

THE IMPORTANCE OF CULTURALLY SAFE ACTIVE SCHOOL TRAVEL OPTIONS TO ENABLE TAMARIKI MĀORI TO FLOURISH

A narrative review and model

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Abstract

To better understand the low and declining trends in active transport, there is a clarion call for town planners to develop sensitivity and sensibility towards the cultural backgrounds, realities and priorities of Māori. This will be important in producing more sustainable, healthy and equitable neighbourhoods. This paper outlines the results of a narrative literature review and consultation on tamariki Māori and travelling to kura. Tamariki Māori face barriers to active transport similar to those of other children, including a lack of access to suitable urban infrastructure, but these are exacerbated for tamariki Māori by historical issues. Factors influencing the feasibility of active transport options for tamariki Māori include school choice, concerns about neighbourhood safety and lack of access to places of importance to whānau Māori. Ultimately, the review reinforces the importance of creating culturally safe active transport options that enable tamariki Māori to flourish.

Keywords

active transport, child rights, Indigenous rights, neighbourhood safety,
transport equity, built environment

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Introduction

Ko te ahurei o te tamaiti arahia ō tātou mahi
Let the uniqueness of the child guide our work

Increasing opportunities for participation in active school travel (i.e., walking or wheeling to and from school) may positively affect climate change goals and ultimately benefit Māori health outcomes. While a substantive body of research exists to help understand factors related to active school travel globally (Ikeda et al., 2018; Smith et al., 2017; Wong et al., 2011) and in Aotearoa New Zealand (Smith et al., 2020), localised and population-specific knowledge is less prevalent. In Aotearoa, as in many other industrialised countries, active school travel has precipitously declined (Ministry of Transport, 2015). Across the motu, a small but growing evidence base is beginning to highlight whānau aspirations to increase active travel options for tamariki Māori (Raerino et al., 2013; Spray et al., 2020). Academics and community members have agreed that meaningful inclusion of Māori realities and designing of infrastructure that enables the continuation of ahurea Māori within the neighbourhood are essential (Hoskins, 2008; Spray et al., 2020).

This review seeks to identify the key ideas within the literature on tamariki Māori with a focus on factors that might affect active travel to school and understanding what matters most for tamariki Māori to enable equitable active travel options. We first provide a background on the benefits and inequities in active travel to school, with a focus on tamariki Māori. Next, we outline the methods used to undertake the review and describe our Indigenous-centred approach. We then describe the results from this process, including the key themes that we developed. Next, we contextualise this research within the broader evidence base and provide recommendations in the discussion and recommendations section. Finally, we conclude with a suggested path forward and highlight the importance of tino rangatiratanga for Māori, leading to whakamana in all transport planning and other community policy.

Generally, communities that can partake in active travel have a propensity towards better physical and mental health (Raerino et al., 2013; Roth et al., 2012; Stark et al., 2018; Wild et al., 2021). Research by Davison et al. (2008) concluded that children who actively commute to school have higher levels of physical activity and improved cardiovascular fitness than those who do not. Another systematic review found positive

associations between increased active school travel and healthier body compositions (Lubans et al., 2011). Recent studies have found that people in cities in Aotearoa with higher levels of cycling and walking had reduced risk factors for diabetes or hypertension and were less likely to be overweight (Jeon et al., 2007; Shaw & Russell, 2017). Furthermore, Bassett et al. (2020) found that the health benefits of active travel were twice as high for Māori as they were for non-Māori. Though the study was conducted with data relating to participants aged 15 years onwards, it aids in understanding the benefits of active travel for whānau Māori as a whole.

Enabling access to active travel options may reduce the disproportionate transport-related injuries experienced by whānau Māori (Rose et al., 2009). Māori experience higher levels of both road-related injuries and mortality than Pākehā, Asian and Pacific peoples in Aotearoa (Bassett et al., 2020). These inequities are particularly high in tamariki and rangatahi Māori (Connor et al., 2006; Waka Kotahi NZ Transport Agency, 2021). Between 2007 and 2016, tamariki Māori represented 52% of all traffic-related deaths and made up 43% of hospitalisations (Environmental Health Intelligence, 2021), despite Māori comprising only 17.1% of the total population. In Auckland, the risk of road traffic injury for tamariki Māori was 65% higher than it was for European children (Hosking et al., 2013).

