Sustainability | Individual communication

IC - (20876) - THROUGH LIGHT AND DARKNESS: A LITERATURE REVIEW OF CHILDREN'S INDEPENDENT MOBILITY AFTER DARK

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Background and objectives

Darkness is a significant barrier to children's independent mobility (Shaw et al., 2015) affecting the perception and use of outdoor environments, making them less attractive, and increasing social fears (Cele, 2019). This literature review addresses the question of *how* artificial outdoor lighting may serve to provide children independent mobility after dark.

Process and methods (for empirical research)

The review procedure was based on Booth, Papaioannou, and Sutton (2012) and the PRISMA statement (Page et al., 2021). A Boolean search string was developed, including terms related to children, independent mobility, lighting, and outdoor environments considering both light and dark conditions. The search was conducted through several databases: Scopus, ISI, PsycInfo, Eric and Engineering Village.

Main results (or main arguments in the case of critical reviews)

The 60 identified articles were divided into two major groups: *Children, natural light and darkness* and *Children and artificial outdoor lighting*. Results show that both natural and artificial lighting conditions can support or hinder children's independent mobility by influencing perceived safety and security, notions of what is seasonally appropriate, travel and route choices, physical activity and the relationship to a place. The existence of lighting as well as lighting quality were discussed in relation to children's use and experiences of the outdoor environment. However, only few studies focused on the implication for children's independent mobility.

Implications for research and practice/policy | Importance and originality of the contribution

The results strengthen the perspective that darkness constitutes a major obstacle for children's independent mobility. Research-based strategies are needed for outdoor lighting to support both children's and parents' perspectives in urban design.

The review provides valuable knowledge about the role of outdoor lighting for children's independent mobility, that may support decision-makers in adopting strategies for more sustainable modes of transport, such as walking and cycling.

Palavras-chave : children's independent mobility, after dark, outdoor lighting, neighborhood environment