

# The Research File



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## Can dogs influence physical activity levels of dog-owners and non-owners?

There is a growing body of literature about the impact of dogs on people's physical activity. Review of qualitative studies by McCormack et al identified dogs as one of the factors that influences the use of urban parks.<sup>1</sup> In their realist scoping review Toohey and Rock explored how interactions between dogs, dog-owners and non-owners influence their physical activity levels.<sup>2</sup>

Primary studies related to the influence of dogs on social and physical environments that may affect physical activity patterns of dog-owners and non-owners were reviewed.<sup>2</sup> All relevant studies were included regardless of the methods used. Initially, PubMed was searched for combinations of keywords: neighbourhood, social capital, social network analysis, walkability, dogs, veterinary, and intervention. Subsequently, other databases and keyword combinations were searched. Reference lists of relevant review papers and included studies were used to identify additional



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pertinent papers. A total of 35 papers were included in the review. The lead author completed data extraction which was then independently verified by the other author. In case of a disagreement, papers were reassessed and consensus was reached after a discussion. The main focus of the analysis were roles that dogs had, and interactions between dogs, dog-owners and non-owners.<sup>2</sup>

The research suggested that physical urban environment was affected by dogs in two ways. Dogs were perceived as a nuisance due to dog litter in public spaces (e.g. sidewalks, parks). Uncontrolled or stray dogs presented an additional negative impact on the physical urban environment which was related to safety.\* Older adults, women and ethnic minorities were more likely to view dogs as barriers to physical activity; however there were exceptions. These social disadvantages pertaining to age, gender and race/ethnicity were found to be important in predicting physical activity behaviour

regardless of individuals' income level.\* For instance, women who observed unattended or loose dogs in their neighborhood had 50 minutes of weekly physical activity less than women who did not observe such dogs. In another study, Latina women perceived unleashed dogs as a barrier to taking children outside. Policies addressing stray or loose dogs were viewed as one way of addressing this issue. When ranking nuisance related to decreased use of parks, elderly perceived dog litter as second in importance, vandalism being ranked first.\*

Dogs were also seen as motivators of physical activity. Responsible dog-ownership was associated with regular dog-walking and higher physical activity levels. Some findings suggested that both dog-owners and non-owners living in communities with larger dog populations were more likely to walk. Older adult dog-owners reported overcoming barriers such as depression, minor illness, bereavement, bad weather and insecurity of walking

alone in order for their dog to get exercise. Moreover, they were 'feeling better'. Having a dog was related to dog-owners spending more time walking. Interestingly, a small number of studies found positive influence of dogs on physical activity levels among non-owners. Dog-walking programs which were 'loaning' a dog had a positive influence on physical activity of non-owners. Program participants walked at least 20 minutes a day five days a week as they were motivated by the commitment towards a dog, and they indicated feeling better.\*

Additionally, physical activity levels were positively linked to neighbourhood social cohesion. Dogs positively influenced social interactions in public spaces (e.g. sidewalks, pathways, parks, school drop-off areas, public transit facilities and outdoor malls).\* Opportunities for social interaction facilitated by dogs were acknowledged by both dog-owners and non-owners who observed regular dog-walkers. Dogs played a positive role in building

## What have we learned?

- Shared social and physical environment between dogs and owners may influence physical activity behaviour of both dog-owners and non-owners.
- The influence of dogs on people's physical activity patterns is mainly positive.
- Women, older adults and ethnic minorities were more likely to perceive dogs as barriers to physical activity.
- Interventions aiming at responsible dog ownership may minimize barriers to physical activity pertaining to dogs and maximize the positive influence that dogs contribute.

relationships with neighbours, with pet care reciprocity being one of the mechanisms. Furthermore, this relationship between neighbours also involved favours unrelated to pet care. Still, one study found that almost 25% of participants reported 'problems with neighbours' dogs'. Regular presence of dog-walkers increased a sense of neighbourhood safety and higher awareness of unusual events or hazards. This positively influenced both dog-owners and non-owners, because increased neighbourhood safety was associated with higher physical activity levels.\*

Majority of the studies reviewed by Toohey and Rock applied social-ecological framework which highlights

the importance of interactions between individual, social, physical and cultural environments for physical activity behaviour.<sup>2</sup> The influence of dogs on physical activity levels was found to be both positive and negative. Although dog-owners were more likely to attain higher physical activity levels than non-owners, interventions aiming at responsible dog ownership may reduce barriers to physical activity related to dogs and maximize positive influence that dogs may play in communities.<sup>2</sup>

## References

1. McCormack GR, Rock M, Toohey AM, Hignell D. Characteristics of urban parks associated with park use and physical activity: a review of qualitative research. *Health Place*. 2010 Jul;16(4):712-26. Epub 2010 Mar 12. Review.
2. Toohey AM, Rock MJ. Unleashing their potential: a critical realist scoping review of the influence of dogs on physical activity for dog-owners and non-owners. *Int J Behav Nutr Phys Act*. 2011 May 21;8:46. Review.  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3123259/pdf/1479-5868-8-46.pdf>

*\*This research file describes findings from individual studies included in the review paper by Toohey and Rock. Please see the review paper for the references to the individual studies.<sup>1</sup>*