Māori are also more likely than non-Māori to face the burdens of social exclusion (inability to partake in everyday activities because of a lack of viable travel options) associated with transport poverty (Raerino et al., 2013; Rose et al., 2009). One in five Māori children live in low-income households, increasing the likelihood of their experiencing transport poverty (Stats NZ, 2021a). Owning a vehicle and the continual maintenance and fuel costs can further increase financial stress within low-income whānau (Curl et al., 2018; Raerino et al., 2013). Recent research has concluded that the financial costs associated with obtaining a licence and using a vehicle are crucial barriers to accessing workplaces and other services (Raerino et al., 2013; Thorne et al., 2020).

Developing solutions to transportation barriers and addressing the inequity in road traffic harm requires solutions that are inclusive of Māori lived realities (Raerino et al., 2013). However, little is specifically known about tamariki Māori and the systemic barriers they face in the active travel space. The positioning of tamariki as tangata whenua—the future of Indigenous whakapapa in

Aotearoa—requires a nuanced understanding of their realities.

Such inequities also illustrate ongoing breaches of foundational documents in Aotearoa. These include the Universal Declaration of Human Rights (1948) and the United Nations Declaration on the Rights of Indigenous Peoples (2007), which guarantees equity for Indigenous people. Moreover, the inequities breach the rights set out in Te Tiriti o Waitangi, the document legitimising settler presence in Aotearoa and that within its articles places obligations on the government and local authorities to commit to transforming outcomes where inequity arises for Māori. These documents reaffirm rights for tamariki Māori. Because tamariki Māori are subject to these inequities, their perspectives are necessary to develop appropriate and effective solutions. Thus, a te Tiriti based approach must lie at the heart of ethical solution-making in this country. Principles of tino rangatiratanga, ōritetanga and kāwanatanga influence the development of solutions to these inequities (Ministry of Health, 2020; Waitangi Tribunal, 2019).

In a child's life, school is the “second place” accessed regularly—the first being home (Carroll et al., 2015). Unlocking Māori realities when they are travelling to school is essential in fulfilling the aspirations of Māori to improve physical health and increase active transport options for their tamariki. Additionally, active school travel allows Māori to express katiakitanga by caring for planetary health. Moreover, as councils work to better incorporate te Tiriti (Auckland Council, 2021), it will be imperative to understand the wants and needs of tamariki Māori and their whānau.

Methods: Indigenous-centred approach

Theoretical positionality

A Kaupapa Māori theory underpins the methods of this narrative review (Curtis, 2016; Mahuika, 2008). The overarching aim of this review was to aid in outcomes that are beneficial for Māori. Accordingly, we explicitly prioritised decolonial research methods, centring concerns and worldviews of Māori. We focused on rejecting deficit framing analyses and privileging Indigenous values, realities and ways of knowing (Curtis, 2016).

Shannon (Rangitāne o Tamaki nui-ā-rua, Ngāti Porou, Ngai Tai ki Tamaki, Waikato-Tainui) is a wahine Māori who is passionate about te taiao and Indigenous experiences of the world. She seeks to pursue research tasks that contribute to improving the wellbeing of Māori as tangata whenua in Aotearoa. Associate Professor Rhys Jones

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Search strategy

Information sources: We undertook a search of Google Scholar, the University of Auckland Library Catalogue (delimited to Journal Article Output only), Scopus, and key national and international organisations and research groups working in the areas of transport for Māori, children's active travel and transport policy. Backwards searching was undertaken, involving searching the bibliographies of key research papers to identify further relevant papers. In addition to peer-reviewed academic sources, a targeted search was carried out of websites of key organisations—the Office of the Children's Commissioner and the New Zealand Transport Agency—for relevant reports.

