

# Review and Testing of Behaviour Change Theories

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# Review and Testing of Behaviour Change Theories

## What did the research entail?

Literature review of behaviour theories/models that might be useful for underpinning behaviour change strategies in relation to travel behaviour choice

A comparison of two of the models

# Review and Testing of Behaviour Change Theories

## What theories/ models?

- Theory of Reasoned Action/ Theory of Planned Behaviour
- Integrated Behaviour Model
- Consolidated Action Determination Model (CADM)
- Transtheoretical Model (Stages of Change)
- Health Belief Model
- Health Action Process Model
- Nudge theory

Also reviewed some practitioner reports

# Review and Testing of Behaviour Change Theories

## Findings

- Some models more appropriate than others
- Depends upon research question and/or context for developing intervention
- e. g. Health Belief Model might be useful if integrating transport choice with health initiatives
- Many of the models are similar and or have similar elements
- The beliefs of people underpin a number of these theories

# Review and Testing of Behaviour Change Theories

## Findings (2)

- Need to understand the models and their elements to successfully apply
- Little theory appears to be applied to many behavioural interventions (**not** only in the transport area and **not** only evident in practitioner reports)
- Reviewing and documenting successes and failures – why success, why failure?

# Review and Testing of Behaviour Change Theories

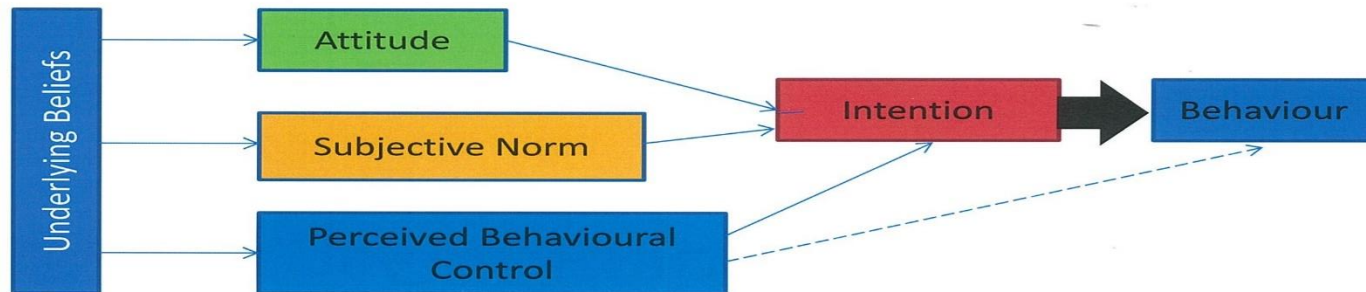
## Procedure/ Methodology for Test of Two Models

- Intention to use a vehicle for ‘daily tasks’
- Online instrument developed to measure the elements of TPB and CADM
- Qualtrics used to source respondents in two age groups 18 – 25 years and 55 years +
- Data analysed for group comparisons (age, gender, status as a university student) and two theories compared (TPB and CADM) through regression analyses

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## Comparison of two models (TPB and CADM)

