BEATS Study
Built Environment and Active Transport to School
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Adolescents' Perceptions of Walking and Cycling to School by Distance

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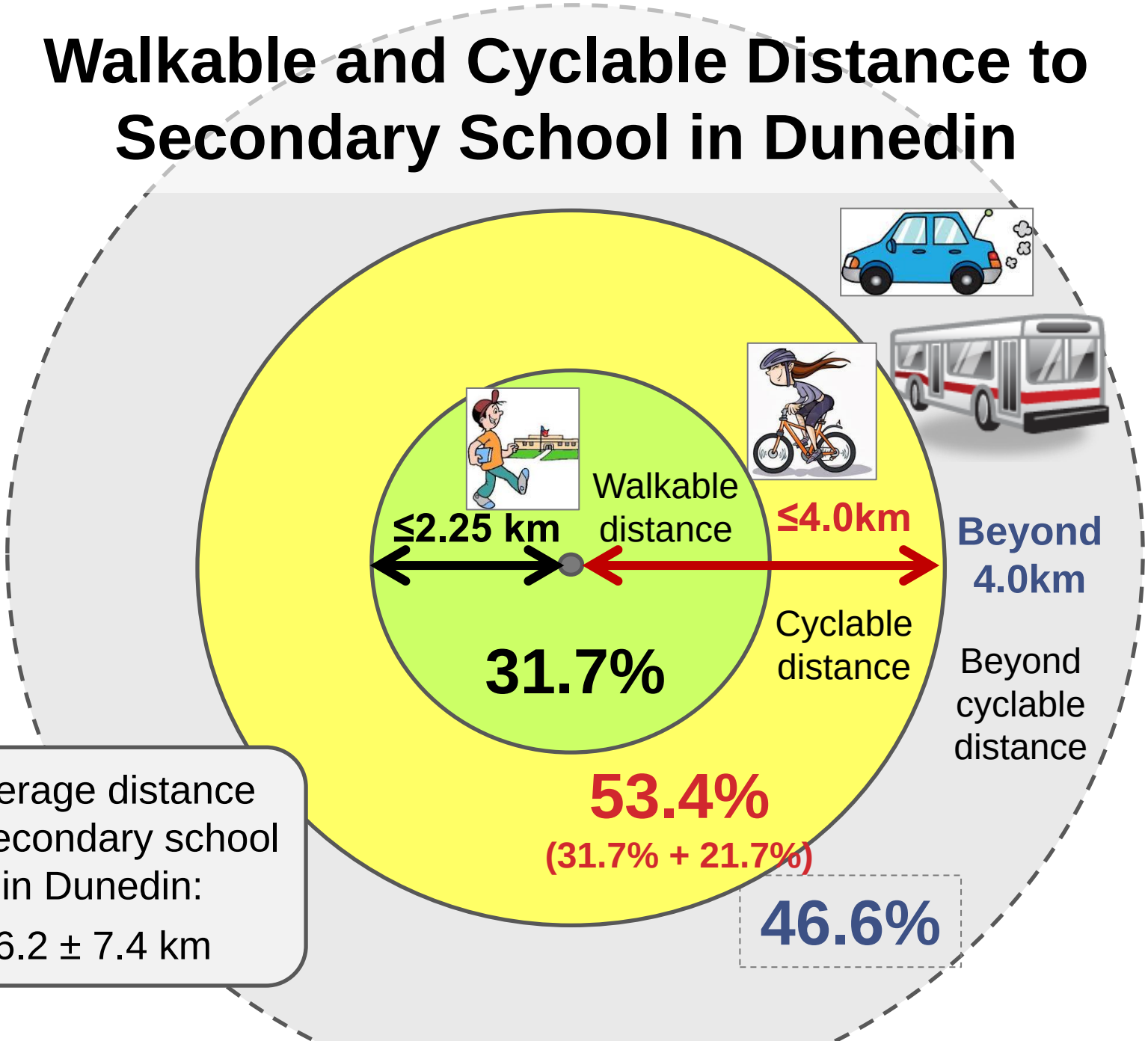
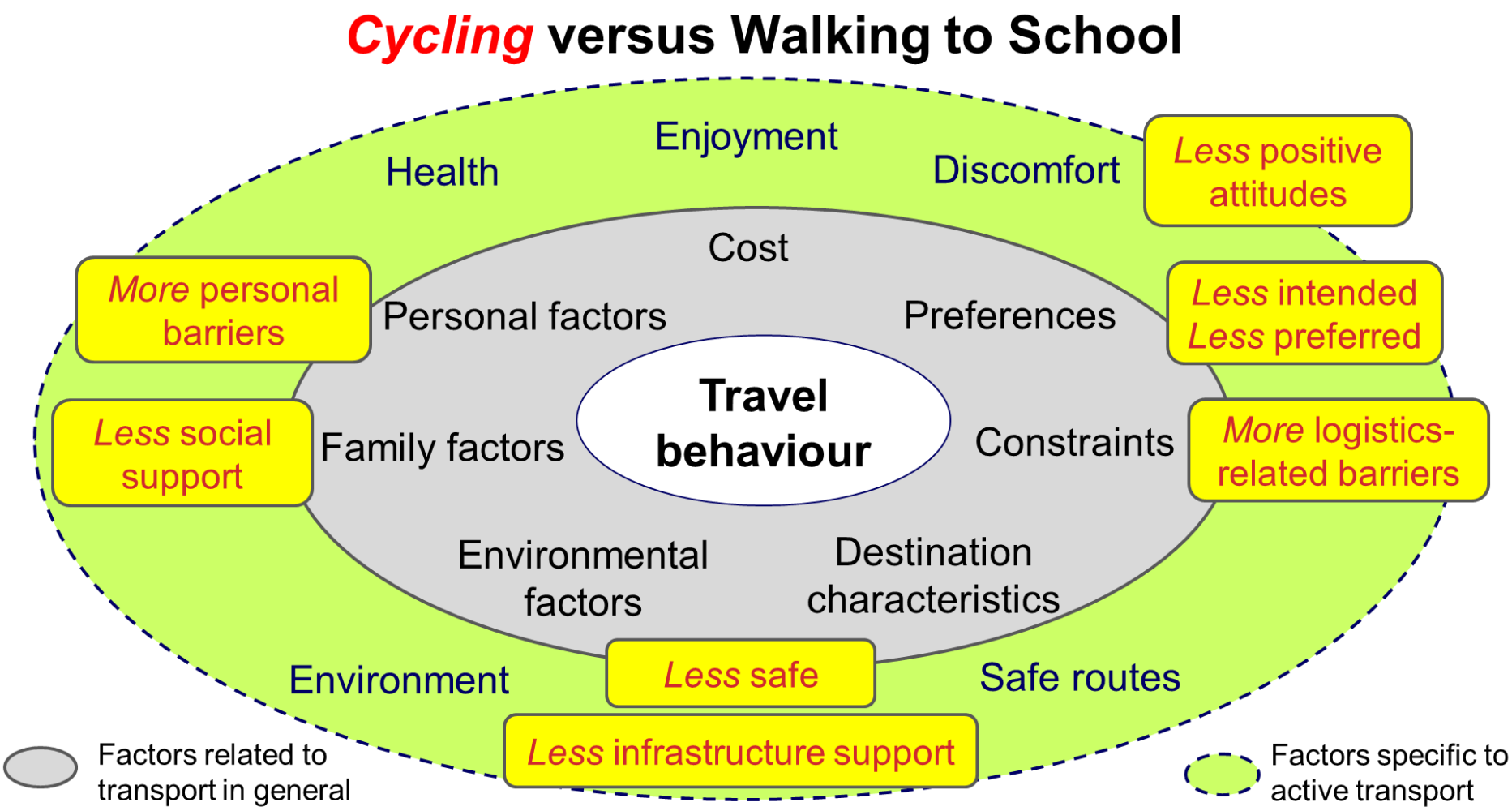
Walkable and Cyclable Distance to Secondary School in Dunedin