Consultation with key researchers and Māori leaders within the fields of education and school travel was used to ensure a comprehensive, localised, historical and population-specific understanding and to help identify any additional important literature. Because of pandemic-related restrictions and the rapid nature of this review, this consultation was undertaken via email.

Eligibility criteria and selection of sources of evidence: The eligibility criteria for this review were broad. Literature published between 2000 and 2021 was considered eligible. Language was limited to English and te reo Māori. The study population must have included Māori participants in the research. At first, inclusion was restricted to the majority of participants being of primary/

elementary school age (approximately 5–13 years). However, because of limited research focusing on tamariki Māori, the upper age limit was removed to include Māori older than 13. The inclusion of articles containing other ethnic groupings was allowed as long as Māori were also included as participants. Both quantitative and qualitative studies that met these criteria were eligible for inclusion, and grey literature, government reports and peer-reviewed articles were all eligible.

Search terms: Search terms were “Māori” OR “Tangata Whenua” OR “Indigenous”, AND “walk*” OR “transport*” OR “bike*” AND “Activ*” OR “School Travel”.

Data collation and synthesis of evidence

Data extraction was conducted using a study-specific data extraction coding sheet including author, ages of participants, key findings and sample size. Data from all included literature were synthesised using narrative analysis to generate key discussion topics. From this analysis, we developed a graphic interpretation of priorities and desires that influence tamariki Māori school travel patterns. Key ideas that were identified throughout the literature were access to kura, keeping tamariki safe in the community and racism across the transport system.

We aimed to seek out Māori lived realities, through employing these review methods with the intention of improving Māori health outcomes. Each step was carried out using a decolonial research methodology, which denies deficit framing and centres Māoritanga.

Results

Taonga tuku iho—Continuation of Māoritanga

The education system has an important influence on active travel to school for tamariki Māori. The whakataukī “He taonga tuku iho” means the treasures passed down to us from the tipuna. Many Māori have the desire for their tamariki to appreciate and understand te ao Māori customs, values and beliefs (Hunia et al., 2018; Mandic et al., 2018; McKinley, 2000; Mead, 2016). While most Māori remain in the mainstream education system, there is a strong demand for Māori language education. This growth has been stimulated by the revitalisation movement of te reo Māori. Despite this, in Aotearoa, access to Māori-medium education is not universal. Accessing Māori schooling options, whether they be in kura kaupapa, a bilingual unit or English-medium schooling with te reo Māori enrichment can be difficult. Participants in Hunia et al.’s (2018) study agreed that living

far away from Māori-medium schools led to reliance on car use to make this aspiration a reality. Additionally, the Waitangi Tribunal attributed this trip length to failing to invest in the expansion of Māori-medium education (Waitangi Tribunal, 2011). The following sections discuss how this might effectively exclude many tamariki from active school travel.

Although domestic legislation and international human rights instruments protect Māori people’s right to access te reo Māori and te ao Māori, the education system has perpetually failed to give effect to te Tiriti through funding Māori-medium education opportunities (Education Act 1989; Orange, 2020; United Nations Conventions of the Rights of the Child, 1989). There was a decline in participation in Māori-medium education from 1999, when 18.6% of Māori students were enrolled, to July 2016, when only 8.6% of Māori were in Māori-medium settings (Hunia et al., 2018). The Waitangi Tribunal found that a key reason was perpetual underinvestment by the government in growing teacher supply and improving whānau access to Māori-medium options (Waitangi Tribunal, 2011). Furthermore, many tamariki and rangatahi wanted more te reo Māori within their schooling experience. Participants in consultation with the Children’s Commissioner expressed that to know them was to understand te ao Māori (Office of the Children’s Commissioner, 2018). In contrast, the report also found that students in some schooling environments who did not speak te reo Māori often felt their school left them ill-prepared or embarrassed to engage with their cultural identity (Hunia et al., 2018).

