



OPEN ACCESS

Children's right to the city and their independent mobility: why it matters for public health

Katherine L Frohlich ,^{1,2} Patricia A Collins³

¹Department of Social and Preventive Medicine, University of Montreal, Montreal, Quebec, Canada

²Centre de Recherche en Santé Publique (CRéSP), Montreal, Quebec, Canada

³School of Urban and Regional Planning, Department of Geography and Planning, Queen's University, Kingston, Ontario, Canada

Correspondence to

Dr Katherine L Frohlich, Department of Social and Preventive Medicine, University of Montreal, Montreal, Quebec, H3T 1J4, Canada; katherine.frohlich@umontreal.ca

Received 28 June 2023

Accepted 15 July 2023

Published Online First

3 August 2023

ABSTRACT

Automobile-centric community design, or 'motornormativity', severely restricts opportunities for children to engage in active transportation (AT) and outdoor free play (OFP). As these activities are critical to children's health and well-being, their decline has become a major public health concern. Meanwhile, independent mobility (IM) has emerged as a critical determinant of child development and well-being. Defined as 'the freedom for children to move about their neighbourhood without adult supervision', children's IM is in direct conflict with motornormativity. And yet, very few studies explore these three practices together, and very few public health interventions actively confront motornormativity to support children's IM. We hypothesise that IM is foundational to AT and OFP, and that efforts to increase AT and OFP are doomed to fail without a deep understanding of the barriers to children's IM. We conclude with ideas to study and support children's IM in public health research and practice.

INTRODUCTION

Since the mid-1900s, urban-dwelling children's activities in North America and western Europe have shifted from city streets to backyards, parks, playgrounds and recreational facilities—places deemed 'appropriate' for children. These places are largely removed from the hazards posed by automobiles, where children's behaviour can be closely monitored by parents and caregivers. 'Motornormativity',¹ the adoption of automobile-centric urban planning approaches around the world, has created and reinforced an ideology that streets exist simply for the movement and storage of motorised vehicles. This ideology has effectively displaced children (and other non-motorists) from our cities' most ample public spaces—streets.

Canadian research has shown that these changes to cityscapes play a significant role in the dramatic decreases in children's use of active transportation (AT) and engagement in outdoor free play (OFP)²—two practices critical for children to be physically active. Meanwhile, children spending less time playing and moving about outdoors in their communities also diminishes the overall liveability of our communities: the development, health and well-being of children are compromised; neighbourhood social cohesion suffers; and the physical dominance of automobiles on city streets creates sterile, exclusionary and hostile spaces.³ Our inability to create conditions favourable to AT and OFP for children flies in the face of the United Nations 2030 Agenda

for Sustainable Development Goal 11 which states that the urban environment should be inclusive, safe, resilient and sustainable for everyone.⁴

While public health researchers and practitioners have successfully drawn attention to the effects that reductions in AT and OFP have had on diminishing children's health and well-being over the last 20–30 years,⁵ they have largely overlooked the role that independent mobility (IM) plays in enabling AT and OFP to occur. As such, IM is 'the elephant in the room' in our current understanding of declining levels of physical activity among children. Given how motornormativity appears to have stripped children of their right to be independently mobile, disrupting it is key to children reclaiming their independence and becoming more active.

Importance of IM for children's health and opportunities for physical activity

The currently agreed upon definition of children's IM—'the freedom of children to travel around their neighbourhood or city without adult supervision'—stems from Hillman *et al's*⁶ oft-quoted UK-based paper entitled: 'One false move, a study of children's independent mobility'. Kytä *et al's*⁷ follow-up work from Finland suggests that children's IM is strongly dependent on mobility licenses. These licenses manifest in terms of whether children are allowed by their parents to travel to and from destinations, cross main roads, ride public transit or to go out when dark, on their own. In a recent review, the socioecological model was used to demonstrate the complexity of IM's environmental correlates,⁸ correlates that are all profoundly shaped by motornormativity. Specifically, children's IM is constrained by various social forces including mobility licences, parental and children's perceptions of the neighbourhood environment, as well as the physical environments within and surrounding homes, schools, parks and neighbourhoods.⁸

International research has demonstrated that IM benefits children physically, psychologically, cognitively and socially.⁹ IM allows children to explore their environments, at their own pace, based on their own decision-making processes. As such, IM increases children's confidence, autonomy, social skills and capacity to move around public space while strengthening their bonds to and familiarity with place.¹⁰ Studies have shown that children who are given licences for IM without adult accompaniment spend more time playing outdoors with friends and accumulate more physical activity¹¹ compared with children who are not afforded such freedoms. Taken together, IM lays the foundation



© Author(s) (or their employer(s)) 2024. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Frohlich KL, Collins PA. *J Epidemiol Community Health* 2024;**78**:66–68.

for more active and resilient adults who can navigate urban environments without the use of a private automobile.

