

## SYNOPSIS

# Review of “The Impact of the Built Environment and Social Environment on Physical Activity: A Scoping Review”

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## One-Minute Summary

- Moderate-to-vigorous physical activity (PA) reduces chronic disease and enhances population health. Two strategies for improving physical activity are through changes to the built environment and the social environment. In 2023, Wang et al. conducted a scoping review to identify the current state of physical activity research, focusing on the relationship between the built environment (BE) and the social environment (SE).
- Literature published between 2000 and 2022 in four databases was examined. Thirty-five (35) studies were included, data extracted, and a thematic analysis conducted. The studies were conducted in the United States, Europe, Australia, Asian countries and Brazil. Research populations included adults, adolescents, females of different ethnic minority groups, and the elderly population. Most (n=30) studies evaluated the socioeconomic status (SES) of participants and five studies focussed on low SES communities. Studies examined the role of the BE or SE, or both. Only one study examined the interactions between the built and social environments.
- The scoping review’s authors conclude that evidence supports the influence of the BE and SE on PA. Specifically, the social environment was shown to influence physical activity levels in all age groups, in particular through social interaction, social support, and social cohesion. Various BE factors were examined, including objectively measured factors such as accessibility and street connectivity, and subjective factors such as perceived access, connectivity, and quality of the BE.

## Additional Information

Wang and colleagues’ scoping review sought to examine the relationship between the built and social environments and the impact on physical activity. The included studies divided physical activity into commuting, leisure, and total physical activity. The majority of the studies measured PA, BE and SE by self-report via surveys, questionnaires or interviews. Six studies used tracking devices to measure PA levels and 11 studies used geographic information systems (GIS) to provide objective measurements of the built environment.

The built environment was defined as the objective and subjective characteristics of the physical environments where people spend their time: aspects of urban design, traffic density and speed, distance to and design of venues for physical activity, and crime and safety. Several aspects of the built environment impacted physical activity levels:

- Accessibility increased walking and cycling opportunities as well as recreational PA levels. Accessibility included objective distance between homes and transit stations, as well as perceived distance between homes, transit and other destinations
- Connectivity of routes and streets was associated with increased PA levels. Objective measures of connectivity included street length, area, and intersection density, while subjective measures included perceptions of connectivity.
- Quality of the built environment, measured objectively, increased the probability of active travel by both adults and children as well as PA in general. Attractiveness, safety, convenience, maintenance, and diversity of open public spaces, in particular parks, led to more leisure time PA. Subjectively measured quality of walkability and aesthetics were associated with higher levels of recreational PA. Perceived safety related to crime and traffic impacted peoples' willingness to engage in outdoor activities.

The social environment refers to the relationships, culture and society that individuals interact with, including social influencers such as family and friends.<sup>1</sup> Social support from family members, friends and peers positively affected physical activity participation in all age groups. In studies of adolescents, parent values, parental constraints, and interactions between parents and adolescents influenced PA patterns. Additionally, verbal or active support from family, friends and peers directly affected adolescents' PA behaviour. Social cohesion, simply defined as a sense of belonging in a community, impacted PA levels of all demographic groups. Social cohesion impacted PA both directly and indirectly, in that neighbourhoods with higher social cohesion were more likely to have lower crime rates which in turn positively impacted PA levels. At the community level, safety of the community impacted peoples' engagement in PA. Safety was measured using local crime rates in some studies, while others examined perceived safety. A sense of belonging (social cohesion) and social norms also positively impacted physical activity levels.

Only one included study examined both the social and built environments. Sawyer et al. suggested that the social environment moderated the impact of the built environment.<sup>2</sup> For example, social cohesion and safety moderate low quality and poor aesthetics of the BE.

The authors of the scoping review conclude that there is a collaborative relationship between social and built environments, as together, they form the neighbourhoods in which people live and create perceptions of the neighbourhood. However, there is a knowledge gap regarding how the built and social environments interact, and impact physical activity levels.

## PHO Reviewer's Comments

Two reviewers assessed the quality of the scoping review using JBI's Checklist for Systematic Reviews and Research Syntheses.[cite] However, methodology for a scoping review differs from a systematic one in that the purpose is to describe the current state of the literature on a topic and generally does not include quality appraisal of the included studies, and most do not generate recommendations for practice.<sup>3</sup> Quality appraisal guidance for scoping reviews is under investigation.<sup>4</sup> Nevertheless, both reviewers assessed the scoping review as methodologically strong with detailed inclusion and exclusion criteria, multiple databases and detailed search terms. While overall the review was systematic and

transparent, the data extraction process and thematic analysis were less detailed in how they were conducted, and the review did not include grey literature.

While the concept of the social environment is not new – for example, core health promotion documents from the 1980s mention its importance – only more recently are researchers beginning to focus on measuring its impacts on health behaviours and outcomes. A recent literature review conducted by Public Health Ontario found that while the term “social environment” is often used in the literature, it is not consistently defined.<sup>5</sup> Papers such as this scoping review strengthen the knowledge base regarding the SE and provide direction for future research.

ParticipACTION’s most recent report cards reported that less than half of Canadian adults<sup>6</sup> and only 29 percent of children and youth<sup>7</sup> met Canada’s national physical activity guidelines. Having access to safe and convenient infrastructure in addition to having social support from family, peers, and friends can increase the likelihood of engaging in regular physical activity. This scoping review demonstrates the impact of considering both the built and social environments in interventions to promote physical activity and prevent chronic diseases.

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