Active School Travel and Snacking Behaviours

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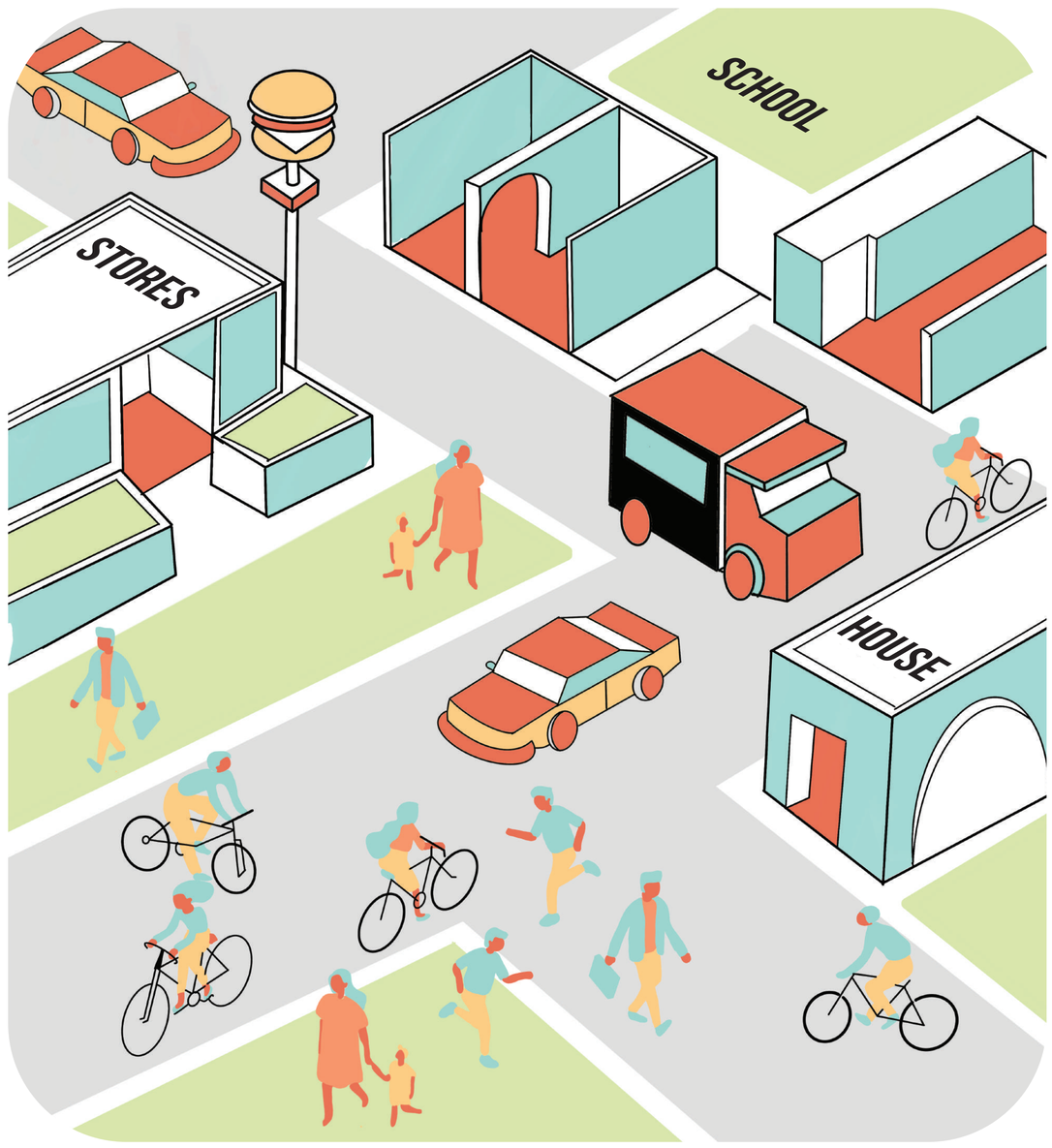
INTRODUCTION

Background:
- Active transport to school (ATS) may increase physical activity (PA) in adolescents.
- Adolescents using ATS were more likely to meet PA guidelines compared to those using motorised transport to school.
- ATS may increase adolescents' opportunities to purchase and consume unhealthy foods, particularly when combined with surrounding environmental cues of food outlets and advertising exposures during school journey.