Despite the scholarship demonstrating and advocating for IM, it is largely withheld from children today. Hillman *et al*'s landmark study found that the percentage of children aged 7 and 8 years old allowed to walk home from school on their own decreased from 80% in 1971 to 9% in 1990.⁶ And this trend has persisted; a study of children under 11 years of age from Canada, Japan and Sweden found they were not allowed to move freely about in their local area,⁹ and a recent British study reveals that parents were allowed to be independently mobile at a younger age than their children.¹² Children's life-space diameters—the extent and frequency of mobility within a geographical area—have always been smaller than those for adults since children are less cognitively, socially and physically developed. However, these diameters have dramatically shrunk over successive generations, owing in large part to constraints imposed on children's IM.

From a public health perspective, the dearth of IM for children is alarming given how essential it is for enabling children's engagement in OFP and AT. In a recent Canadian study, children who had the freedom to travel beyond their home property without an adult were significantly more likely to engage in 90+ min of time outdoors playing after school compared with children who did not have this freedom.¹³ And, the proportion of Canadian children and youth who relied solely on motorised travel to school increased significantly from 2000 to 2010.² Although research examining all three of these practices together is generally lacking, one Canadian study found that greater IM encourages higher levels of OFP and AT by providing access to a larger range of destinations without adult accompaniment.¹⁴ The centrality of IM in these patterns suggests that the promotion of children's IM might be the most promising public health strategy to increase children's physical activity levels, and that more public health research in this area needs to simultaneously consider IM, OFP and AT.

IM, motornormativity and reclaiming children's right to the city

The erasure of children from cityscapes represents a present-day mobility injustice that threatens the liveability and resiliency of our cities. Automobile-centric planning has normalised the dependence on automobiles for even the shortest of trips, such as children's journeys to school, while stoking parental concerns about stranger-danger and traffic accidents that further constrain children's IM.¹⁵ This motornormativity also shapes the solutions we perceive as feasible. This occurs by imbuing urban planners and public health professionals with an unconscious bias that upholds, rather than challenges, this harmful status quo when intervening on the health of urban populations. In a classic example of 'lifestyle drift',¹⁶ abundant attention has been paid to finding ways to increase children's physical activity levels, with little consideration given to the physical and social landscapes of cities that, over the last century, have made these activities impracticable for them. As a result, public health approaches to children's diminishing levels of AT and OFP have had a remarkable blind spot to the critical interplay between urban planning and children's ability to engage in these activities.

One way for public health researchers and practitioners to disrupt 'motornormativity' is to work with urban planners to study the mobility and health-related effects of street reconfigurations that deprioritise motorists. In recent years, and particularly since the COVID-19 pandemic, many cities have

experimented with various street repurposing options, such as Slow Streets, Quiet Streets and Flex Streets. These approaches are typically designed to reduce the speed and volume of vehicular traffic to support active transportation and general street liveliness. In studying the health and well-being effects of these reconfigured streets, we can better justify, from a public health perspective, why streets need to become public spaces available to *all* citizens for daily activity use.

With regard to children's IM more specifically, the proximate environments of home and school are particularly critical. Reconfigurations that prioritise children specifically, such as Play and School Streets,¹⁷ typically involve fully closing streets to through-traffic to give streets back to children to play, socialise and be independently mobile. By design, Play Streets and School Streets seek to dismantle the barriers that constrain children's IM, and in doing so, create opportunities for children to engage in OFP and AT. These interventions are social innovations that challenge the status quo of automobile dependency, and as a result, are often met with opposition and even hostility.¹⁸ In the past, these have largely been local initiatives, often unaccompanied by fulsome evaluations. Public health is well positioned to engage in population health intervention research by using these initiatives to gather and share the intervention evidence stemming from it. These data are desperately needed to confront and overcome the opposition to children (re)claiming their independence, their health and their right to the city.

CONCLUSION

Children today engage in substantially less OFP and AT compared with previous generations. Public health interventions have attempted to reverse these trends without careful consideration of the role of IM—a necessary precursor for OFP and AT. Children's engagement in IM, however, is shaped by various conditions, including the capacities of children themselves, allowances from their parents and the local built environment conditions that support or constrain these capacities and allowances, respectively. We contend that decades of automobile-centric urban planning and design have created hostile conditions that fail to support children's IM and, in turn, account for declining rates of OFP and AT. Thus, public health practitioners must confront this link between automobile-centric urban environments and children's IM if increasing children's engagement in OFP and AT is their aim.