### Theory of Planned Behaviour

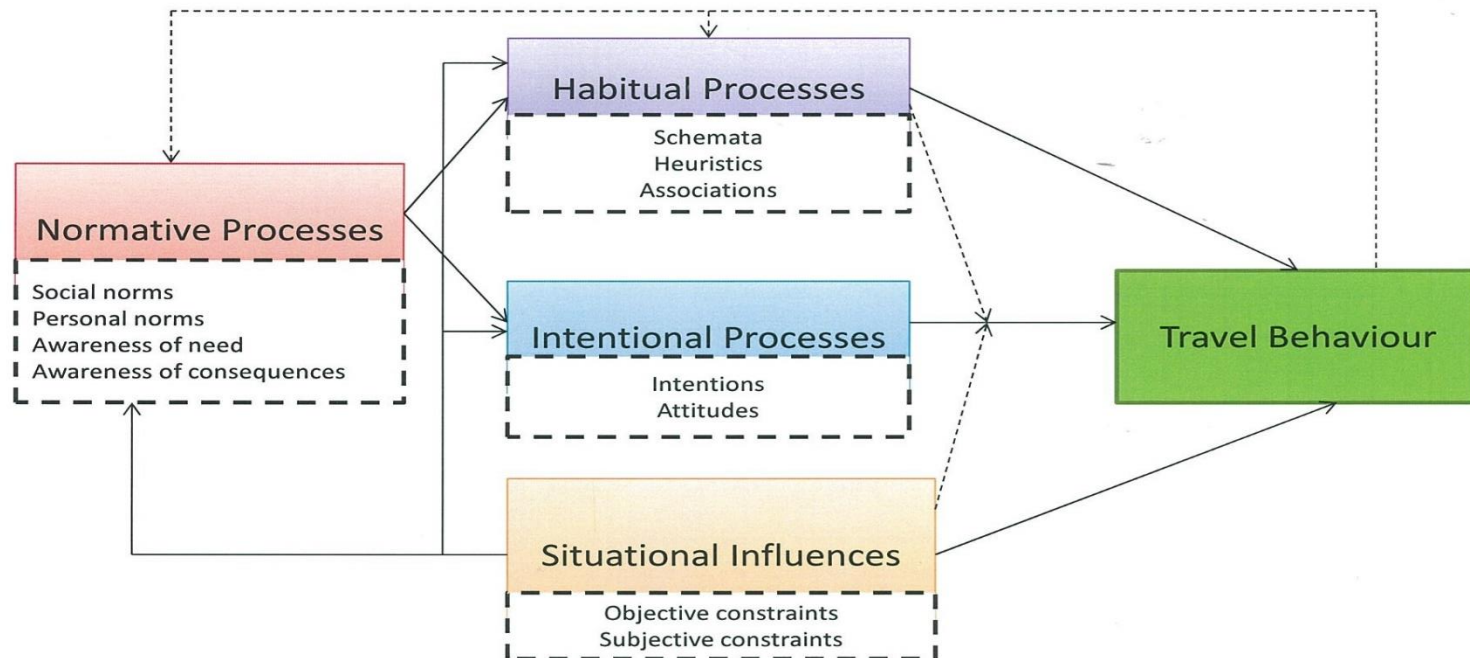


Theory of Planned Behaviour, adapted from Ajzen, 1991

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## CADM

*Conceptual Model  
Behaviour Change Model*





# Review and Testing of Behaviour Change Theories

## Results

- 509 Respondents split by gender and age
- 67% had access to a vehicle all the time, 29% sometimes, and 4% no access
- 72% indicated that they would use their vehicle to undertake 'daily tasks' – with 50.6% indicating 'all the time' - high vehicle usage

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	Vehicle	Public Transport	Cycle or Walk
Visiting a friend in the next suburb	73%	11%	16%
Going to the city centre	41%	<b>57%</b>	2%
Visiting a pub in the evening	<b>64%</b>	21%	15%
Taking an excursion in nice weather	67%	16%	17%
Shopping for daily needs	86%	7%	7%

# Review and Testing of Behaviour Change Theories (Results)

Attitude measurement – no significant differences across age, gender, or status as a university student

Normative measurements – no significant differences

Perceived Behavioural Control – small differences

	Mean	Standard Deviation	Effect Size (Cohen)
Young	5.25	1.57	.44
Older	5.94	1.57	
University student	5.20	1.46	.35
Not university student	5.70	1.39	

# Review and Testing of Behaviour Change Theories (Results)

Significant or not	Age	Gender	University Student status
Awareness of need	No	Yes	No
Awareness of consequences	Yes	Yes	Yes
Personal norms	No	No	No
Social norms	Yes	Yes	Yes
Perceived Behavioural Control (CADM)	Yes	No	Yes
Habit	No	No	No
Habit Strength	Yes	No	No

# Review and Testing of Behaviour Change Theories

		TPB	CADM
<b>Demographics</b>		2.1	1.9
<b>Theory Variables</b>	Attitude		0.3
	Subjective Norms	9.0	
	PBC	32.3	
	CADM PBC		29.8
	<b>Habit</b>		<b>12.7*</b>
	Personal Norm		6.0
	<b>Habit Strength</b>		<b>2.2*</b>
<b>Total (Results of regression)</b>		43.4	52.9
<b>Exclude Habit and Habit Strength*</b>		43.4	42.5

# Review and Testing of Behaviour Change Theories

## Conclusions:

From literature review

- Theory chosen needs to be considered in relation to desired outcomes of the research
- All potentially useful in some circumstances
- Reflection on outcomes and recording of outcome is important

# Review and Testing of Behaviour Change Theories

## Conclusions:

From the model comparison

- Similar results achieved in both models
- Previous behaviour (habit) can be a useful predictor of future behaviour, breaking habits might be a useful element for interventions
- Similar outcomes for the theories compared, and little difference in the potential useful elements to apply in interventions

# Review and Testing of Behaviour Change Theories

## Limitations of the research:

1. No elicitation study for beliefs
2. Investigation to intention only (not behaviour)



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