

# UNDERSTANDING WAYS IN WHICH THE BUILT ENVIRONMENT, GREENNESS AND UV RADIATION AFFECT PHYSICAL ACTIVITY FOR MINORITY AND LOW INCOME RESIDENTS AND HIGH RISK SKIN CANCER PATIENTS IN DENVER, COLORADO

Streetscape features, urban greenness in particular, can advance the physical activity (PA) conduciveness of urban settings by providing comfort, safety, and aesthetics for the users of the area. There is very limited literature on how people subjectively assess street greenery, and other features of streetscapes for PA. Also, current research has been little concerned about the tradeoff between outdoor activity and the increased risk of sun exposure. This research investigates how the features of street design, trees and shade in particular, affect residents' perceptions of neighborhood streets for walking. This study also examines how people, who are at risk of sun exposure, perceive the quality of their neighborhoods for walking.

This research included three projects that were conducted between 2014 and 2018 in neighborhoods of Denver, CO. The first project used data drawn from a cross-sectional population-based survey of Denver residents completed in 2007. A mixed methods research approach, including a Visual Landscape Assessment survey, focus groups, and interviews, was used to collect data in the second and third projects. A total of 69 people participated in the VLA survey in addition to 19 interviews conducted in a skin cancer treatment facility in Denver. Interview and focus group results were coded and analyzed for emergent themes. The quantitative data was analyzed with SAS 9.4.

Results suggest that (1) the level of physical activity in neighborhoods can better be predicted by the perceived measures of greenness than the objective measures of greenness; perceived greenness is influenced by exposure to the actual environment. (2) More shade and trees, higher levels of maintenance, and the presence of a buffer between the street and sidewalk increase the likelihood of intuitively choosing a street for walking. This finding has implications for streetscape design guidelines. (3) People with a history of melanoma are shown to prefer more shade, trees and vegetation cover in urban streets to avoid both sun exposure and high temperature. They tend not to limit their outdoor activity, but rely on the application of other protective measures, such as sunscreen to secure themselves against excessive UV exposure.