

Sample Abstract

Adolescents' Perceptions of Walking versus Cycling to School in New Zealand: Informing Future Interventions for Promoting Cycling to School

Sandra Mandic PhD¹, Debbie Hopkins PhD², Enrique García Bengoechea PhD³, Charlotte Flaherty BCom⁴, John Williams PhD⁵, Leiana Sloane BPhEd¹, Antoni Moore PhD⁶, John C. Spence PhD⁷.

¹Active Living Laboratory, School of Physical Education, Sport and Exercise Sciences, University of Otago, Dunedin, New Zealand

²Center for Sustainability, University of Otago, Dunedin, New Zealand

³Participatory Research at McGill, Department of Family Medicine, McGill University, Montreal, Canada

⁴Dunedin City Council, Dunedin, New Zealand

⁵Department of Marketing, University of Otago, Dunedin, New Zealand

⁶School of Surveying, University of Otago, Dunedin, New Zealand

⁷Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Canada

Background: Though walking is a popular form of active transport to school among adolescents, cycling to school (C2S) is less common in many countries. This cross-sectional study compared perceptions of walking versus C2S in adolescents living ≤ 4 km from school in Dunedin, New Zealand.

Methods: Adolescents ($n=753$; 44.5% males; 15.1 ± 1.4 years) from 12 secondary schools completed an online survey in 2014-2015. Questions included sociodemographic characteristics, home address, travel to school habits, and perceptions of walking and C2S. Distance to school was determined using Geographic Information Systems network analysis.

Results: Overall, adolescents lived 1.9 ± 1.0 km from school, 72.1% had ≥ 1 bicycle available and 61.4% had ≥ 2 vehicles at home. Modes of transport to school included walking (50.7%), being driven/driving (41.7%), school/public bus (5.6%), and cycling (1.9%). Half of adolescents liked cycling for recreation (44.2%) and perceived themselves as able capable (56.6%), confident (55.9%) or having the ability (64.0%) to C2S. Adolescents reported too much traffic (35.6%), dangerous crossing(s) (32.4%), too many hills (32.9%), boring route (33.3%), fewer cycle paths compared to footpaths (37.5% vs 91.2%; $p < 0.001$) on the way to school and convenience of being driven to school (52.9%). Compared to walking, adolescents reported that C2S was perceived as less safe by themselves (61.6% vs 89.6%) and their parents (71.0% vs 89.0%) and was less encouraged by their parents (23.0% vs 67.2%), peers (19.0% vs 48.7%) and school (19.5% vs 30.5%) (all $p < 0.001$). Cycle friendly uniforms (41.6%), safer bicycle storage at school (40.4%), slower traffic (36.3%), bus bicycle racks (26.4%) and bicycle ownership (32.7%) would encourage C2S.

Conclusions: Compared to walking, C2S among adolescents in Dunedin was less common, perceived as less safe and had less social and infrastructure support. Future interventions should focus on creating supportive environment, improving adolescents' cycling skills and improving road safety for cyclists in New Zealand.

Support/Funding Source: National Heart Foundation of New Zealand, Lottery Health Research Grant, University of Otago Research Grant, Dunedin City Council and internal grants from the School of Physical Education, Sport and Exercise Sciences, University of Otago.