In the literature, the aspiration to pass on this tikanga to tamariki seemed hindered mainly by the lack of equal access to quality education, including te ao Māori and te reo Māori (Office of the Children’s Commissioner, 2018). Hunia et al. (2018) found that whānau involvement in education was important in setting up te reo Māori schooling options for their children. Section 61(3)(a)(ii) of the Education Act 1989 supports the right to these options by stating “all schools must provide Māori language programmes to learners if parents request it”. However, parents and pouako mentioned the necessity to operate outside of government funding via self-funding operations to pay staff and rent buildings even with this addition to the legislation. Furthermore, pouako based in English-medium schools were unable to find financing to celebrate Māori culture in order to normalise speaking te reo Māori. These shortcomings highlight that the government is yet

to address the low numbers of Māori-medium schools across Aotearoa, leaving the expansion of te reo Māori education to Māori.

Because of the lack of investment in education, the travel distance required to attend Māori-medium schools plays a large role in hindering active school travel for tamariki. The desire to immerse tamariki Māori in kura kaupapa, a bilingual unit or English-medium schooling with te reo Māori enrichment has been mentioned by Māori parents as playing an essential role in decisions about education (Mandic et al., 2018; McKinley, 2000; Wilcox, 2022). One report found that Māori peoples access to te reo Māori for their ākonga was difficult, and often, car use was relied upon to make their aspirations a reality (Hunia et al., 2018; Raerino et al., 2013). Whānau described driving to another town each morning to access te reo Māori schooling, with some combining resources to lower the cost and time burdens. Another case study, conducted with Te Whānau-a-Apanui, found that shared mobility by providing a van for the local kōhanga reo was beneficial to their community since tamariki journeyed upward of 32 km to attend (Haerewa et al., 2018). Ultimately, dispersed locations of te reo Māori schooling decrease the feasibility of active school travel (Hunia et al., 2018; Raerino et al., 2013).

Despite the desire and attempt to exercise autonomy over their education options, the reality of choice within the schooling environment is hindered by the socio-economic positioning of some whānau. The New Zealand Council for Educational Research found that Māori parents were more likely to have their rangatahi at a school that was not their first choice (Mandic et al., 2018). McKinley (2000) and Hunia et al. (2018) have suggested that Māori are much more likely to consider schools within their locality because of the ease of travel and proximity. These priorities seemingly dominate other aspirations such as immersion or schooling experience because of the cost and time burdens associated with car dependency (Hunia et al., 2018). While Māori are found within all socio-economic sectors of society in Aotearoa, tamariki Māori are over-represented in child poverty statistics and low-income households (Stats NZ, 2021a). Many low-income parents do not have the diverse schooling options available to them that their high-income counterparts have (McKinley, 2000). Furthermore, urban tamariki Māori are more likely than Pākehā to walk to school (Ministry of Health, 2016; Yelavich et al., 2008). Whānau Māori have affirmed the cost of driving as a hindrance to transferring

their tamariki to schools outside of their suburb (Hunia et al., 2018; Jones et al., 2020; Raerino et al., 2013). Sending tamariki to schools closer to their home can be essential to save money rather than as a method of enabling active school travel. Ultimately, lack of access to schools strong in te ao Māori alongside deprivation of resources has stripped Māori of their right to access forms of education for Māori by Māori (Borell, 2005; Orange, 2015; United Nations Declaration on the Rights of Indigenous Peoples, 2007).

Tiakina ō Tātou Tamariki—Keeping our children safe

Generally, the literature highlights the importance of local environments in terms of children's neighbourhood mobility and active school travel (Smith et al., 2017; Wong et al., 2011). Carroll et al. (2015), Moore (1986) and Egli et al. (2020) have pointed out that children's freedom to interact with their neighbourhoods is positively associated with the development of their social and motor skills and their personal identity. Engwicht (1992) highlighted that engaging with people of different backgrounds in people's neighbourhoods gives rise to opportunities to develop a relationship with the "placeness" of one's physical environment.