Average distance to secondary school in Dunedin:

6.2 ± 7.4 km

Adolescents and Parental Perceptions



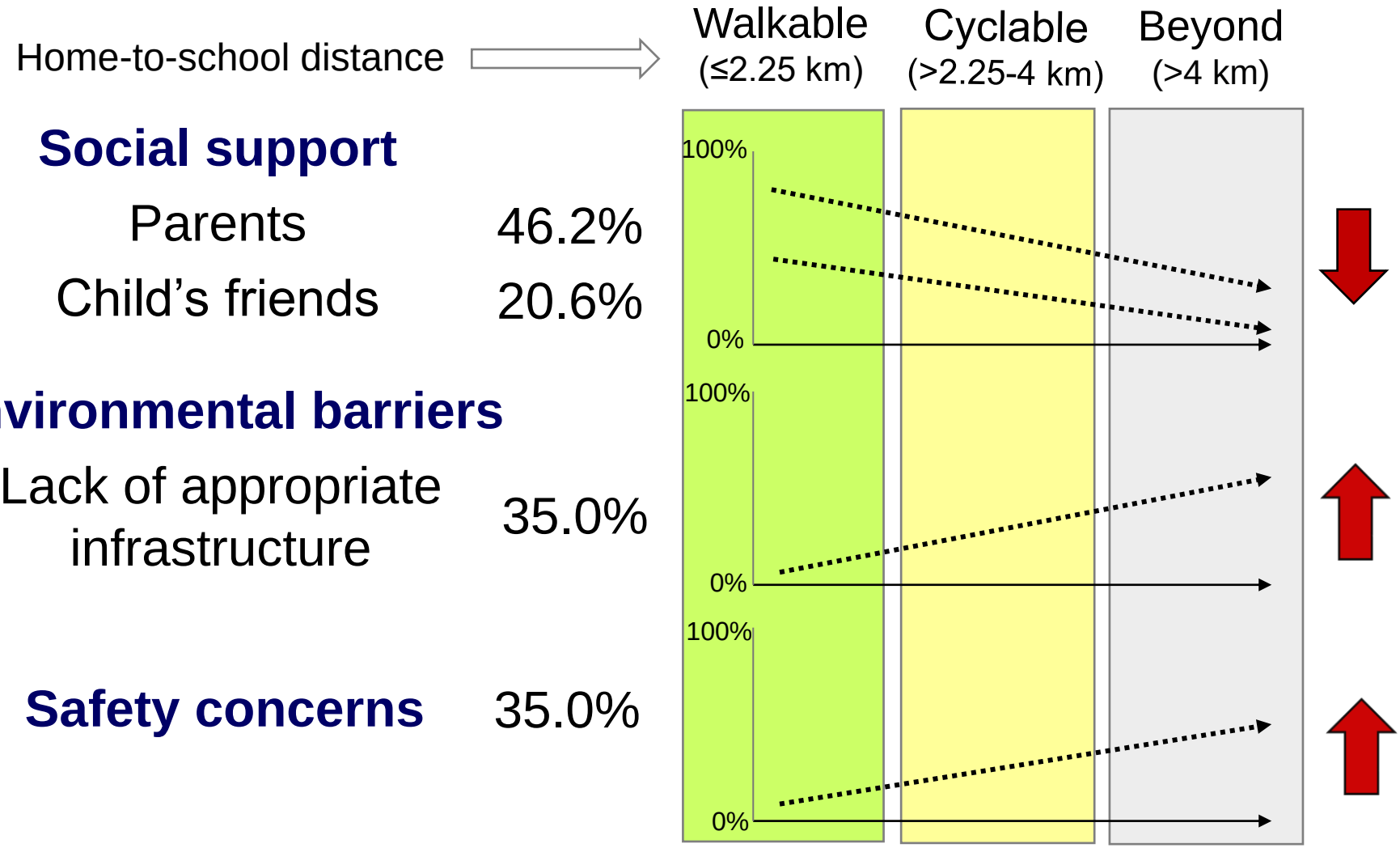
BEATS Student Survey (n=764)

Mandic S et al. Journal of Transport and Health. 2017: 4:294-304.

BEATS Parental Survey (n=341)

Mandic S et al. Transportation Research Part F: Traffic Psychology and Behaviour. 2020; 71:238-249.

