



## Parental perceptions of cycle skills training for adolescents



Sandra Mandic<sup>a,\*</sup>, Charlotte Flaherty<sup>b</sup>, Tessa Pocock<sup>a</sup>, Chiew Ching Kek<sup>a</sup>,  
Palma Chillón<sup>c</sup>, Christina Ergler<sup>d</sup>, Enrique García Bengoechea<sup>e</sup>

<sup>a</sup> Active Living Laboratory, School of Physical Education, Sport and Exercise Science, University of Otago, Dunedin, New Zealand

<sup>b</sup> Dunedin City Council, Dunedin, New Zealand

<sup>c</sup> University of Granada, Granada, Spain

<sup>d</sup> Department of Geography, University of Otago, Dunedin, New Zealand

<sup>e</sup> Institute of Sport, Exercise and Active Living, Victoria University, Melbourne, Australia

### ARTICLE INFO

#### Keywords:

Adolescents  
Cycling  
Cycle skills  
Cycle skills training  
Parents  
Perceptions

### ABSTRACT

**Objective:** Traffic safety is a key concern regarding cycling for transportation. Parental perceptions of adolescents' cycle skills may influence the uptake of cycling for transportation among adolescents. This study examined parental perceptions of cycle skills training (CST) for New Zealand adolescents where rates of adolescents' cycling for transportation are low.

**Methods:** Parents ( $n = 310$ ; age:  $47.7 \pm 5.3$  years; 77.7% females) of adolescents (age:  $15.1 \pm 1.6$  years; 51.0% females) from Dunedin (New Zealand) completed a survey about travel to school habits and parental perceptions of cycling to school, their adolescent's cycling skills, and CST (perceived benefits and provision of CST at school). Data were analysed using linear mixed models.

**Results:** More than half of parents perceived that their adolescents had very good or excellent cycling skills (57.8%). Overall, 73.2% of parents believed their adolescents would benefit from CST and of those parents 74.5% believed their adolescents would take CST at school. In a multivariate analysis, parental perceptions that cycling to school is important and unsafe, and having fewer vehicles at home were positively associated with parental perceptions that CST would make adolescents safer in traffic (all  $p < .05$ ).

**Conclusions:** Nearly three-quarters of parents perceived that their adolescents would benefit from participation in CST. Parental perceptions that cycling to school is important and unsafe, and having fewer vehicles at home were associated with favourable parental perceptions of CST for adolescents. Future interventions should also involve parents and consider offering CST in secondary schools as a part of the efforts to promote active transport to school.

### 1. Introduction

In most developed countries, cycling to school among adolescents is less common than walking (McDonald, 2007; Larsen et al., 2009; Chillon et al., 2009; Nelson et al., 2008; Leslie et al., 2010; Mandic et al., 2015; Mandic et al., in press) and has been declining over the last two decades (McDonald, 2007; Ministry of Transport 2015). In New Zealand, only 2% of children and 3% of adolescents cycled to school in 2010–2014 (Ministry of Transport 2015). One key concern about cycling for transportation is traffic safety (Krizek et al., 2009; Sallis et al., 2013; Department for Transport, 2015), especially in children and adolescents. High rates of bicycle-related injuries have been reported among adolescents in the United States (National Highway Traffic Safety Administration, 2015),

\* Correspondence to: School of Physical Education, Sport and Exercise Sciences, University of Otago, PO Box 56, Dunedin, New Zealand.  
E-mail address: [sandra.mandic@otago.ac.nz](mailto:sandra.mandic@otago.ac.nz) (S. Mandic).

European Union (Candappa et al., 2012), Australia (Boufous et al., 2011) and New Zealand (Ministry of Transport 2015). Much higher accident rates have been observed in children with inadequate cycle skills compared to other children, even though they may cycle less frequently (Preston, 1980).

Parental perceptions of safety play an important role in the uptake of cycling among children (Ducheyne et al., 2012) and adolescents (Woldeamanuel 2016). Parental confidence in the child's cycle skills is one of the determinants of the rates of cycling to school in children (Ducheyne et al., 2012; Trapp et al., 2011) and mediates the association between parental perceptions of safety and cycling (Trapp et al., 2011). In a recent study from New Zealand, adolescents also reported that cycling to school was perceived as less safe by themselves and their parents compared to walking (Mandic et al., in press). Findings from focus groups with adolescents and parents from the same study identified a complex range of factors that contribute to perceptions of cycling safety, including adolescents' cycling skills (in addition to the features and perceptions of the built environment, traffic safety, previous cycling experiences and on-road cycling experiences) (Hopkins and Mandic, 2017). Taken together, these findings suggest that parental perceptions of adolescents' cycling skills may also influence the uptake of cycling for transportation among adolescents. Therefore, development of cycling skills in children and adolescents may be an important strategy to help minimize parental safety concerns and increase rates of cycling in these age groups.