The focus on IM and cityscape planning does pose somewhat of a challenge for public health, however, as managing street-scapes may seem out of public health's formal scope of practice. Recent important work in urban health and Healthy Cities, however, urges public health researchers to push the boundaries of the traditional public health purview by working directly with researchers, non-governmental organisations and municipalities on issues relating to urban planning and transport. We urge public health researchers and practitioners concerned with children's health and well-being to seek to work collaboratively with new stakeholders to help reshape our cities and make them more child-friendly and conducive to their health and well-being.

Acknowledgements KLF and PAC would like to thank Kate St-Arneault and Carise Thompson for help with the background literature review, idea generation and formatting.

Contributors KLF and PAC contributed equally to the conception and writing of this manuscript.

Funding KLF and PAC received funding through the Canadian Institute for Health Research (project grant number PJT-175153) to conduct research associated with this paper.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; internally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Katherine L Frohlich <http://orcid.org/0000-0002-5519-2455>

REFERENCES

- Walker I, Tapp A, Davis A. Motornomativity: how social norms hide a major public health hazard. *Int J Environ Health* [Preprint] 2022.
- Barnes JD, Tremblay MS. Changes in indicators of child and youth physical activity in Canada, 2005-2016. *Can J Public Health* 2017;107:e586-9.
- Cook A, Whitzman C, Tranter P. Is 'citizen kid' an independent kid? The relationship between children's independent mobility and active citizenship. *J Urban Des* 2015;20:526-44.
- United Nations. Goal 11 make cities and human settlements inclusive, safe, resilient and sustainable. 2023 Available: <https://sdgs.un.org/goals/goal11>
- Bassett DR, John D, Conger SA, et al. Trends in physical activity and sedentary behaviors of United States youth. *J Phys Act Health* 2015;12:1102-11.
- Hillman M, Adams J, Whitelegg J. *One False Move: A Study of Children's Independent Mobility*. London, UK: Policy Studies Institute XLV, 1990.
- Kyttä M, Hirvonen J, Rudner J, et al. The last free-range children? Children's independent mobility in Finland in the 1990s and 2010s. *J Transp Geogr* 2015;47:1-12.
- Marzi I, Reimers AK. Children's independent mobility: current knowledge, future directions, and public health implications. *Int J Environ Res Public Health* 2018;15:2441.
- Waygood EOD, Friman M, Olsson LE, et al. Children's incidental social interaction during travel International case studies from Canada, Japan, and Sweden. *J Transp Geogr* 2017;63:22-9.
- Kantomaa MT, Tammelin TH, Demakakos P, et al. Physical activity, emotional and behavioural problems, maternal education and self-reported educational performance of adolescents. *Health Educ Res* 2010;25:368-79.
- Schoeppe S, Duncan MJ, Badland H, et al. Associations of children's independent mobility and active travel with physical activity, sedentary behaviour and weight status: a systematic review. *J Sci Med Sport* 2013;16:312-9.
- Dodd HF, FitzGibbon L, Watson BE, et al. Children's play and independent mobility in 2020: results from the British children's play survey. *Int J Environ Res Public Health* 2021;18:4334.
- Loebach J, Sanches M, Jaffe J, et al. Paving the way for outdoor play: examining socio-environmental barriers to community-based outdoor play. *Int J Environ Res Public Health* 2021;18:3617.
- Larouche R, Barnes JD, Blanchette S, et al. Relationships among children's independent mobility, active transportation, and physical activity: a multisite cross-sectional study. *Pediatr Exerc Sci* 2020;32:189-96.
- Jelleyman C, McPhee J, Brussoni M, et al. A cross-sectional description of parental perceptions and practices related to risky play and independent mobility in children: the New Zealand state of play survey. *Int J Environ Res Public Health* 2019;16:262.
- Baum F, Fisher M. Why behavioural health promotion endures despite its failure to reduce health inequities. *Sociol Health Illn* 2014;36:213-25.
- D'Haese S, Van Dyck D, De Bourdeaudhuij I, et al. "Organizing "play streets" during school vacations can increase physical activity and decrease sedentary time in children". *Int J Behav Nutr Phys Act* 2015;12:14.
- Smith LE, Gosselin V, Collins P, et al. A tale of two cities: unpacking the success and failure of school street interventions in two Canadian cities. *Int J Environ Res Public Health* 2022;19:11555.