Children's use of their local environment is subject to parental influence and control. Many parents in Aotearoa have fears (e.g., of traffic or stranger danger) regarding their children travelling in the neighbourhood alone (Smith et al., 2019). These worries can affect the perceived safety of the area for whānau and further decrease the likelihood of independent active school travel. Lin et al. (2017) found that the most common safety issue overall for parents when considering their neighbourhood independent mobility was stranger danger. Moreover, past studies have inextricably linked the perception of safety with physical activity, and found that higher perceived safety is associated with a greater likelihood of active independent travel (Bennett et al., 2007; Tucker-Seeley et al., 2009). In these studies, whānau found that the people within their community were disconnected from one another. Solutions to these barriers were seen to be sourced through building a "greater sense of community". Indeed, in Lin et al.'s (2017) study, parent perceptions of neighbourhood cohesiveness and connectivity were associated with greater independent mobility in tamariki.

Reasons for feelings of neighbourhood disconnection may include factors associated with social deprivation (Ellis-Young, 2021; Lin et al., 2017).

Loss of social connection between people in the community has been attributed to busy lives and time scarcity caused by increased economic burdens (Thorne et al., 2020; Witten et al., 2013). Additionally, cited insecurity of tenure is associated with greater residential movement (Stats NZ, 2021b). At present, Māori are more likely than Pākehā to move house because of their tenancy being ended by their landlord or unaffordability. In general, families that move often are less likely to build community connections that make parents feel comfortable about allowing their children to independently move within the neighbourhood (Houkamau & Sibley, 2015; Stats NZ, 2021b; Witten et al., 2013).

The Te Ara Mua—Future Streets project found that reducing safety hazards through infrastructure reinvigoration removed road safety fears, but children were still fearful of other hazards, such as roaming dogs and broken glass on the ground, in their neighbourhood (Macmillan et al., 2018; Thorne et al., 2020; Witten & Field, 2020). Parents agreed that personal safety remained a significant concern following the renovations of the local landscape (Macmillan et al., 2018). The project highlighted the astute nature of children in relation to their lived environments (Thorne et al., 2020; Witten & Field, 2020). The emphasis on traffic calming, prioritisation of walking and cycling infrastructure, and cultural landscaping reflecting mana whenua identity affected tamariki and rangatahi perceptions of their neighbourhood. Children noticed cars slowing down for them, less traffic and feeling seen through the inclusion of Māori tohu but acknowledged that changing the infrastructure would do little to change the antisocial behaviour of some individuals (Raerino et al., 2021; Witten & Field, 2020). Te Ara Mua highlights the creation of regenerative projects across Aotearoa as an important aspect of making cities user-friendly and inclusive of whānau and tamariki Māori perspectives (MacMillan et al., 2020; Rose et al., 2009). However, the fear of harassment from others and the presence of roaming dogs exemplifies the need for social intervention to be coupled with physical changes.

One community, Te Ora Hou, created environments where children were safe and cared for through kai sharing (Wanwimolruk, 2015). Eighteen streets within a Whanganui suburb were invited to a hākari twice monthly to have the opportunity to get to know one another and develop a greater sense of community. Te Ora Hou sought to provide space for “community kōrero” where people could talk about things they would

like to see in their neighbourhood (Wanwimolruk, 2015). Outcomes included the creation of neighbourhood gardens, walking groups or buses and driver’s licence programmes for local whānau. The overarching project of Tiakina ō Tātou Tamariki is grounded in te ao Māori, including whanaungatanga, manaakitanga and aroha. The vision of the project was to shape an environment that allows children and parents to “know that, if they had reason to worry, celebrate, or grieve, someone would notice, and someone would care.”

Infrastructural change to create protected cycle lanes was met with some positivity in the Te Ara Mua—Future Streets project; however, the financial cost of biking was still considered a barrier for low-income households (Thorne et al., 2020). The cost of a bike and maintaining its roadworthiness can be unaffordable (Jones et al., 2020; Raerino et al., 2013). Moreover, the average whānau size (per household) is higher for Māori than for non-Māori. The cost of multiple bikes and the challenges of meeting larger family needs without motorised transport means biking is not always feasible. When low incomes are required to cover all portions of living, bikes are unlikely to top the list. Thus, in the current transport environment, in which car dependency is entrenched, biking as a form of active school travel is inherently inaccessible for some Māori whānau.

