

WALKABLE BUT UNSAFE? A SYSTEMATIC REVIEW OF BUILT ENVIRONMENT CORRELATES OF WALKING AND CHILD PEDESTRIAN INJURY

doi:10.1136/injuryprev-2012-040590v.16

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Background A well-established body of walkability literature examines the correlates of walking in children; however, correlates of child pedestrian injury are less understood. Walkability does not necessarily imply safety. Built environment conditions for safe walking must be defined so that increased walking does not lead to increased pedestrian injury.

Objective To identify modifiable features of the built environment related to both walking and pedestrian injury in children.

Methods A systematic literature review across 10 electronic databases from 1980-Feb, 2012 sought statistically significant associations between built environment factors and either walking or safety in urban children 4–12, in Western countries. Environmental features were grouped into those that increased or decreased walking and improved or worsened safety.

Results Thirty-seven pedestrian injury and 50 walking papers met the inclusion criteria. Traffic lights and calming devices and the presence of recreational areas and playgrounds were related to more and safer walking. Eight features were related to more walking and less safe pedestrian outcomes. The majority of built environment features had inconsistent associations with either walking or injury, or had not been tested for either one of the outcomes. Well designed controlled experimental studies are lacking examining the built environment and walking or injury in children.

Significance These results reflect current knowledge and can be used to inform future injury prevention evaluations relate to safe walking promotion in children. Walkability features must be assessed against safety criteria in order to optimise the pedestrian environment for children.