Parental Perceptions of Walking to School Differ by Distance



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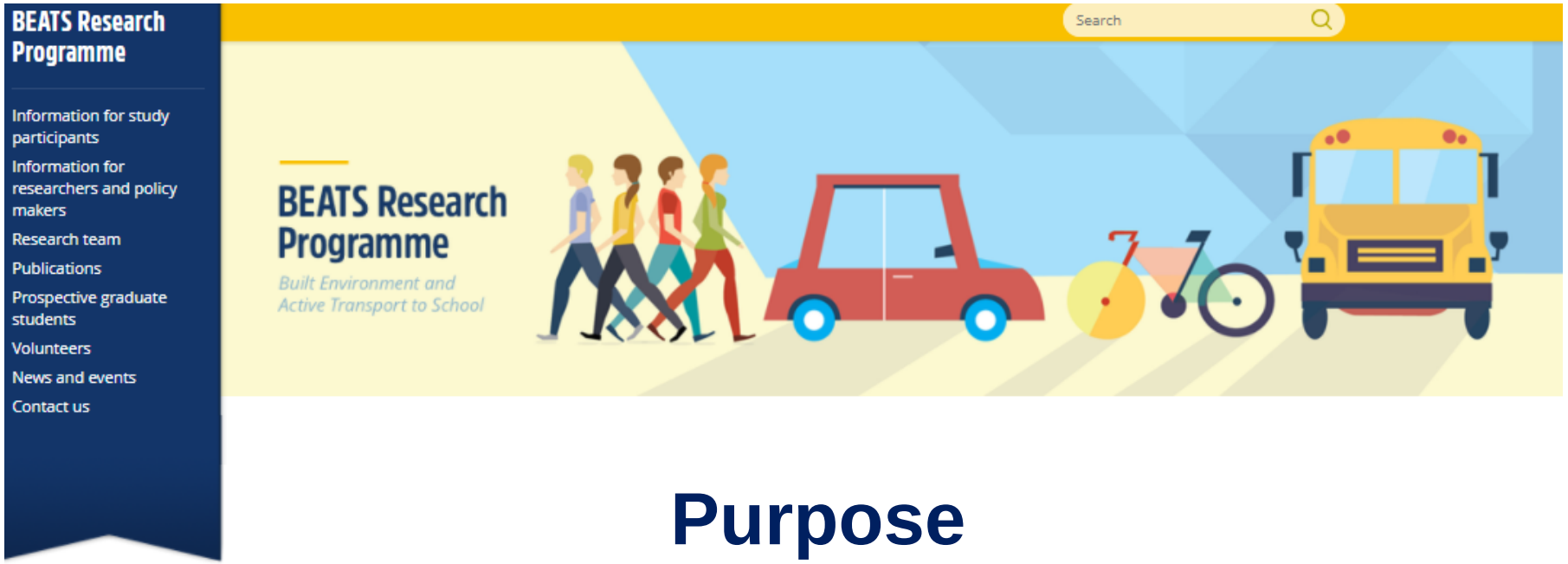

Purpose

- **This study compared perceptions of walking and cycling to school among adolescents living within 'walking', 'cycling' and 'beyond cycling' distance to their school**

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Methodology

1,401 Dunedin adolescents (13-18 years) (55% females)

BEATS Student Survey

Online survey
At school
Supervised

GIS Network Analysis:
Distance to School

Distance to school categories	**Within walking** distance (≤2.25 km)	**Beyond walking but within cycling** distance (>2.25-4.0 km)	**Beyond cycling** distance (>4.0 km)
n	455	286	660

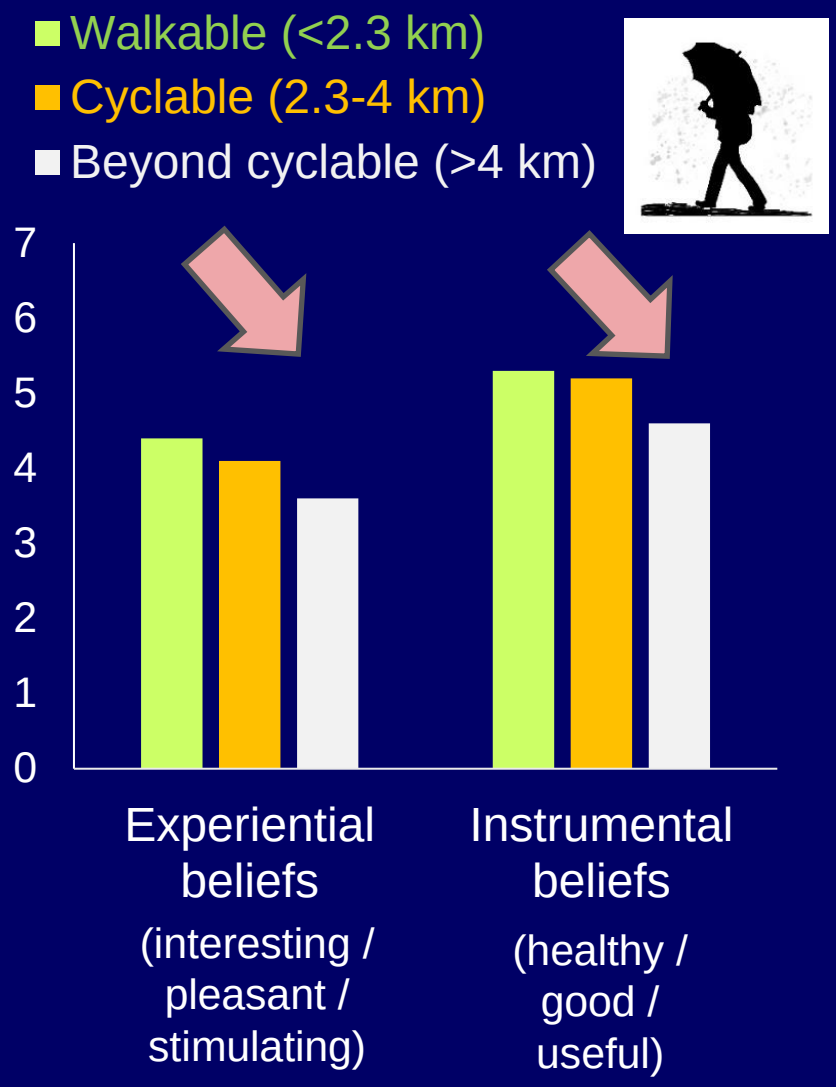
Mandic S et al. BMJ Open. 2016; 6:e011196

