

Correlates of intention to cycle to school

Comparison between Dunedin & Christchurch

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Agenda

Using the **Reasoned Action Approach (RAA)** and **Structural Equation Modelling (SEM)** to examine the **correlates of cycling to school**

- Sample description
- Overview of the RAA
- Overview of SEM
- Measuring the unobservable
- Results
- Discussion

Sample

Two research projects into the transport to school habits of secondary school students:

- From the BEATS study: 403 responses from Dunedin
- From the Jillian's PhD: 296 responses from Christchurch

Conducted independently, but the BEATS study was partially informed by Jillian's PhD research. Both questionnaires were partially informed by the RAA.

Students filled out an online questionnaire, mostly in school time and under supervision (some responses excluded due to not taking the task seriously)

The Reasoned Action Approach

- AKA the Theory of Planned Behaviour, the Theory of Reasoned Action
- An attempt to explain human behaviours in terms of *proximate* psychological constructs: *Attitude, Subjective Norm & Perceived Behavioural Control*
 - **Attitude**: overall evaluation/feeling toward enacting the *behaviour* in question
 - **Norm**: what others say and do regarding the behaviour
 - **Control**: the degree to which we feel capable (physically, psychologically, socially) of doing it
- Everything else (e.g. demographics, physical environment, ...) is presumed to influence intention *through* these constructs (i.e. "fully mediated")

Graphical representation

Structural Equation Modelling

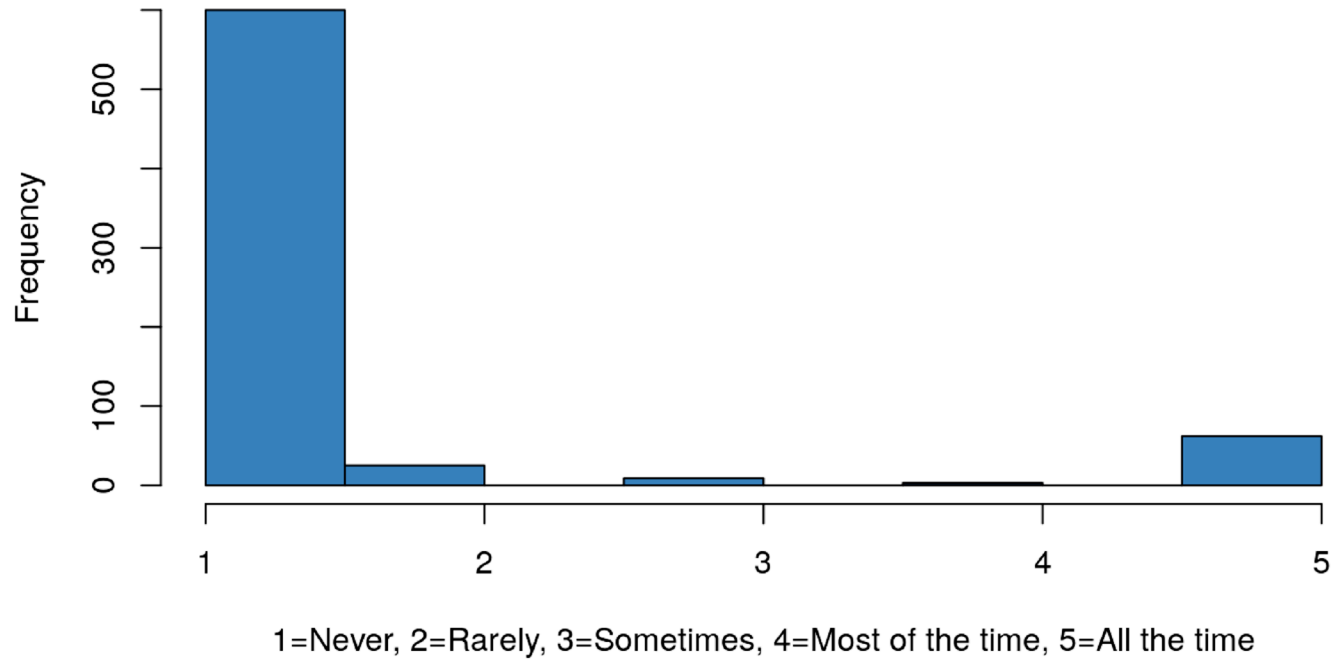
- A method to "explain" the pattern of correlations among observed variables in terms of *latent* (unobserved) variables
 - **measurement model:** latent variables are measured by (their presumed effects on) observed variables
 - **structural model:** causal relationships between latent variables are of interest
- Correlation is not causation! SEM, even more than most stats, proves *nothing* — multiple theoretical models have identical consistency with observed data
- All we can do is examine whether our theoretical model is *consistent* with the observed data, i.e. no evidence *against* it

Measurement model

- **Intention:**
 - "I intend to cycle to school"
 - "I want to cycle to school"
- **Attitude:**
 - "Cycling to school is interesting"
 - "Cycling to school is nice"
 - "Cycling to school is stimulating"
- **Subjective norm:**
 - "Parents say I should cycle to school"
 - "Friends say I should cycle to school"
- **Control:**
 - "I have the ability to cycle to school"
 - "I am capable of cycling to school"

Why not include actual behaviour?

Propensity of cycling to school



Results

	cfi	nfi	rmsea	srmr
Index	0.98	0.97	0.07	0.04

The model fits (very) well, so: what affects intention of adolescents to cycle to school?

City	Attitude	Control	Norms
Dunedin	0.42	0.14	0.16
Christchurch	0.35	0.05	0.52

- **Control** is not significant in Christchurch
- **Norms** have less influence in Dunedin, **Control** has more

Discussion

- A common mistake in many public health campaigns is "information gap" or "attitude - behaviour gap"
- Some students already have a positive attitude toward cycling to school, so what gets in their way?
 - Lack of parental and peer support and motivation
 - Lack of self-belief (especially in hilly Dunedin!)
- Lack of parental support is probably due in no small part to parental safety concerns (other presentation at this symposium)
- Other factors could be addressed by cycle skills training
- Social norms are important: getting a small group converted could be the start of a snowball effect

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