



Characteristics of urban parks associated with park use and physical activity: A review of qualitative research

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ARTICLE INFO

Article history:

Received 26 November 2009

Received in revised form

1 March 2010

Accepted 3 March 2010

Keywords:

Physical environment

Social environment

Neighborhood

Recreational facilities

Leisure

Dog walking

ABSTRACT

Given that recent literature reviews on physical activity in urban parks deliberately excluded qualitative findings, we reviewed qualitative research on this topic informed by a published classification scheme based on quantitative research. Twenty-one studies met our inclusion criteria. These studies relied mainly on semi-structured interviews with individuals or in focus groups; only five studies involved *in situ* observation. Our synthesis aligns with previous quantitative research showing that attributes including safety, aesthetics, amenities, maintenance, and proximity are important for encouraging park use. Furthermore, our synthesis of qualitative research suggests that perceptions of the social environment entwine inextricably with perceptions of the physical environment. If so, physical attributes of parks as well as perceptions of these attributes (formed in relation to broader social contexts) may influence physical activity patterns. Both qualitative and quantitative methods provide useful information for interpreting such patterns, and in particular, when designing and assessing interventions intended to improve the amount and intensity of physical activity.

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1. Background

Physical activity participation provides mental and physical health benefits and can also reduce the risk of many chronic diseases (Bauman, 2004; Warburton et al., 2006; Kohl, 2001). Evidence regarding the influence of the built environment on physical activity behavior is beginning to accumulate. This evidence suggests that the built environment can both enable and limit physical activity participation. Specifically, neighborhood characteristics such as the proximity and mix of land uses, pedestrian connectivity, aesthetics and interesting scenery, and traffic and personal safety are important correlates of physical activity (Wendel-Vos et al., 2007; McCormack et al., 2004). Nevertheless, certain types of facilities and amenities likely support specific types of behaviors among different segments of the population (Giles-Corti et al., 2005b). The proximity of recreational facilities and amenities appears to influence physical activity participation (Kaczynski and Henderson, 2007). Moreover, urban parks provide local opportunities for different types of leisure pursuits and play an important role in encouraging physical activity among various subpopulations (i.e., different age, ethno-cultural, and socioeconomic groups). Urban parks support physical activity through their accessibility; their provisions to facilitate active pursuits; their capacity to provide opportunities to a wide range of users; and their semi-permanent

nature. Thus, park design, redesign, and upkeep are vitally important for population health.

Parks offer a unique setting within the urban landscape, providing opportunities for physical activity, enjoyment of nature, social interaction, and escape (Hayward and Weitzer, 1984). Participation in these opportunities is likely to help explain how parks contribute to improving health and wellbeing of users. Access to nearby parks and natural settings is associated with improved mental health (Sugiyama et al., 2008; Payne et al., 2005), positive affect and reduced anxiety (More and Payne, 1978), physical health (Payne et al., 2005), and healthy weight among children (Potwarka et al., 2008). Moreover, park users are more likely to achieve recommended levels of physical activity compared with non-users (Giles-Corti et al., 2005a; Deshpande et al., 2005). There is also evidence that distance from parks and open space is inversely associated with use and physical activity behavior (Kaczynski and Henderson, 2007), which might suggest that creating more neighborhood parks within walking distance to most residents could encourage physical activity participation in the population. Nevertheless, the quality of parks and open space must also be considered. Attributes such as park size (Giles-Corti et al., 2005a); the presence of sports fields (Floyd et al., 2008); wooded areas, trails, paths, and sidewalks (Shores and West, 2008; Reed et al., 2008; Kaczynski et al., 2008); and the total number of features and amenities (Kaczynski et al., 2008; Giles-Corti et al., 2005a) may promote park use and physical activity, while the presence of litter, vandalism, and unclean washrooms may deter use (Gobster, 2002). Features such as playgrounds, basketball courts, walking paths, running tracks,

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swimming areas, lighting, shade, and drinking fountains may also be particularly important for encouraging physical activity among children and their caregivers (Cohen et al., 2006).

Research into the associations between parks and physical activity has relied mainly on quantitative methodologies (Kaczynski and Henderson, 2007). While this research has advanced our understanding, much of the evidence regarding the influence of parks on physical activity is mixed (Kaczynski and Henderson, 2007; Librett et al., 2007). Qualitative methods (e.g., in-depth individual interviews, focus group interviews, direct observation, and participant observation) could complement quantitative findings and provide unique contributions to our understanding of the influence urban parks have on physical activity behaviors. Notably, qualitative research might help explain inconsistencies found in quantitative research to date on urban parks and physical activity. The dynamics of user characteristics, the park itself, and the setting – physical, cultural, social, and political – in which parks exist are often overlooked in quantitative research.

