

Can a motivational walking intervention overcome an unsupportive environment for walking - Findings from the Step-by-Step study

Dafna Merom, School of Public Health, University of Sydney,, Australia; Adrian Bauman, School of Public Health, University of Sydney,, Australia; Philayrath Phongsavan, School of Public Health, University of Sydney,, Australia; Ester Cerin, Hong Kong University, ; Wendy Brown, Queensland University, ; Ben Smith, Monash University, ; Chris Rissel, Sydney South West Area Health Service,

Purpose

Interventions to promote walking have rarely examined how their effects varied by the attributes of the physical environment. We examined whether perceived walkability predicted change in walking behaviour following individual-based walking intervention, and whether the intervention buffered the effects of unsupportive environment for walking.

Methods

Inactive adults (aged 30-65 years, 85% women) who completed a 3-month randomized control trial comparing the effect of a single mail-out of a theoretically-based self-help walking program (WP, n=102); the same program plus a pedometer (WPP, n=105); and a “no-treatment” control group (C, n=109). Measures included change in self-reported walking time for all purposes and in the proportion of people reporting regular walking (i.e., ≥ 150 mins/wk and ≥ 5 sessions/wk). Perceptions of environmental aesthetics, safety from crime, proximity to destinations, access to walking facilities, traffic, streetlights, connectivity and hilliness, were assessed at baseline and dichotomized into “low” or “high” by the median score. Covariates were social support, self-efficacy, motivation and socio-demographic characteristics.

Results

Adjusting for baseline walking, significant covariates and study groups, walking time at follow-up was lower if streetlights or aesthetics were perceived to be “low” (-24% and -22% respectively), compared with “high” ($p < 0.05$). In ‘low’ aesthetic conditions, those in the WPP were significantly more likely than controls to increase total walking time (Exp (b)=2.53, $p < 0.01$) and to undertake regular walking (OR=5.85, 95% CI: 2.60-12.2), whereas in aesthetically pleasing environments the between group differences were non-significant.

Conclusion

Walkability attributes can influence individual-based walking programs. Some environmental barriers for walking can be overcome by motivational aids.

Funding Source

National Heart Foundation