Psychological predictors of walking and cycling behaviour change: An iConnect study

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Study context

iConnect study aimed to effects of new purpose-built infrastructure for walking and cycling (Ogilvie et al., 2011; Ogilvie et al., 2012)

Key findings to date:

• Increased walking, cycling and overall physical activity at two years (Goodman et al., 2014)

• Improvements to physical environment important in intervention effectiveness (Panter & Ogilvie, 2015)

• Qualitative interviews suggested that visibility of infrastructure is important (Sahlqvist et al., 2015)

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Aim

To what extent does an extended version of the Theory of Planned Behaviour (eTPB) predict change in walking and cycling for transport and recreation?

Image: Courtesy of Sustrans
Extended Theory of Planned Behaviour (eTPB)

- Attitude
- Subjective norms
- Perceived behavioural control (PBC)
- Visibility
- Habit

Intention

Behaviour [change]

Adapted from Ajzen (1991)
Methods

Observational cohort analysis of iConnect survey data

• Adults from three UK municipalities (Cardiff, Kenilworth, Southampton)

• Three data collection points (baseline, 1-year follow-up, 2-year follow-up)
Methods
Multinomial logistic regression models, adjusted for socio demographic characteristics

Baseline responses to each psychological construct from the eTPB in relation to four behavioural outcomes
  o E.g. Attitude: “It is beneficial for me to walk for travel.”

Baseline to 1-year and 2-year change in time spent walking and cycling for transport and recreation
  o Increased = >15 min/week
  o Decreased = >15 min/week
  o Maintained = ≤±15 min/week
Results

1-year sample, N = 1,796 / 2-year sample, N = 1,465

Focus today is on key results from 2-year sample
<table>
<thead>
<tr>
<th>Construct</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>Increase in walking for transport</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>No associations identified</td>
</tr>
<tr>
<td>Perceived behavioural control</td>
<td>Increase in cycling for transport</td>
</tr>
<tr>
<td>Intention</td>
<td>Those with no intention to cycle for recreation were more likely to decrease time cycling for recreation</td>
</tr>
</tbody>
</table>
Extended TPB constructs

Visibility
- Those not seeing people cycling for recreation were more likely to decrease time cycling for recreation

Habit
- Increase in walking for transport
- Increase in cycling for transport
Discussion

• Limited support for eTPB as a standalone framework

• However, all eTPB constructs (with the exception of subjective norms) were associated with change in at least one behavioural outcome of interest

• Highlight strategies to be explored in future development of interventions
Visibility of cycling for recreation

**RECAP**: Not seeing cycling in the neighbourhood = more likely to decrease time spent engaged in that behaviour

Promotional media and visual exposure may...

- Create opportunities for comparison
- Improve confidence
- Contribute to ‘normalisation’
Conclusions

One of the first studies to examine walking and cycling behaviour *change* using eTPB

Caution advised as possible influence of wider socio-ecological factors unknown

Insight into psychological factors that may influence walking and cycling behaviour change – highlighting areas for intervention development
Acknowledgements

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Thank you for listening

Any questions?

For further information on iConnect study and study outputs, please visit www.icconnect.ac.uk.

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