By their very nature, qualitative studies evolve during the research process and rely heavily on interpretations based on participant language and actions. They also tend to involve purposeful sampling of participants and settings (Crabtree and Miller, 1999). Qualitative methods provide a means of gathering detailed and specific information and, most importantly, go beyond statistical associations by enabling investigation of the localized and complex mechanisms of both events and process (Miles and Huberman, 1994). The strong emphasis on contextualization in qualitative research could be particularly beneficial in elucidating how various attributes of parks and user groups interact to influence physical activity patterns, and in drawing inferences about the unequal benefits current arrangements might provide for different groups. While quantitative research has contributed to knowledge regarding the proximity of parks and physical activity, more localized qualitative inquiry could assist in informing park design and park-based programs that are tailored to meet the specific needs of the local community (Kaczynski and Henderson, 2007). Moreover, although federal, provincial, or municipal government entities regulate the planning and location of parks, the quality and functionality of these facilities might be greatly influenced by local recreation, park, and community associations (Godbey et al., 2005).

Recent literature reviews on urban form and physical activity – including reviews of studies examining associations between parks and physical activity (Kaczynski and Henderson, 2007) – deliberately exclude qualitative findings (Humpel et al., 2002; Saelens and Handy, 2008; McCormack et al., 2004; Wendel-Vos et al., 2007; Davison and Lawson, 2006). This exclusion is purposeful and does not weaken these reviews in any way, given their goal of synthesizing studies that closely resemble each other, particularly in terms of methodology. Nevertheless, excluding qualitative studies and the dearth of reviews of qualitative research examining associations between the urban environment and physical activity might erroneously suggest that qualitative findings do not contribute important or unique knowledge. Indeed, following their review of the literature exploring associations between recreational facilities and physical activity, Kaczynski and Henderson (2007) suggested the need for more qualitative research, noting that qualitative findings could be used to improve the design of public parks and recreational amenities and programs. Similarly, to elucidate relationships between environmental attributes and physical activity patterns within urban parks, Bedimo-Rung et al. (2005, pp. 159–160) called for transdisciplinary field research.

Qualitative research has been undertaken on physical activity in urban parks, but unlike the quantitative evidence, the qualitative evidence has yet to be synthesized. In contrast to the

corpus of standardized guidelines available for undertaking systematic quantitative literature reviews (e.g., MOOSE: Stroup et al., 2000; QUOROM: Moher et al., 1999), qualitative research may be less amenable to standardized review procedures and more difficult to synthesize (Eakin and Mykhalovskiy, 2003; Sandelowski et al., 2007). Nevertheless, procedures exist to facilitate aggregation of qualitative findings and synthesis of both qualitative and quantitative results (e.g., Sandelowski et al., 2007). Such procedures apply various established approaches for qualitative analysis (Miles and Huberman, 1994).

In light of the current shift from describing population health problems to planning and analyzing interventions (Hawe and Potvin, 2009), mechanisms related to the “how” and “why” of park characteristics, park use, and physical activity at a more localized, in-depth level must be better understood. Qualitative methods may be especially well suited for answering such questions. The purpose of this paper, therefore, is to review qualitative evidence that explores the associations between urban parks and physical activity patterns. Furthermore, we present the results of this review in a manner that will facilitate comparison with recent quantitative reviews. Specifically, this paper will (1) synthesize qualitative research findings on how urban parks might influence park use and potentially physical activity patterns; and (2) assess concordance or discordance between the qualitative and quantitative evidence on parks, park use and patterns of physical activity.

2. Methods

2.1 Search strategy

In February 2009, we searched for English-language studies on parks and physical activity from all available years in health, leisure, and social science databases (i.e., PsycInfo, PubMed, LeisureTourism Abstracts, and Web of Science). Keyword and phrase searches within titles and abstracts were undertaken for the following terms: physical activity; exercise; inactivity; or walking combined with environment; neighborhood; urban design; park; trail; greenway; or environmental design. The search was then refined to capture qualitative studies by using the following terms: qualitative; focus group; interview; ethnographic; case study; anthropology; cultural/instrumentation; and cultural/methods. Duplicate records were removed, and we screened article titles and abstracts for relevance.

2.2 Study selection

To be considered for this review, studies must have: (1) reported using at least one qualitative research method; (2) examined urban parks either exclusively or in addition to other recreational settings, and; (3) examined park use or park-based physical activity behavior in any form (e.g., sports, walking, dog-walking, vigorous exercise, and playground use). Studies of urban parks that supported both formal and informal activities were included, but we excluded studies focusing on parks designed for formal activities only (e.g., sports-specific fields), and walking trails that, judging from the research reports, were not located within parks. Furthermore, to meet inclusion criteria, a study had to investigate the social or physical qualities or characteristics of parks in relation to both general patterns of use and physical activity participation. Only peer-reviewed primary studies published in academic journals were included, resulting in the exclusion of literature reviews, conceptual papers, strictly methodological papers, and government reports. The reference

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