Cycle skills training (CST) courses have been developed to provide children the skills and confidence to cycle safely in traffic (Ducheyne et al., 2013, 2014; New Zealand Transport Agency 2012). Cycling is a motor skill which requires a large amount of practice to become efficient and automatic (Ellis, 2014). Cycling in traffic also requires cognitive skills and considerable alertness for processing complex traffic situations (Ellis, 2014). CST courses often feature skill components taught in traffic-free and lightly trafficked environments. CST conducted in a traffic-free environment increased knowledge (McLaughlin and Glang, 2010; van Schagen and Brookhuis, 1994) and improved cycle skills (Ducheyne et al., 2013, 2014; van Schagen and Brookhuis, 1994) in primary school children in most (Ducheyne et al., 2013, 2014; van Schagen and Brookhuis, 1994) but not all (Macarthur et al., 1998) studies. Adolescents perceived CST was/would be effective in making them a safer road user (Colwell and Culverwell, 2002; Mandic et al., 2016a, 2016b). Although CST interventions may increase the knowledge of cycling safety, participation in CST interventions did not reduce the rates of injuries or improved bicycle handling skills and attitudes toward safe cycling in young people Richmond et al. (2014). In a study from London, UK, participating in or passing a CST programme was not associated with the reduced likelihood of cycling-related injury in adolescents and had no effect on cycling-related accidents or adolescents' attitudes towards safe cycling behaviour (Colwell and Culverwell, 2002).

Compared to children, adolescents have more developed motor and cognitive skills (Ellis, 2014). However, this skill maturation may not necessarily translate into greater on-road cycling competence or perceived ability to cycle to school (Ellis, 2014). Since CST interventions have been developed primarily for children, adolescents who do not receive such training in their childhood may miss the opportunity to develop competence for cycling on the road. Approximately one third of adolescents from Dunedin, New Zealand, living within 4 km from school did not perceive themselves as capable of cycling to school (Mandic et al., in press). Therefore, CST programmes may need to be offered to adolescents to gain the required competence and perceived competence for cycling on the road, minimize parental concerns associated with cycling to school and increase social support for cycling in cities with low rates of cycling for transportation. However, the uptake of such programs would ultimately depend on adolescents' and their parents' perceptions that CST programs would make adolescents' safer in traffic.

Currently, limited evidence exists in relation to adolescents' attitudes towards CST, whereas parental perceptions of CST for adolescents remain unstudied. A study from London, UK, reported that 39% of adolescents who participated in the CST intervention perceived that CST was teaching real life skills and making them safer road users (Colwell and Culverwell, 2002). A recent study from Dunedin, New Zealand, found that 39% of adolescents perceived that CST could make them safer in traffic and nearly half of those adolescents expressed interest in taking such training at their school (Mandic et al., 2016a). Enjoyment of cycling for recreation, cycling to school being perceived as worthwhile, desire to cycle to school, frequent cycling with parents, and schools' encouragement to cycle were positively associated with the adolescents' perception that CST could make them safer in traffic (Mandic et al., 2016a, 2016b). Therefore, given the lack of research on parental perceptions of CST for adolescents, this study examined parental perceptions of the perceived benefits of CST and provision of CST at school for New Zealand adolescents.

## 2. Materials and methods

### 2.1. Participants

Participants were recruited through schools, workplaces, social media and at sport events for adolescents, as described previously (Mandic et al., 2016b). Parents ( $n = 310$ ; age:  $47.7 \pm 5.3$  years; 77.7% females) of adolescents (age:  $15.1 \pm 1.6$  years; 51.0% females) from Dunedin (New Zealand) completed an online or paper survey as a part of the Built Environment and Active Transport to School (BEATS) Study in 2014–2016 (Mandic et al., 2016b; Mandic et al., 2015).

### 2.2. Procedures

Participants completed the survey either online or on paper. The study was approved by the University of Otago Ethics Committee.

Download English Version:

<https://daneshyari.com/en/article/5117677>

Download Persian Version:

<https://daneshyari.com/article/5117677>

[Daneshyari.com](https://daneshyari.com)