Attitudes Towards Cycle Skills Training in New Zealand Adolescents

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From 1990 onwards New Zealand saw a substantial decline in cycling for transport by adolescents.
Children and Adolescents Cycling Behaviours

- Children and adolescents are at the highest risk of cycling-related accidents and injuries.
- Adolescents are at the highest risk of being in a collision with motor vehicles.
- Bicycle crashes often occur because children and adolescents engage in risky cycling behaviours.

Cycle skills training programmes have a positive effect on increasing knowledge and improving cycling skills in primary school children.
Cycle Skills Training (CST)

CST courses aim to give children the confidence and skills to cycle safely in a trafficked environment.

Grade 1
- Off-road experience
- Balance, stopping, steering, braking, hand signals

Grade 2
- Lightly-trafficked experience
- On road, passing stationary vehicles, intersections
Study Purpose

To examine correlates of adolescents perceptions that CST could make them safer in traffic

Mandic et al. (2016) Abstract accepted to ISPAH.
Adolescents from all 12 secondary schools in Dunedin (n=1,780)

- Invalid surveys (n=38)
- Incomplete assessments (n=79)
- Missing data (n=48)
- Boarders (n=162)

Completed survey as part of BEATS study (n=1,453)

<table>
<thead>
<tr>
<th>Total sample n=1453</th>
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<tbody>
<tr>
<td>Age (years)</td>
</tr>
<tr>
<td>Boys</td>
</tr>
<tr>
<td>Girls</td>
</tr>
<tr>
<td>Ethnicity [n(%)]</td>
</tr>
<tr>
<td>NZ European</td>
</tr>
<tr>
<td>Māori</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Bikes available [n(%)]</td>
</tr>
<tr>
<td>None</td>
</tr>
<tr>
<td>One</td>
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<tr>
<td>Two or more</td>
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</tbody>
</table>

Mandic et al. (2016) Abstract accepted to ISPAH.
Bicycle Ownership

On average, Dunedin adolescents have **two** bicycles at home (SD 1.5)

No bicycle available at home
(Variation by School)

Queen's Kaikorai

- All: 24%
- Que: 37%
- Kai: 35%
- Kav: 30%
- Col: 29%
- Bay: 27%
- OB: 23%
- Kin: 22%
- Log: 21%
- OG: 20%
- Joh: 15%
- Tai: 10%
- StH: 9%

n=1,476
(boarders excluded)
Study Methodology

1,453 Adolescents (13 to 18 years) from all 12 Dunedin Secondary Schools

Questionnaire

- Demographic information
- Travel to school habits
- Attitudes towards cycling to school
- Normative beliefs for parents, peers, and schools
- Self-perceived capability
- Intention to cycle to school

Mandic et al. (2016) Abstract accepted to ISPAH.
Adolescents Transport Habits

Dunedin adolescents’ transport to school habits

- Motorised transport: 60%
- Active transport: 24%
- Combined active and motorised: 16%

Average distance to school: $6.2 \pm 7.4$ km

Only 2% of adolescents cycled to school almost every day in the previous two weeks

Mandic et al. (2016) Abstract accepted to ISPAH.
Perceptions of Cycle Skills Training

Dunedin adolescents living up to 4 km to school (n=764)

Composite score for self-perceived capability to cycle to school

58.8% High
10.7% Average
30.5% Low

Figure 1. Adolescents’ perception that cycle skills training would make them safer in traffic (n=1453)

Figure 2. Adolescents’ interest in taking up cycle skills training at school among adolescents who perceived such training as beneficial (n=559)
Who thinks that cycle skills training would make them safer in traffic?

Adolescents who are:

- Enjoying cycling for recreation
- Perceiving cycling to school as being useful
- Cycling frequently with parents
- School encourages cycling to school
- Desire to cycle to school regularly

Mandic et al. (2016) Abstract accepted to ISPAH.
Preliminary findings from the BEATS Parental Survey (n=133)

• 15.8% did not allow their adolescent to cycle alone
• 53.4% perceived that their adolescent had very good/excellent cycle skills
• 73.4% believed their adolescent would benefit from cycle skills training
• 62.4% believe their adolescent would take cycle skills training at school
Study Strengths and Limitations

Strengths

• Large representative sample of adolescents from one city

• The first study to investigate factors affecting adolescents’ perception that CST could make them safer in traffic

Limitations

• The study did not explore:
  – Attitudes towards risky cycling behaviour
  – Number of cycle crashes adolescents involved in
  – Perceptions of safe or unsafe cycling behaviours of peers
  – Actual cycle skills in adolescents

Mandic et al. (2016) Abstract accepted to ISPAH.
Conclusions

• Raising adolescents’ awareness of benefits of CST and offering CST in secondary schools could improve cycle safety and encourage cycling for transport

• Future studies:
  – Design age-appropriate CST programmes for adolescents
  – Examine the effects of CST on cycling skills and behaviour, knowledge of road rules, and cycling habits

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Thank you!

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