Purpose:
To describe and compare the frequency of purchasing and consuming snack foods and soft drinks on the school journey in adolescents by mode of transport to school, neighbourhood level deprivation and weight status.



METHODS

Adolescents (n=731; 53.5% females; 15.3±1.4 years) from 11 secondary schools in the Ōtākou / Otago region, Aotearoa / New Zealand, completed an online survey and had anthropometry measurements as part of Built Environment and Active Transport to School (BEATS) Rural study in 2018.

Data analysis:
Multivariable logistic regression model with the effects of modes of school transport, neighbourhood-level deprivation (New Zealand Deprivation Index), and weight status (healthy or overweight/obese).

RESULTS

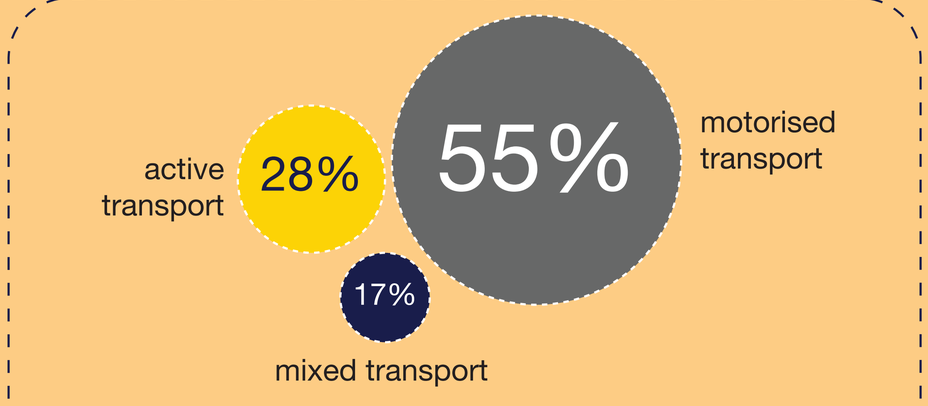


Figure 1. Proportion of adolescents' school transport modes

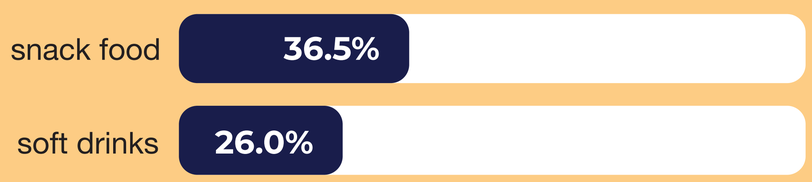


Figure 2. Proportion of adolescents reported purchasing/ consuming snack food and soft drink at least once during weekly school trip

Table 1. Odds of adolescents snacking during weekly school trip

Variables	Effect	Snack Food		Soft Drinks	
		Odds Ratio	95% CI	Odds Ratio	95% CI
Modes of transport	AT vs. MxT	0,783	0,592 - 1,036	0,908	0,657 - 1,255
	AT vs. MT	1,074	0,874 - 1,320	1,138	0,902 - 1,437
	MxT vs. MT	1,372	1,057 - 1,780	1,254	0,922 - 1,704
Neighbourhood deprivation	Q3 vs Q1+Q2	1,076	0,855 - 1,354	1,319	1,012 - 1,719
	Q3 vs Q4+Q5	0,574	0,443 - 0,745	0,490	0,370 - 0,649
	Q1+Q2 vs Q4+Q5	0,534	0,429 - 0,664	0,371	0,292 -,0,473
Weight status	Healthy vs Unhealthy	0,729	0,612 - 0,869	0,652	0,533 - 0,797

CI, confidence interval; AT, active transport; MT, motorised transport; MxT, mixed transport; Q1+2, least deprived neighbourhood; Q3, medium deprived neighbourhood; Q4+5, most deprived neighbourhood;

CONCLUSION

The odds of purchasing/consuming snack foods differed significantly by school transport modes, neighbourhood-level deprivation, and weight status.

Adolescents using ATS have well-established health benefits but understanding the role of exposure to unhealthy food environments along school routes in food purchasing / consumption behaviours is needed to minimise unintended health consequences.

SUMMARY OF FINDINGS

Higher odds of snack food purchase or consumption **among mixed transport users** compared to motorised transport.

Lower odds of snack food and soft drinks purchase or consumption **in healthy weight adolescents and those from low-deprivation neighbourhood** compared to their counterparts.

ACKNOWLEDGEMENTS