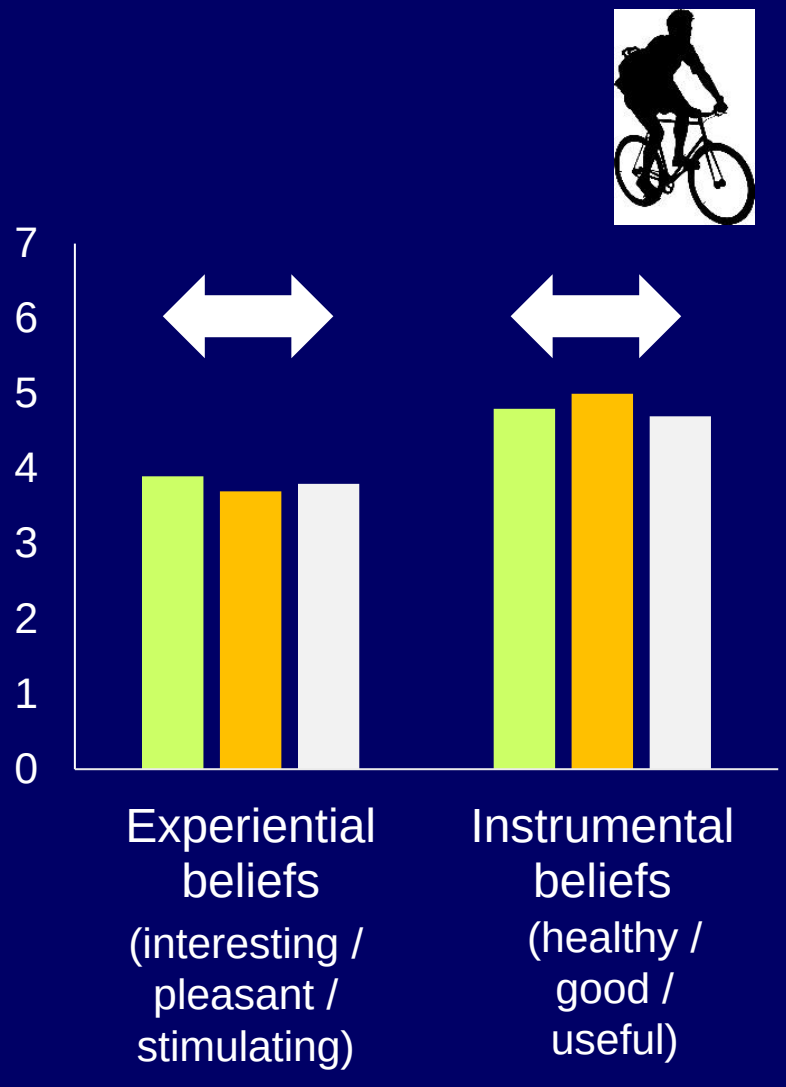
Results: Rates of Active Transport

	Within walking distance (≤2.25 km)	**Beyond walking but within cycling** distance (>2.25-4.0 km)	**Beyond cycling** distance (>4.0 km)
Rates of active transport to school	**60.1%**	**16.2%**	**1.2%**

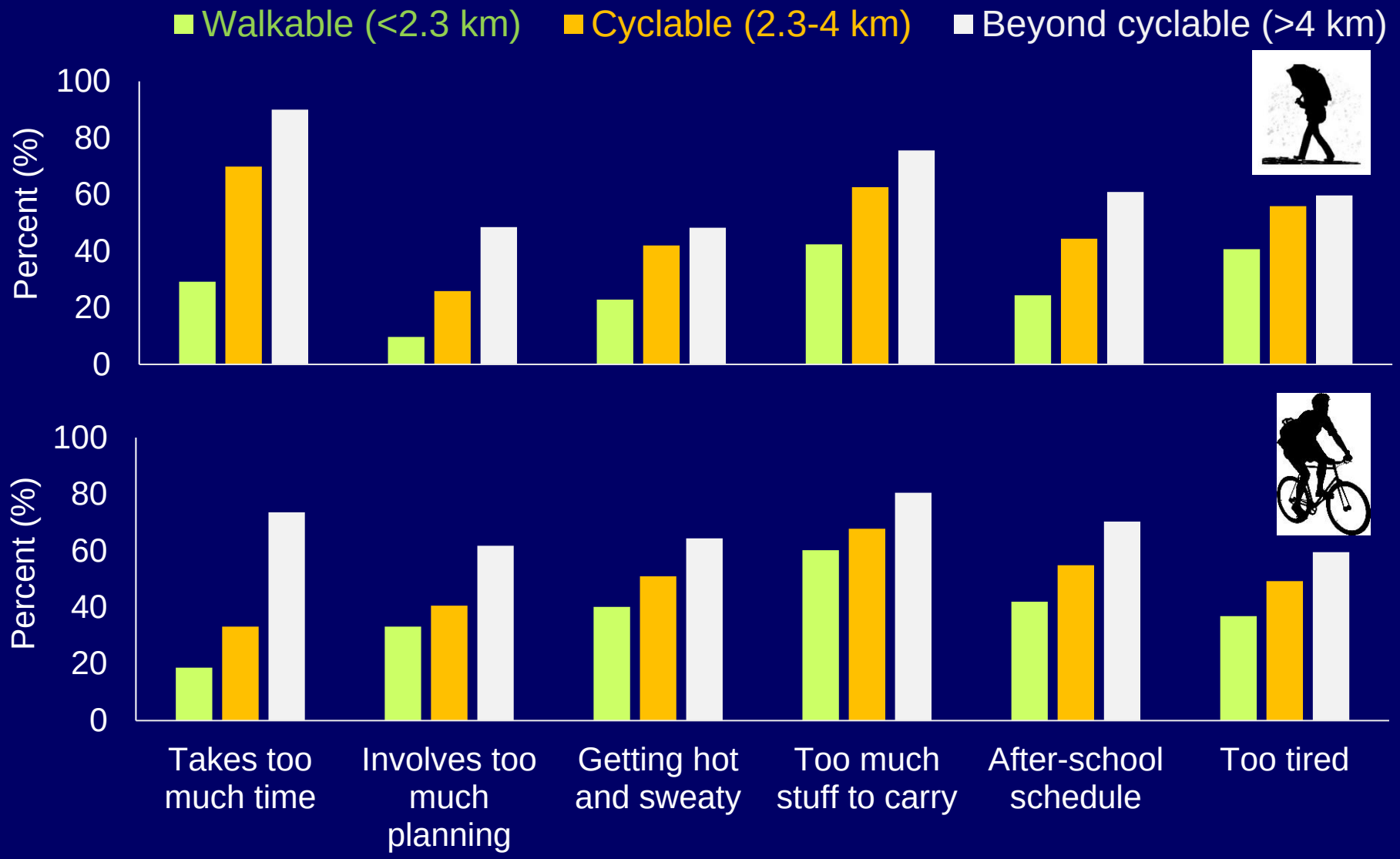
Only 1.2% of Dunedin adolescents regularly cycled to school
even though half of adolescents lived within cycling distance to school

