Health & Place 33 (2015) 75–82

Contents lists available at ScienceDirect

Health & Place

journal homepage: www.elsevier.com/locate/healthplace

Public open space, physical activity, urban design and public health: Concepts, methods and research agenda

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ARTICLE INFO

Article history:
Received 21 October 2014
Received in revised form
18 February 2015
Accepted 19 February 2015

Keywords:
Built environment
Neighbourhood
Urban form
Parks
Walking

ABSTRACT

Public open spaces such as parks and green spaces are key built environment elements within neighbourhoods for encouraging a variety of physical activity behaviours. Over the past decade, there has been a burgeoning number of active living research studies examining the influence of public open space on physical activity. However, the evidence shows mixed associations between different aspects of public open space (e.g., proximity, size, quality) and physical activity. These inconsistencies hinder the development of specific evidence-based guidelines for urban designers and policy-makers for (re) designing public open space to encourage physical activity. This paper aims to move this research agenda forward, by identifying key conceptual and methodological issues that may contribute to inconsistencies in research examining relations between public open space and physical activity.

1. Introduction

There have been declines in physical activity in many countries over the past few decades (Brownson et al., 2005; Ng and Popkin, 2012). Given the limited success of individually-based approaches to behaviour change, public health researchers have increasingly used socio-ecological models to further understand determinants of physical activity (Sallis et al., 2008). Such conceptual frameworks suggest that the built environment is one important level of influence, as it can facilitate or inhibit participation in physical activity (Sallis et al., 2012, 2008). Indeed, public open spaces, such as parks and green spaces, appear to be key built environment settings that provide opportunities for a variety of physical activity behaviours, such as recreational walking and playing sports (Bedimo-Rung et al., 2005; Kaczynski and Henderson, 2007).

A growing body of literature has examined how different aspects of public open space, such as access to, size and design features, are associated with physical activity participation. A review of 50 quantitative studies (Kaczynski and Henderson, 2007) found proximity to parks and recreational settings to be generally associated with greater physical activity. Qualitative evidence further shows that public open space safety, aesthetics, amenities, maintenance, and proximity are important attributes for supporting physical activity (McCormack et al., 2010). Despite the increasing number of studies in this field, there are some inconsistencies in the evidence base. For example, a review by Lachowycz and Jones (2011) shows that among studies examining the relationships between access-related measures of local green spaces and physical activity, only 40% found significant associations.

These inconsistencies are confusing to urban designers and policy-makers and prevent the development of clear evidence-based guidelines for (re)designing public open space to encourage physical activity. It is possible that variations in studies are contextual

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http://dx.doi.org/10.1016/j.healthplace.2015.02.009
1353-8292/