He kaikiri Māori, he whakaputanga o te tāone—Racism in transport infrastructure and allocation

Generally, transport systems in industrialised countries have privileged Western cultural norms, values and knowledge (Schwanen, 2018; Schwanen & Nixon, 2019; Spray et al., 2020). Transport infrastructure, such as the placement of motorways (Ameratunga, 2019), footpaths (Meher et al., 2021), transport links and bike paths (Jones et al., 2020), has prioritised how Pākehā, able-bodied people interact with the world. Transport systems have the potential not only to connect people to one another but also to isolate communities and, in turn, residentially segregate cities into separate neighbourhoods for different groups of people: Indigenous, settler and diaspora communities (Bécares et al., 2013; Salesa, 2017). The centring of Western priorities in the allocation and provision of transport infrastructure can be referred to as “infrastructural violence” (Ameratunga, 2019; Kumar et al., 2021; Rodgers & O’Neill, 2012). The notion of infrastructural violence occurs when residents are excluded from essential infrastructures, such as a lack of adequate footpaths

and bicycle paths leading to places of importance (Ameratunga, 2019; Rodgers & O'Neill, 2012). For example, in Auckland, a motorway severed the adjoining road and isolated kaumātua papakainga residents and the marae from the Māngere township, making the housing only accessible by vehicle. The motorway was largely celebrated for making the commute faster to the thriving central business district (NZ Transport Agency, 2008). However, in the process, it cut a community off from one another. In doing so, this infrastructure prioritised a Western connection to the world rather than accounting for how urban Māori in Māngere interact with their surroundings and each other.

The creation of transport infrastructure may have intergenerational impacts for urban marae (Spray et al., 2020). One kaumātua discussed the intergenerational effects that are likely to stem from the severance of the community from the marae by the motorway. The severance of community and inability of people on one side of the motorway to get to the marae without walking along a road known for being a high crash zone or driving stops whānau from going (Meher et al., 2021). A consequence of this impedance may be the progressive diminishment of tikanga because marae are there for whānau and the community. Consequently, connection to one another and ahurea Māori can be hindered by creating urban cultural landscapes that prioritise car infrastructure and do not consider the aspirations of Indigenous people (Spray et al., 2020; Stats NZ, 2021a).

The government has specific obligations under Te Tiriti o Waitangi to address Māori transport needs and rights, including equitable access and outcomes. This includes the capacity for Māori to determine their own transport priorities and solutions—tino rangatiratanga—and to have any specific transport requirements in relation to social interaction—such as access to urupā or marae—and social and educational services accounted for. A relatively new set of Māori-developed urban design principles is seeking to aid in the dismantling of these hegemonic Western paradigms to help achieve better quality urban environments. The Te Aranga principles seek to make mana whenua present, visible and active participants in the design process (Raerino et al., 2021). A mana whenua respondent involved in Te Ara Mua—Future Streets Project found the inclusion of tohu and te reo Māori imperative for protecting Māori wellbeing and identity. Furthermore, promoting Māori in place helped educate people in the

neighbourhoods while affirming the whakapapa of the area.

Māori within the urban design sector have noted their role in creating inclusive infrastructure as kaitiakitanga in practice (Raerino et al., 2021). Respondents agreed that good design should enhance social and cultural connections to improve the wellbeing of all residents. Mana whenua respondents placed emphasis on the responsibility of Māori as kaitiaki to focus on the health and safety of community members—in particular, their tamariki. Māori designers discussed ideas relating to creating walkable communities that are conducive to increased physical activity and being out in nature. Thus, Māori-centred approaches create links between healthier communities and urban design.

One example is a case study from Palmerston North, Te Aroha Noa, focused—among other things—on the regeneration of a local park. Residents—in collaboration with the Palmerston North City Council and Housing NZ—planned, built and planted the site (Knight, 2015; Wanwimolruk, 2015). Through the process, whānau began to see themselves as experts or knowledge holders rather than “recipients of services”. Residents knew what they needed within their community and were able to execute changes, which shaped positive neighbourhood identity (Munford et al., 2007).

