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Enrolling in the Closest School or Not? Implications of school choice decisions for active transport to school



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ABSTRACT

Background: Absence of requirements to attend a local school combined with social factors driving school choice make distance to school less important in school choice decisions. This study examined correlates of adolescents' enrolment in the closest school in the absence of school zoning policies.

Methods: Adolescents (n=797; age: 15.2 ± 1.4 years; 51.4% boys) from six non-integrated (regular) public secondary schools without school zoning in Dunedin, New Zealand, completed an online survey about school choice. Distance to school was calculated using Geographic Information Systems network analysis. Data were analysed using t-tests, Chi-square tests and mixed effects binary logistic regressions.

Results: Overall, 51.3% of adolescents enrolled in the closest school (range across schools: 28.3% to 81.6%). These adolescents had five times higher rates of active transport (46.5% vs. 8.8%) and lower rates of motorised transport to school (40.3% vs. 68.8%) compared to their counterparts (all p < 0.05). In a multivariate analysis, enrolment in a co-educational school [OR (95%CI): 4.51 (2.60–7.80)] and choosing school because of its proximity to home [2.29 (1.97–2.66)] were positively associated with enrolment in the closest school, whereas distance to school [0.86 (0.82–0.90)] and negative comments from students at closest school [0.68 (0.47–0.98)] were negatively associated.

Conclusions: In the absence of school zoning, shorter distance to school, importance of school's proximity to home, co-educational school status, and absence of negative peer feedback were associated with adolescents' enrolment in the closest secondary school. School choice decisions have implications not only for education but also for public health, transport and environmental sustainability. A multi-sector approach and extensive collaboration between educational policy makers, urban designers, health promoters, and community groups is required to reduce the tensions between parental and students' school choice expectations of getting the best education possible and the goal of increasing rates of active transport to school.

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1. Introduction

During the last few decades there has been a shift in travel mode to school in many developed countries, with decreased rates of walking and cycling to school and increased rates of motorised transport; especially driving children and adolescents to school (Gray et al., 2014; McDonald, 2007; Ministry of Transport, 2011). In New Zealand, the rates of adolescents being driven to secondary school have increased from 21% in 1989/1990 to 32% in 2010–2014 (Ministry of Transport, 2015). A shift away from neighbourhood schools led to increasing the distance that children and adolescents have to travel to get to school (McDonald, 2007), which can in part explain reduced rates of walking and cycling to school observed in developed countries over the last few decades (Davison et al., 2008; Panter et al., 2008; Pont et al., 2009; Wong et al., 2011). In addition to reducing opportunity for physical activity in young people, increased rates of travelling to school by private vehicles have also led to increased traffic volume, increased traffic congestion around schools at drop-off and pick up times, increased air pollution and increased safety concerns for children and adolescents who walk or cycle to school (Eyler et al., 2008; Frank and Engelke, 2007; Maibach et al., 2009; Parusel and McLaren, 2010).

School choice is a multifaceted issue with socio-cultural, economic and political implications, particularly relating to equity and social justice (West, 2006). Access to educational opportunities, and particularly ‘good’ schools, is strongly related to housing, spatial form and transport (e.g. DeLuca and Rosenblatt, 2010; Dougherty et al., 2009; Müller et al., 2008; Phillippo and Griffin, 2016; Wilson et al., 2010). School choice is informed by a number of individual and collective norms. In ‘developed’ countries, school choice policy has shifted in line with neoliberal ideals of individual choice and competition. Freedom of choice in education is a hotly contested public policy, and has been widely debated (Bunar, 2010). Freedom of choice in education has manifested in a range of policies including the removal of school zoning. This policy has resulted in attendance at schools that are geographically distanced from the child’s place of residence. Thus freedom of choice has implications for transport to school mode choice and travel behaviour (Wilson et al., 2010).

Available evidence indicates that the role distance plays in the choice of, and access to, educational institutions is complex. For example, the Longitudinal Study of Australian Youth explored the association between distance to a university campus and university choice and admission, including enrolment in an elite university in ~12,000 adolescents (Parker et al., 2016). The findings indicate that distance exerts an influence on students’ choice beyond socioeconomic background and academic ability and suggest that distance affects aspirations well before issues related to cost and relocation become a barrier. In the US, research has shown that for elementary school children, mode of transport to school and parental school choice differ by school type, income and race (Wilson et al., 2010).

Unlike students who attended their closest ‘neighbourhood’ school, students attending schools for other reasons (e.g. not distance related) include students from a wider catchment area with lower rates of active transport (e.g. walking and cycling), identifying the “unintended influence of school district policy on school commute mode” (Wilson et al., 2010: 2168). Preliminary findings from the city of Dunedin (New Zealand) show that social factors and school programmes/facilities rather than proximity to home influences secondary school choice decisions (unpublished findings). Therefore, absence of requirements to attend a local school combined with social factors driving school choice likely make distance to school less important in school choice decisions.

Research has also elucidated the relationship between school choice, distance to school, and transport-related emissions. Transport contributes over 20% to global greenhouse gas emissions, and 72% of transport sector greenhouse gas emissions arise from road-based transport (Sims et al., 2014). Wilson et al. (2007) examined the travel distance, greenhouse gas emissions and exposure to air pollution related with attending neighbourhood or city-wide schools. They found that attendance at a city-wide school, rather than a local school resulted in “six times fewer children walking, 4.5 times as many miles travelled, 4.5 times the system cost, and 3 to 4.5 times the amount of criteria air pollutants and greenhouse gas emissions” (Wilson et al., 2007: 506).

School choice in Aotearoa New Zealand is a complex and disputed field, with multiple factors influencing how parents and/or students choose a secondary school. The 1989 Education Act and subsequent legislation, which removed school zones, radically reshaped school choice (Stubbs and Strathdee, 2012). These school reforms underpinned by neo-liberal ideologies that emphasise the importance of individual choice, resulted in increased stratification between low- and high-decile schools¹ (Gordon, 2015; Harker, 2000; Nash and Harker, 2005) and a culture of parental school choice frequently driven by factors other than distance to school (e.g. characteristics of the school population, school’s academic achievement, reputation, environment, and safety) (Gordon, 2015).

Taken together, school choice and school zoning policies have implications not only for education but also for public health, transport, and sustainability. This paper extends the literature by examining correlates of adolescents’ enrolment in the closest secondary school in the absence of school zoning policies in the city of Dunedin, New Zealand, and its implications for active transport to school.

2. Methods

2.1. Setting

The study was conducted in the city of Dunedin (population: 130,000) on the South Island of New Zealand. The city of Dunedin

¹ The decile rating of a school is a “measure of the socio-economic position of a school’s student community relative to other schools throughout the country” (Ministry of Education, 2016, 4)

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