Results: Attitudes by Distance

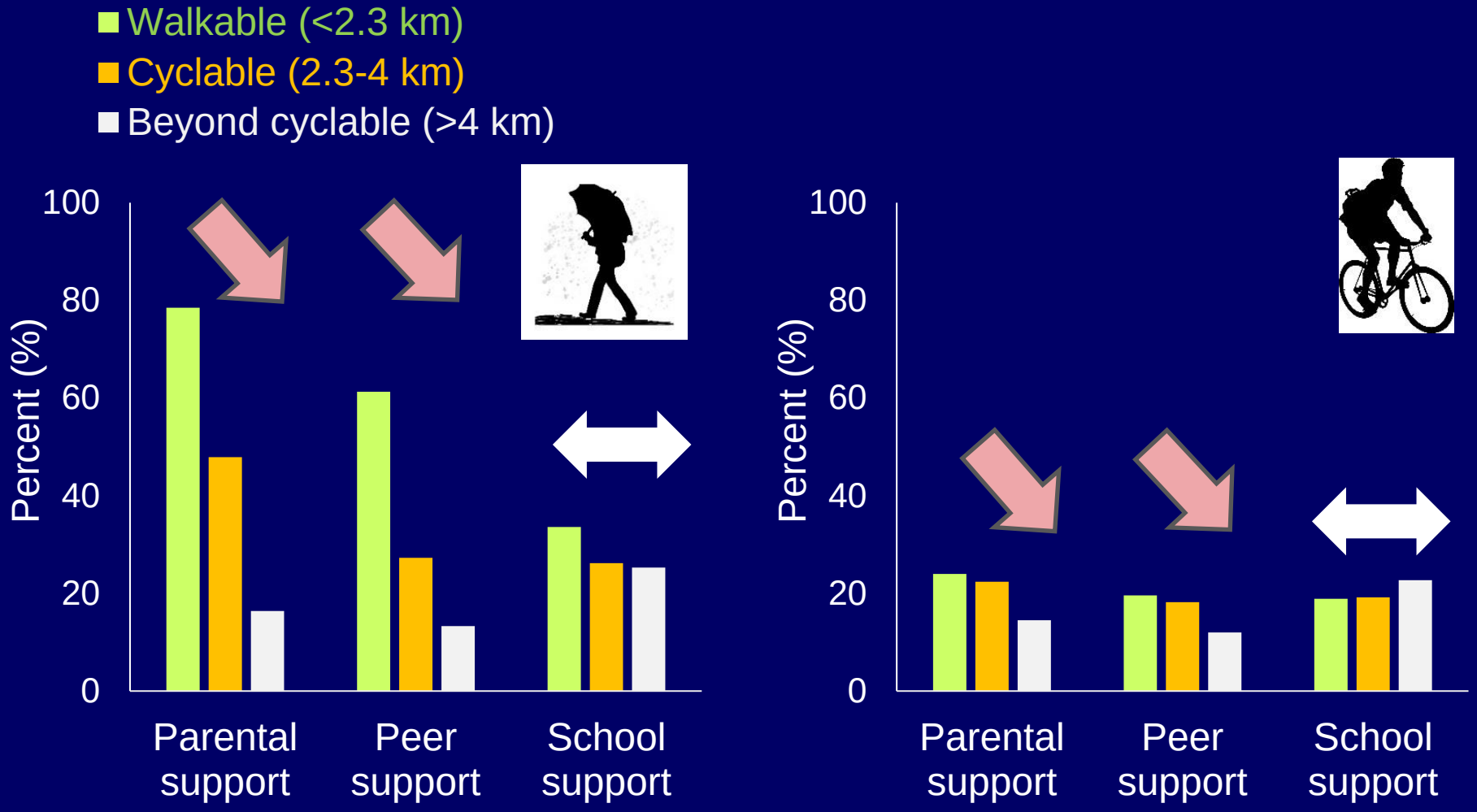




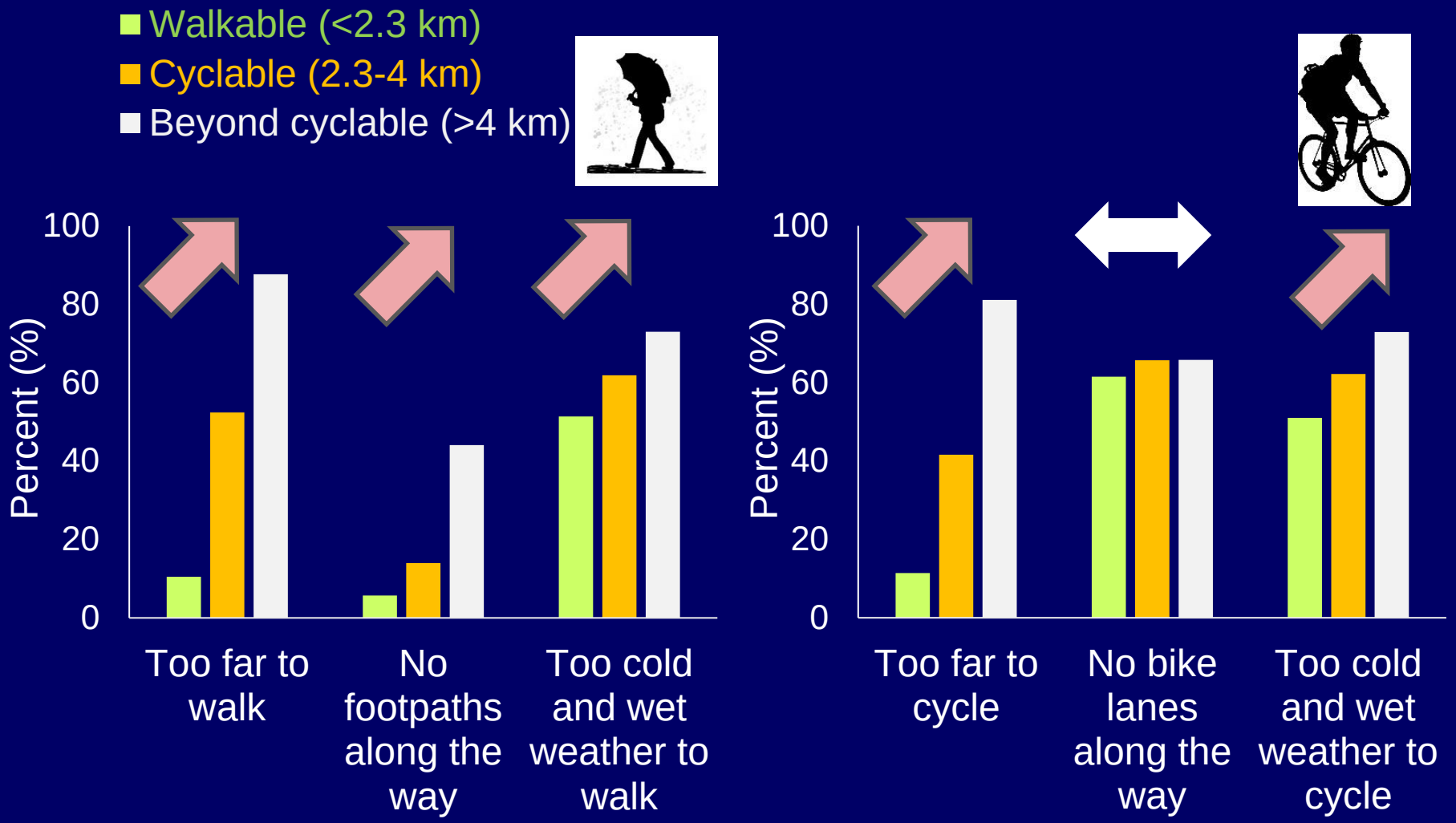
Results: Personal Barriers by Distance



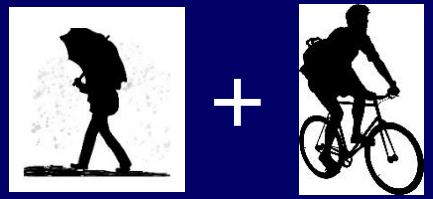
Results: Social Support by Distance



Results: Environmental Barriers by Distance