Coupled with the structural barriers noted, whānau face historical and ever-present experiences of stereotyping and racism while out in the community (Cormack et al., 2020). Discrimination of whānau Māori has been reported in almost every facet of life, including education, housing, public settings, policy and legislation. Tamariki Māori have reported experiences of racism at primary school (Office of the Children’s Commissioner, 2018). To our knowledge, in the academic literature, there is no documentation of racism towards tamariki Māori on the journey to school. However, generally, Indigenous children facing racism are likely to face emotional and confidence issues that permeate into all areas of life (Macedo et al., 2019).

Discussion and recommendations

In this review, we have examined the available literature and undertaken consultation with people on factors of importance for active school travel in tamariki Māori. A range of barriers were identified; most research has highlighted social deprivation within Aotearoa as a large driver of these transport barriers. However, transport research is yet to fully explore the aspirations Māori have within the transport space. Raerino

et al. (2021) specifically stated that transport systems are extremely important for enabling access to activities and sites relevant to the lived experience of being Māori. Barriers imposed by decades of prioritising transport infrastructure for Pākehā desires have restricted the ability of tamariki to fully participate in active school travel. Emphasis on transitioning to low emissions transport within recent government policy seems to lack understanding of this historic domination of investment in road infrastructure. The worry faced by some parents in Aotearoa ultimately comes to the forefront in this setting; if we are to move away from private vehicles, how will the cost of the transition to bikes and scooters be covered? Whether that be through biking, scootering or walking, without the inclusion of Māori aspirations, tamariki are likely to be left behind if not included in the solution.

Aspirations to increase active transport participation by tamariki Māori has led to the necessity of understanding the influences on their movement. Our findings demonstrate that their travel patterns are largely shaped by the perceptions of their whānau and are often affected by differential exposure to the social determinants of health (economic deprivation, colonisation and racism). Findings from this literature review are consistent with previous findings demonstrating the importance of distance to school, safety from traffic, personal safety and community togetherness in

supporting active school travel. This review covers a variety of these influences for tamariki Māori, highlighting that they are experienced in ways that differ from other children. To the best of our knowledge, this is the first review of literature relating to active school travel among tamariki Māori in Aotearoa. This review aims to act as a springboard for more research directly addressing the aspirations of tamariki Māori.

In our narrative literature review, we identified three key areas relevant to understanding how the school travel patterns of tamariki Māori are affected, as visually depicted in Figure 1. These three areas are He Taonga Tuku Iho (whānau aspirations to continue Māoritanga), which is affected through the failure of the education system to protect the right to access te ao Māori schooling (e.g., via increased distance to kura kaupapa Māori); Kotahitanga (feeling a sense of belonging and unity within the community), negatively affected through infrastructure that is not inclusive and through racism in transport infrastructure and allocation; and Tiakina ō Tātou Tamariki (keeping children safe in the community), which is diminished through concerns for personal safety and safety from traffic (e.g., speeding cars). Overall, interventions to overcome barriers across these three areas should be grounded in whanaungatanga and inclusive of all whānau members. These findings, as well as the mentioned kaupapa Māori



FIGURE 1 Three key areas relevant to understanding how the school travel patterns of tamariki Māori are affected

interventions, point to areas where change can occur, including through increasing the funding for schooling options by Māori for Māori, addressing the social and economic determinants of health that result in whānau Māori feeling less connected to their neighbourhood, and the importance of Māori-led infrastructure planning, implementation and evaluation.

The desire for communities to be more connected is a common aspiration among many parents (Egli et al., 2018; Witten et al., 2013). This includes having neighbours that look out for one another and social environments that support children playing together. Thus, a Māori-based approach to community building could be an effective method of improving neighbourhood safety for tamariki from many backgrounds (Wanwimolruk, 2015; Witten et al., 2013). Programmes such as Te Ara Mua—Future Streets, Te Aroha Noa and Tiakina ō Tātou Tamariki, all involving whanaungatanga, provide a model for how Māori values can be embedded in initiatives. These programmes provide good opportunities for reconnecting communities in ways that are valued by Māori. However, it is important to note that these programmes should not simply be replicated in other communities—communities should lead the design of their own initiatives. Nevertheless, the ideas discussed here represent important factors influencing active travel, so are valuable in guiding policy and future research.

