

IMPACT AND EFFECTIVENESS TABLE 45

Point of Decision Prompts

Effectiveness Tables

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EFFECTIVENESS TABLES

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
United States				
<p>Author Coleman, Gonzalez (2001) Texas</p> <p>Design Association Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity (promotional signage)</i></p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not Reported (for desired health outcomes)</p> <p>Positive Association for Stair Use among Women in the Study Population (POPD)</p> <p>No Association for Stair Use among Men in the Study Population (POPD)</p> <p>(Assumption: Introducing point of decision prompts promoting stair use will decrease escalator/elevator use.)</p> <p>Point of Decision Prompts</p> <p>PHYSICAL ACTIVITY:</p> <ol style="list-style-type: none"> The individual promotion message at the bank (n=10,155 observations) significantly increased stair use among men ($\chi^2=276.25, p<0.001$) and women ($\chi^2=117.81, p<0.001$). Increased stair use persisted into phase 3 for men ($\chi^2=40.02, p<0.001$) and women ($\chi^2=12.15, p<0.001$). During phase 3, the individual promotion message at the airport (n=34,125 observations) significantly increased stair use among men ($\chi^2=11.36, p<0.001$) and women ($\chi^2=35.51, p<0.001$). Women's stair use remained elevated during phase 5 relative to phase 3 ($\chi^2=57.40, p<0.001$), but stair use returned to phase 3 levels by phase 5 for men. The individual promotion message at the library (n=9,257 observations) was associated with significantly decreased stair use among men ($\chi^2=25.50, p<0.001$) and did not change women's stair use, relative to phase 3. The decline in men's stair use persisted into phase 5 ($\chi^2=22.27, p<0.001$). The family promotion message at the office building (n=8,361 observations) was associated with significantly decreased stair use among men ($\chi^2=34.67, p<0.001$) but had no effect on female stair use. Decreases persisted into phase 3 for men ($\chi^2=13.47, p<0.001$), but women's stair use increased relative to baseline during phase 3 ($\chi^2=22.52, p<0.001$). The family promotion message at the airport (n=38,022 observations) significantly increased stair use among men ($\chi^2=288.00, p<0.001$) and women ($\chi^2=84.01, p<0.001$), with increases persisting into phase 3 for women ($\chi^2=33.82, p<0.001$) but returning to baseline for men. The family promotion message at the library (n=15,233 observations) was significantly associated with decreased stair use among men ($\chi^2=38.55, p<0.001$) but increased stair use among women ($\chi^2=83.64, p<0.001$), with decreases persisting into phase 3 for men ($\chi^2=17.53, p<0.001$) and increases persisting into phase 3 for women ($\chi^2=33.82, p<0.001$). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Boutelle, Jeffery (2001) Minnesota</p> <p>Design Association Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity (presence of music, artwork, and signage)</i></p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not Reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (PODP)</p> <p>(Assumption: Point of decision prompts that alter aesthetic environment using visual and audio enhancements will increase stair use.)</p> <p>Point of Decision Prompts</p> <p>PHYSICAL ACTIVITY:</p> <ol style="list-style-type: none"> Participants were more likely to exit the stairwell (mean=14.92%, SE=0.35%) than to enter the stairwell (mean=11.58%, SE=0.35%, $p<0.01$), presumably indicating more downward than upward stair travel. Women were more likely to use the stairs (mean=13.70%, SE=0.35%) than were men (mean=12.71%, SE=0.35%; $p=0.04$). There was a main effect for intervention ($F(3,131)=10.50, p<0.01$) and there were significant differences between baseline and the music-artwork intervention ($p<0.01$), baseline and follow up ($p<0.01$), the music-artwork intervention and the intervention involving signs only ($p<0.01$), and the music-art intervention and follow up ($p=0.03$). There were no significant differences between baseline and the intervention involving signs only or between the signs only intervention and follow-up. There were main effects for intervention ($F(3,265)=12.36, p<0.01$) and direction ($F(1,265)=45.99, p<0.01$), showing an increase in stair use during intervention phases. There were also main effects for intervention ($F(3,265)=12.93, p<0.01$) and sex ($F(1,265)=4.11, p<0.05$). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<p>Author Russell, Hutchinson (2000)</p> <p>Midwest USA</p> <p>Design Association</p> <p>Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity</i> (multiple strategies for promotional signage)</p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not Reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (POPD)</p> <p>(Assumption: Using point of decision prompts at the entrance to a stairwell will decrease escalator use.)</p> <p>Point of Decision Prompts</p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> 1. During both the health promotion and deterrent interventions, there was a significant increase in stair use compared to weeks when no sign was present ($\chi^2=35.10$, $p<0.0001$) Stair use was at 8.22% when no signs were present and rose to 14.89% with health promotional sign and 14.4% with the deterrent sign being hung. 2. For younger individuals, stair use was significantly higher during the weeks in which the health promotion sign (17.56%) and the deterrent sign (15.54%) were present, compared to weeks when no sign was present (10.24%; $\chi^2=21.37$, $p<0.001$). 3. For older individuals, stair use was significantly higher during the weeks in which the deterrent sign (12.06%) and health promotion sign (11.64%) were present, compared to weeks when no signs were present (5.37%; $\chi^2=22.50$, $p<0.001$). 4. For both interventions, there was a significant increase in stair use compared to weeks when no sign was present ($\chi^2=35.10$, $p<0.0001$). 5. There were no statistically significant differences between the two signs for increasing stair use over baseline ($\chi^2=0.06$, ns). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>
