

Article details: 2016-0068	
Title	Residents of highly walkable neighbourhoods do substantially more physical activity: A cross-sectional analysis of walkability and objectively-measured physical activity in Canadian urban areas
Authors	Justin Thielman MSc, Heather Manson MD MHSc, Maria Chiu PhD, Ray Copes MD MSc, Laura Rosella PhD
Reviewer 1	Not available
Institution	Not available
General comments (author response in bold)	Not available
Reviewer 2	Prof. Mark Hamer
Institution	University College London, London, UK
General comments (author response in bold)	<p>This paper examines associations between walkability and objective MVPA from a subsample of CHMS. The study finds that adults in the highest quintiles record around 15 min/d more MVPA .</p> <p>Main comments:</p> <p>The key aspect of this paper is in employing objective assessments of MVPA . However this method has its own limitations that have not been acknowledged. For example a 10 hour wear protocol captures incomplete portions of waking hours and many contemporary studies are now moving to 24hr accelerometry wear protocols. In addition the protocol for identifying non-wear was unclear. It is common to identify non wear as a continuous 60 min period of zero counts. Lastly , the short wear period of up to a week may not represent habitual pattern of activity.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>To address the limitations raised, we have added the following text to the limitations section of the manuscript: "Furthermore, the 4-7 day wear period may not be representative of typical activity levels for some people, and the minimum 10-hour wear protocol may have missed important activity information; again, these differences are likely non-differential across quintiles" (line 269-272).</b></li> <li><input type="checkbox"/> <b>We have also added the following point of clarification to the methods section: "Non-wear time was considered to be 60+ consecutive minutes with zero counts (allowing 1-2 minutes of counts between 0-100)" (line 98-99).</b></li> </ul> <p>The models are lacking important covariates. For example , participants will accrue MVPA during structured sports and exercise regardless of neighborhood walkability. In addition chronic health conditions , obesity, and smoking will limit MVPA .</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Thank you for raising this point. The cluster sampling design of the Canadian Health Measures Survey results in a limited number of degrees of freedom in statistical models. Therefore, despite the large sample size, we were limited in the number of covariates we could include in our adjusted models. We aimed to include the most important covariates based on previous research and have clarified this with the following revision to text in the methods section: "Covariate-adjusted models for respondents overall included the following variables, anticipated to be the most important confounders based on previous research" (line 121-124).</b></li> </ul> <p>The data presented in table 1 could be better described. For example, there is an intriguing inverse association between income and walkability. This seems quite paradoxical and deserves some discussion . I.e., it is common to see social patterning of physical activity ( higher activity in more wealthy).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Thank you for the suggestion. While there are some interesting differences in other covariates across Walk Score quintiles, we do not go into detail describing these in the text because the focus of this paper is on differences in physical activity.</b></li> </ul> <p>The paper describes some important caveats in the limitations . I agree that neighborhood safety is a crucial variable not captured in the walkability index. Taken together, at present it is difficult to evaluate the true significance of these data.</p>