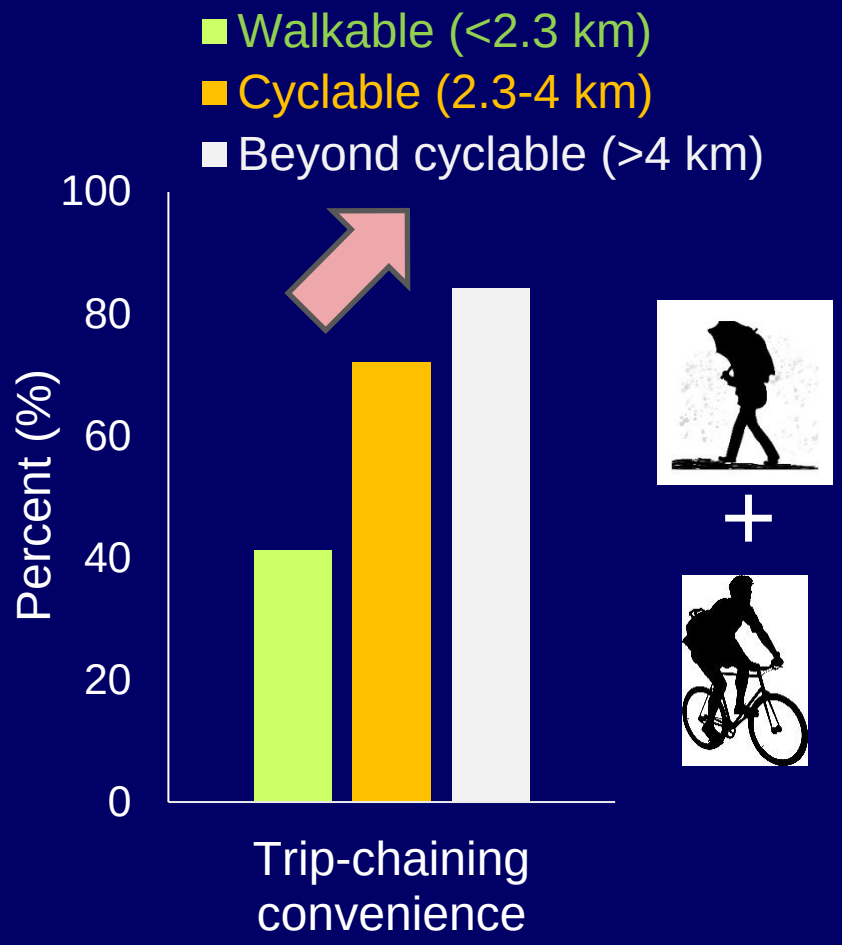


Results: Route to School Barriers



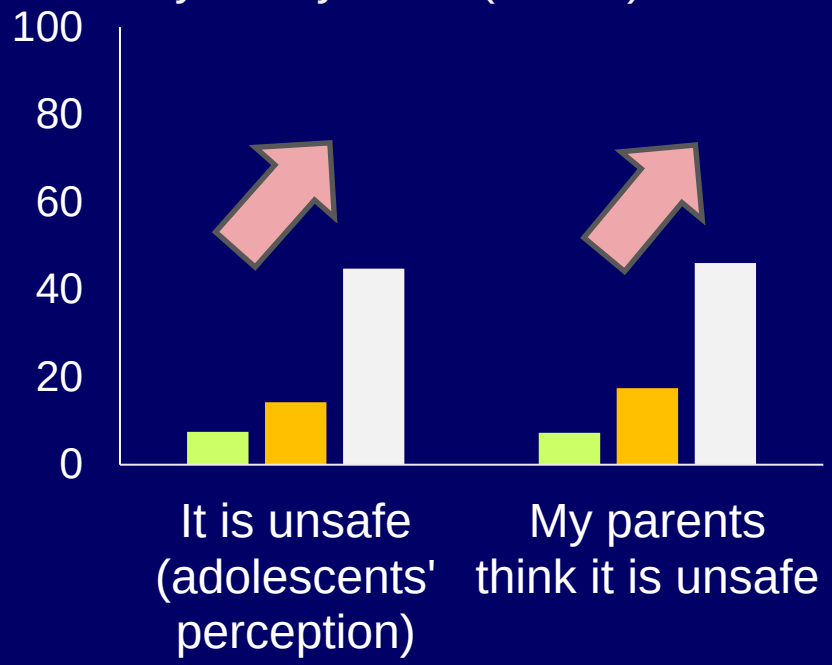
Consider creating <u>safe and attractive walking and cycling routes</u> to/from school that extend well beyond school neighbourhoods