There is a paucity of literature relating to tamariki transport that ultimately highlights a need for further research examining the topic. Currently, there is a lack of quantitative research about how much wheeling and walking tamariki do, and how this varies across settlement types (e.g., rural, suburban, urban). Furthermore, there are gaps in qualitative research relating directly to what Māori see as enablers or barriers to active school travel. Many of the research articles examined within this review had only a small sample size of tamariki Māori, and they were included as part of the total population rather than examined through disaggregation by ethnicity and thus reflecting the lived reality of Māori in mostly urban and mainstream schooling environments. The review can be seen as an exploratory first look into what matters to whānau Māori. It has helped to identify broad ideas and concepts that require development and further refinement through comprehensive kaupapa Māori research. Further research on tamariki Māori and active transport may include mixed methods explorations of the lived experience of active transport among tamariki Māori; and

kaupapa Māori analysis of active transport among tamariki Māori and its interaction with other factors such as whānau income, age structure, gender and neighbourhood characteristics. Further, evaluation of interventions such as Te Aroha Noa and Te Ora Hou in terms of their effectiveness would give public services a stronger mandate to create or expand these initiatives to wider suburbs.

The review has a number of strengths and limitations. We collated a variety of sources to provide insight into tamariki Māori travel patterns, both influences and barriers. A key weakness of this review is the fact that many of the sources were not designed with Māori as central to the research question. Nor were data analysed and interpreted in a method that might highlight Māori perspectives on transport within said communities.

Conclusion

A path forward

This review examined factors that may affect tamariki Māori travel patterns. We found that tamariki Māori face similar challenges in accessing active school travel to other communities through lack of infrastructure for walking and biking. However, other barriers are experienced differently by Māori by virtue of the ongoing impacts of colonisation, such as lack of access to places of cultural importance, a lack of kaupapa Māori schooling options and concerns about neighbourhood cohesion. The findings reflect systemic failings by the government to uphold Te Tiriti o Waitangi, resulting in social and economic inequities woven into the fabric of Aotearoa. Interventions require a reframing of the solutions, led and designed by the communities themselves (Wanwimolruk, 2015). Fixing the conditions Māori are often subjected to by colonisation through understanding their aspirations is imperative so as not to put the responsibility on the individual. These findings highlight the need for tino rangatiratanga for Māori, leading to whakamana in all transport planning and other community policy.

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Glossary

ahurea Māori	knowledge, and connection, to things to do with Māori culture
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ākonga	students
Aotearoa	New Zealand
aroaha	love
hākari	feast
kai	food
kaitiaki	caretakers
katiakitanga	caretaking
kaumātua	elder, elderly man, elderly woman
Kaupapa Māori	Māori approach, Māori customary practice
kāwanatanga	governance
kōhanga reo	Māori language pre-school
kōrero	talk, discussion
kotahitanga	feeling a sense of belonging and unity within the community
kura	school
kura kaupapa	primary schools operating under Māori custom and using te reo Māori as the medium of instruction
manaakitanga	kindness, generosity, support
mana whenua	tribal groupings with local authority
Māoritanga	Māori traditions, realities, and experiences
marae	meeting house
motu	land
ōritetanga	equity
Pākehā	European
papakāinga	communal housing
pouako	teachers
rangatahi	young people
tamariki Māori	Māori children
tangata whenua	Indigenous people
te ao Māori	the Māori world
te reo Māori	the Māori language
te taiao	the environment
Te Tiriti o Waitangi	The Treaty of Waitangi
tikanga	right way of doing something
tino rangatiratanga	self-determination
tīpuna	ancestors
tohu	symbols
urupā	burial grounds, cemeteries
whakamana	empowerment
whakapapa	genealogy
whakatauki	proverb
whānau	family; extended family
whanaungatanga	shared experiences, relationships

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