

Exploring Perceptions of Route Environments in Relation to Walking

av

Dan Andersson

Akademisk avhandling

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Abstract:

Background: Every walk takes place in a route environment, which can play an important role in deterring or facilitating walking. The focus of this thesis is on the perceptions of environmental variables, and how they relate to appraisals of route environments as hindering – stimulating for walking and unsafe – safe for reasons of traffic, in two metropolitan environments. Another focus is to expand the state of knowledge concerning the criterion-related validity of the Active Commuting Route Environment Scale (ACRES).

Methods: Commuting pedestrians in Greater Stockholm, Sweden, were recruited via advertisements. From the inner urban area there were 294 participants (77% women), aged 49.5 years, and from the suburban areas there were 233 participants (82% women), aged 50.0 years. 77 individuals walked in both areas. The participants evaluated their commuting route environments using the ACRES. Correlation, multiple regression, and mediation analyses were used to explore the relationships between the variables. Comparisons of environmental ratings between groups and settings were performed with t-tests. Studies 1 and 2 focused on the inner urban area and studies 3 and 4 on the suburban areas. Studies 1 and 3 focused exclusively on the relations between the four motorized traffic variables (vehicle speed, vehicle flow, noise, and exhaust fumes), and their relations to the outcome variables (hinders – stimulates walking and unsafe – safe traffic). Studies 2 and 4 utilised proxies from studies 1 and 3 and combined them with other environmental variables to further the understanding of route environmental variables in relation to walking.

Results: In both areas, aesthetics and greenery were positively related to stimulating walking, whereas noise, a proxy for motorized traffic, was negatively related. Aesthetics was also positively related to unsafe – safe traffic in the inner urban area, whereas greenery had the corresponding role in suburbia. Another important finding was that greenery also influenced aesthetics positively in both areas. Thus, greenery had both a direct and an indirect positive effect. On the other hand, noise influenced aesthetics negatively in the inner urban area, whereas vehicle flow had the corresponding role in suburbia. A number of variables conjointly influenced the outcome unsafe – safe traffic negatively in both areas (speeds of motor vehicles, noise, conflicts, congestion: pedestrians, red lights, and course of the route). The route environment profiles differed distinctly between the two areas.

Conclusions: Several route environmental variables appear to be particularly influential in relation to pedestrian commuting, e.g., aesthetics, greenery, and noise. An important finding is that both positive and negative interactions, between certain predictor variables, were disclosed. The contrasting route environment profiles in the different settings strengthen the criterion-related validity of the ACRES. The findings expands the state of knowledge concerning the relations between the environment and walking. If implemented, these findings can influence public health positively.

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Dan Andersson, Gymnastik- och idrottshögskolan, Lidingövägen 1, Box 5626,
SE-114 86 Stockholm, Sweden, e-mail: dan.andersson@gih.se