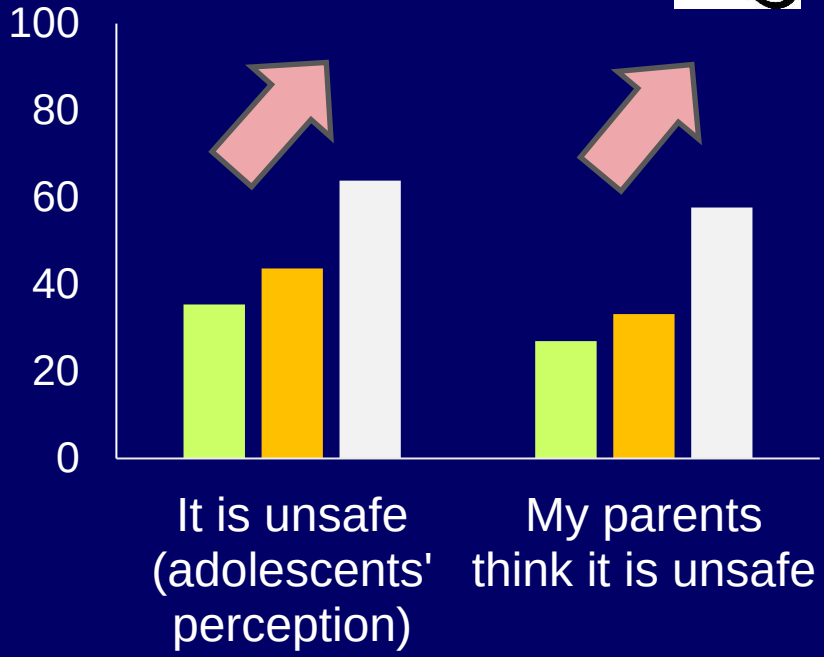
Results: Trip Chaining Convenience



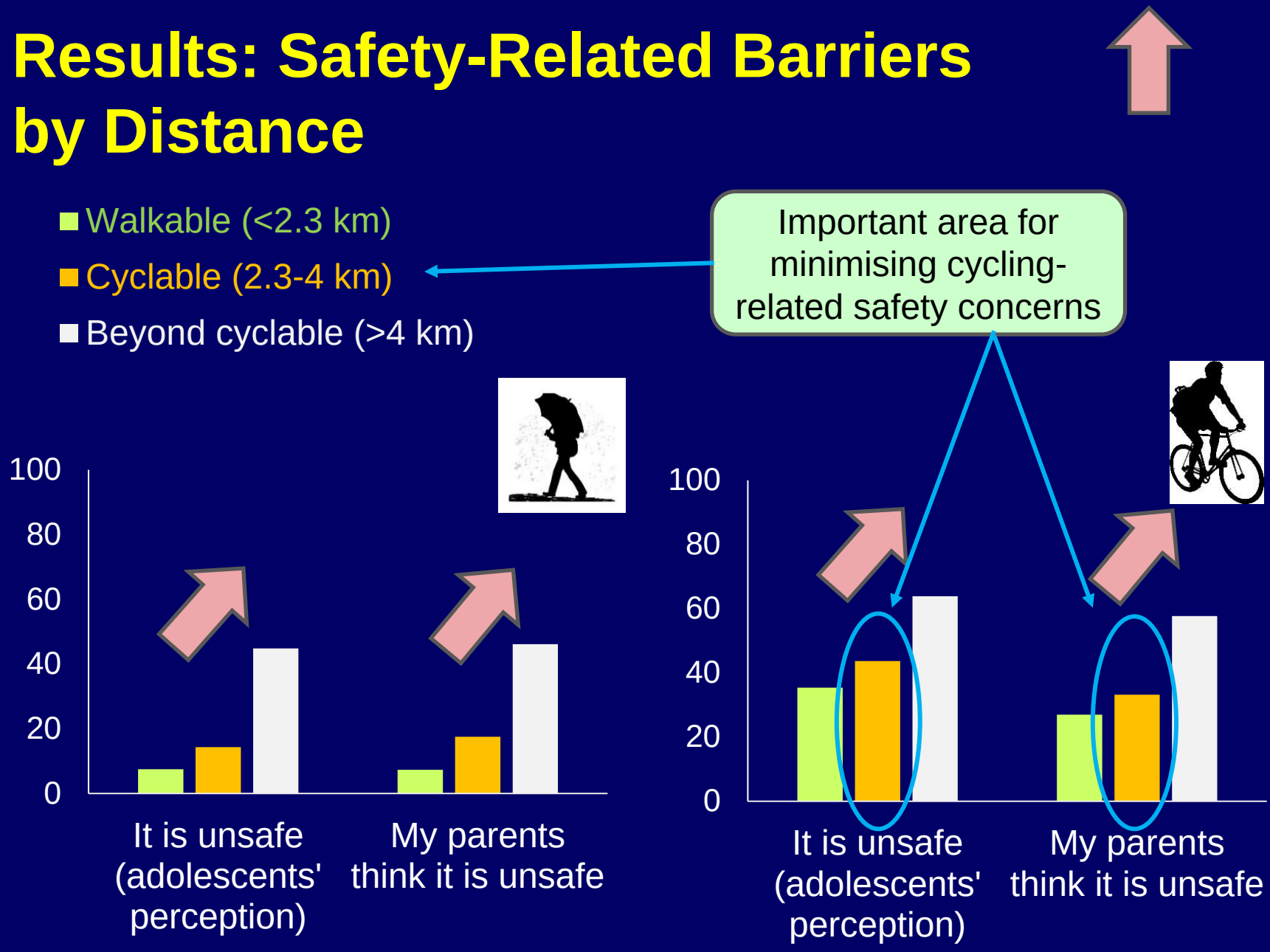
Disincentivising motorised transport may be as important as incentivising active modes of transport among adolescents

