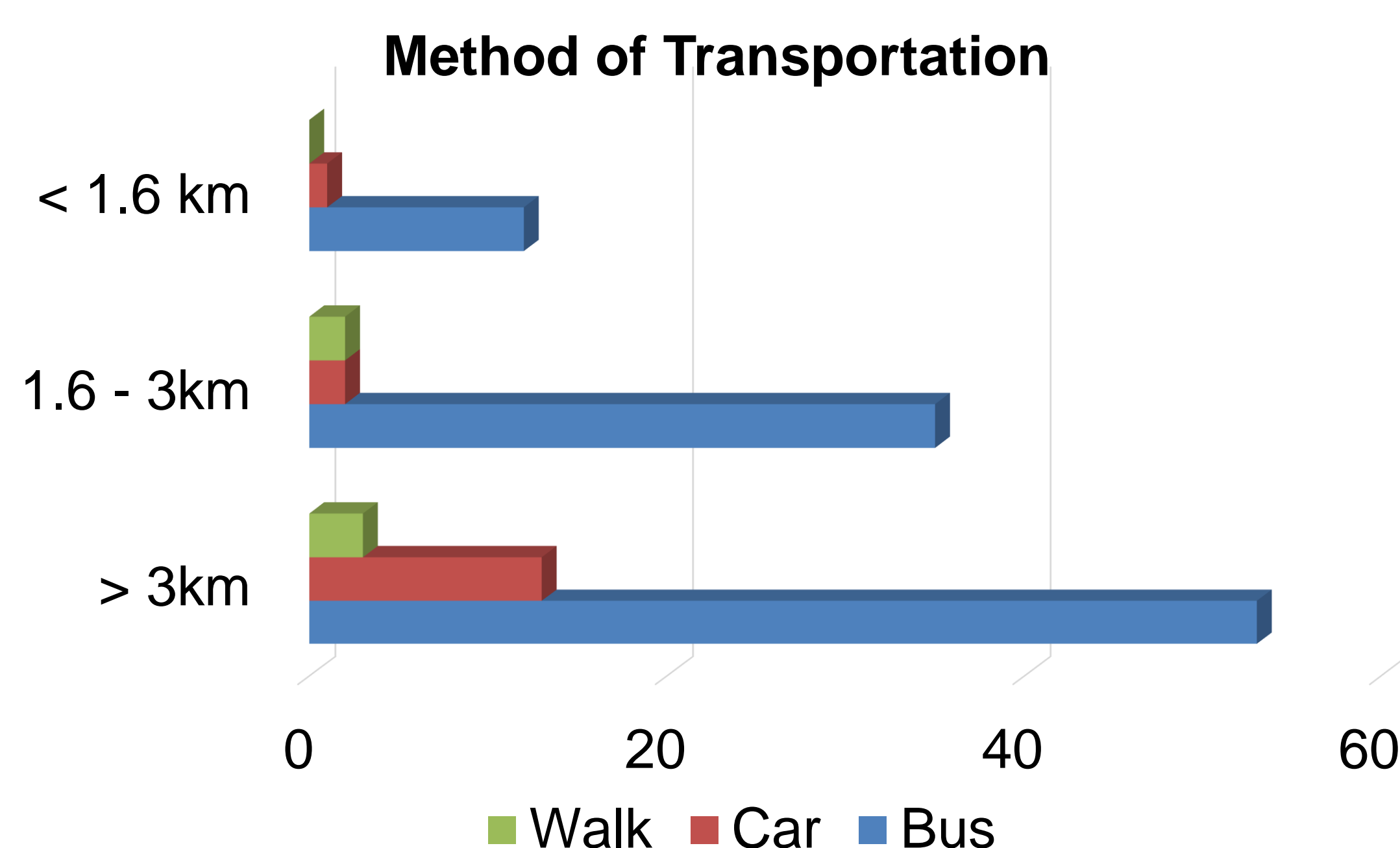
### Data Analysis

- ❖ Descriptive statistics and frequencies were calculated for the quantitative items using SPSS (v. 22).
- ❖ Qualitative data were organized into groups to form initial categories (4).
- ❖ Analytic ordering reduced the data into further subthemes. Thematic analysis was conducted to distill barriers to ATS and school travel experiences.

## RESULTS

### Demographics

- ❖ Average age of the children was 7.7 years (SD ± 2.4).
- ❖ 66% respondents lived > 3.0 km from school, 23% between 1.6 and 3.0 km, and 11% less than 1.6km.
- ❖ 80% of children took the bus, 13% were driven to school.



### Neighbourhood Safety

- ❖ "I believe kids may be taken from any neighbourhood - very unfortunate situation that this is even on survey." (P39)
- ❖ "I feel its unsafe for kids to walk to school. The traffic is crazy, the school is near two high schools. Strangers, bullying." (P69)
- ❖ "If we lived closer I would still be reluctant to allow my son to walk or bike because of the high traffic levels on High & Stones Street."(P105)

### Bus Experiences

- ❖ "The bus ride is an hour to school and an hour back - 2hrs total during the day. The kids get bus sick." (P70)
- ❖ "She is learning new vocabulary on the bus from older students. NOT NICE!" (P121)
- ❖ "Bus ride is long. Young students are bored so they get restless and loud, in their words, "annoying". They sing and count loud and make random noises. On bus for 45 min to school and 1 hour from school." (P161)

### An Inadequately Built Environment

- ❖ "There are far too few sidewalks in residential areas in North Bay. Snowbanks leave shoulders unavailable to walk on for much of the school year." (P3)
- ❖ "The lack of sidewalks in our neighbourhood makes the thought of my kids walking scary." (P172)
- ❖ "Need sidewalks on both sides of High St OR a crossing guard to provide access to sidewalk." (P76)



No Sidewalks, no winter plowing

## PRACTICE & POLICY

- ❖ A majority of our sample used inactive modes of transportation to travel to and from school, which represents a critical target for STP to generate innovative solutions.
- ❖ Creative solutions are required to enhance the ability of all students to engage in ATS and reduce exposure to unpleasant commuting experiences.
- ❖ Policy adaptations such as locating bus stops further from home or school may increase ATS.
- ❖ A modified walking school bus might also serve to increase PA and reduce the amount of time spent on the bus.



## CONCLUSIONS

- ❖ The findings of a poorly built environment and traffic concerns as barriers to ATS are consistent with the urban literature.
- ❖ Unique rural challenges include long distances between home and school resulting in long, unpleasant commuting times.
- ❖ Long bus rides and encountering undesirable behaviors are relatively unexplored issues that might be leveraged to promote ATS.

## REFERENCES

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