Results: Safety-Related Barriers by Distance





Results: Safety-Related Barriers by Distance



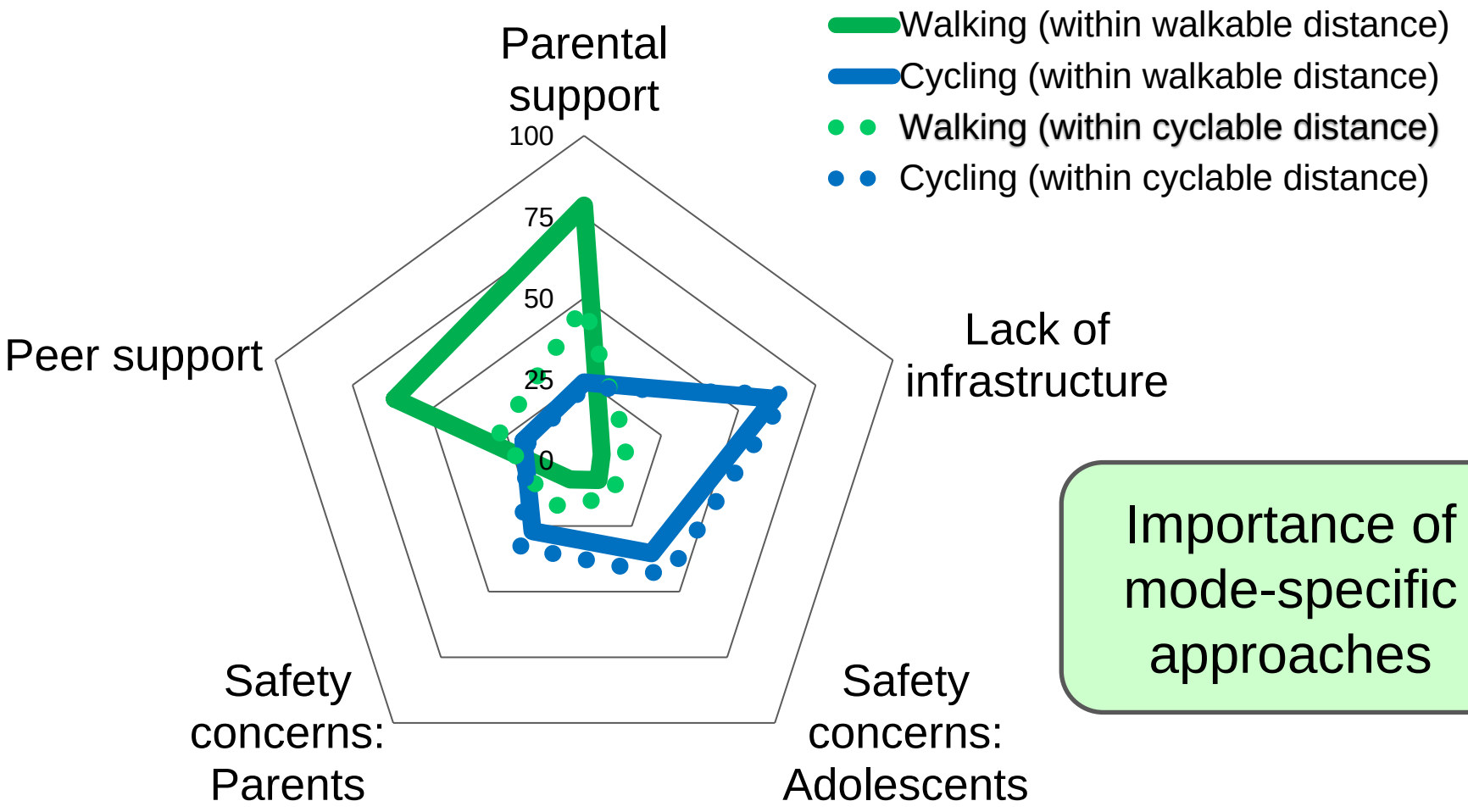
Summary:
Adolescents Perceptions by Increasing Distance

	Walking to School	Cycling to School
Favourable attitudes	↓	⇔
Intention	↓	⇔ Low
Peer & parental support	↓	↓

Summary:
Adolescents Perceptions by Increasing Distance

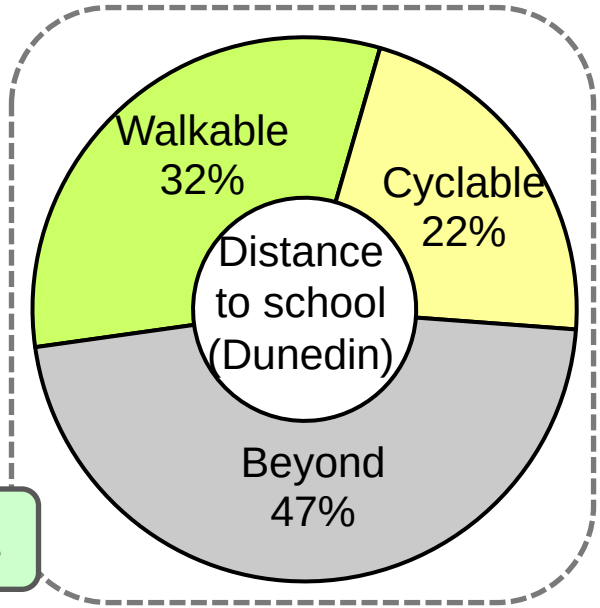
	Walking to School	Cycling to School
Favourable attitudes	↓	⇔
Intention	↓	⇔ Low
Peer & parental support	↓	↓
Personal barriers	↑	↑
Distance being too far	↑	↑
Lack of walking/cycling infrastructure	↑	⇔ Low
Safety concerns	↑	↑

Implications: Differentiate Perceptions of Walking versus Cycling to School



Importance of mode-specific approaches

Implications: Take into Account Home-to-School Distance



Importance of distance-specific approaches

BEATS Research Programme Report 2013-2020

Overview

The Built Environment and Active Transport to School (BEATS) Research Programme is based on contemporary ecological models for active transport (walking or cycling) that identify individual, social, environmental and policy influences on behaviour. This research has been designed to advance scientific knowledge and provide service to the government, local community and schools.

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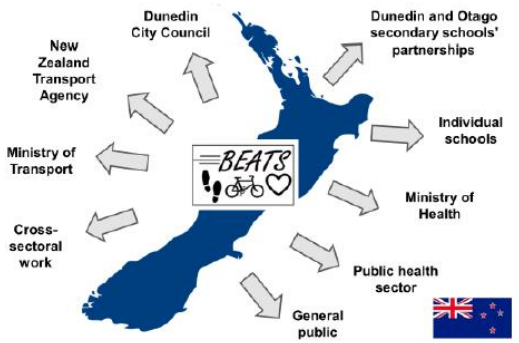
BEATS Research Dissemination and Impact



To be released in April 2021

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Thank you!