International				
<p>Author Kerr, Eves (2000)</p> <p>United Kingdom</p> <p>Design Association</p> <p>Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity</i> (presence of promotional signage)</p> <p>Outcome(s) Affected Stair use (14-day physical activity recall, direct observation)</p>	<p>Not Reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (POPD)</p> <p>(Assumption: Using point of decision prompts at the entrance to a stairwell will increase stair use.)</p> <p>Point of Decision Prompts</p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> 1. Logistic regression analyses showed that stair use significantly increased during the intervention periods ($p<0.00001$). 2. Analysis of covariance of the total activity scores of interviewees, with age as a covariate, revealed that the activity scores of stair users interviewed after the poster intervention were lower than those of stair users interviewed during baseline ($p=0.02$). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Kerr, Eves (2001)</p> <p>United Kingdom</p> <p>Design Association</p> <p>Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity</i> (presence of various forms of promotional signage)</p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (POPD)</p> <p>(Assumption: Buildings with point of decision prompts of varying size and content will increase stair use.)</p> <p>Point of Decision Prompts</p> <p><u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> 1. (Study 1; n=13,934, Study 2; n=16,084) There was no significant difference between baseline stair use (study 1: 8.0%, study 2: 3.0%) and stair use during the A3-size poster intervention (study 1: 7.3%, study 2: 2.9%) (study 1: OR=0.91, 95%CI=0.79-1.05, study 2: OR=0.95, 95%CI=0.71-1.27). 2. (Study 2; n=16,084) Stair use did not significantly differ between the A2 and A1 poster conditions. 3. (Study 1 and 2; n=30,018) Stair use was significantly greater in the A2 poster condition (3.9%) than in both the no poster baseline condition (OR=1.3, 95%CI=1.00-1.68) and the smaller A3 poster condition (OR=1.42, 95% CI=1.06-1.90). 4. (Study 1 and 2; n=30,018) There was significantly greater stair use (4.7%) with the larger A1 poster than with no poster (OR=1.56, 95% CI=1.20-2.03) and the A3 poster (OR=1.70, 95%CI; 1.28-2.27). 5. (Study 3; n=25,319) There was a significant difference between stair use at baseline (38.1%) and during the first (healthy message content: 41.9%) and the second (convenience message content: 45.7%) poster conditions (poster 1; OR=1.12, 95% CI=1.05-1.20; poster 2; OR=1.22, 95% CI=1.15-1.31). Stair use was also significantly greater in the second than in the first poster condition (OR=1.09, 95% CI=1.02-1.15). 6. (Study 4; n=12,588) There was a significant difference between stair use at baseline (7.4%) and during the first (healthy message content: 11.0%) and the second (convenience message content: 10.3%) poster conditions (poster1; OR=1.49, 95% CI=1.26-1.76; poster 2; OR= 1.39, 95% CI; 1.19-1.64). Stair use did not differ significantly between poster conditions (OR=0.91, 95% CI=0.78-1.06). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<p>Author Kerr, Eves (2001) United Kingdom</p> <p>Design Association Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity (presence of promotional posters and stair banners)</i></p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (POPD) (Assumption: Use of poster prompts and stair-riser banners with various messages will increase stair use.)</p> <p>Point of Decision Prompts <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> 1. Stair use increased from 2.4% at baseline to 4.0% when the poster was in place and rose to 6.7% when the banners were displayed on the stair risers at the intervention site (n=11,961). 2. Stair use increased at both sites during the first 2 weeks in which the poster was displayed (odds ratio [OR]=2.18, 95% confidence interval [CI]=1.69, 2.80), with no significant differences between the sites (n=23,979). 3. During the second intervention period, there was an interaction between the sites (OR=2.06, 95% CI=1.48, 2.87) such that rates of stair use were higher with the banners at the intervention site than with the poster at the control site. 4. At the control site (n=12,018), the rate of stair use increased from 2.2% at baseline to 4.8% during the first 2 weeks of the poster exposure but fell slightly to 4.1% during the second 2 weeks. 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Webb, Eves (2007) United Kingdom</p> <p>Design Association Cross-sectional study</p> <p>Duration Not Applicable</p>	<p>Measures <i>Access to alternatives for physical activity (presence of promotional prompts)</i></p> <p>Outcome(s) Affected Stair use (direct observation)</p>	<p>Not reported (for desired health outcomes)</p> <p>Positive Association for Stair Use in the Study Population (POPD) (Assumption: Point of choice prompts using heart healthy and caloric output content will increase stair use.)</p> <p>Point of Decision Prompts <u>PHYSICAL ACTIVITY:</u></p> <ol style="list-style-type: none"> 1. At the intervention site, stair climbing increased significantly from 5.3% at baseline to 14.6% during weeks 1 to 4 of the banners (OR=2.76, CI=2.44, 3.12). 2. During weeks 1 to 4, there was a significant increase in stair climbing at the generalization site, from 12.6% at baseline to 17.5% (OR=1.39, CI=1.29, 1.49). 3. When comparing weeks 1 through 4 to week 13, there was no significant change in stair use, either at the intervention site (OR=0.91, CI=0.81, 1.03) or generalization site (OR=0.97, CI=0.88, 1.06). 4. Analyses were repeated with data and collapsed; over the full 13 week course of the prompt, stair use at the intervention site increased by an OR of 2.61 (CI=2.32, 2.94). <p><u>FOLLOW-UP:</u></p> <ol style="list-style-type: none"> 5. Stair use at both the intervention site and generalization site remained significantly elevated even 5 weeks after the point of choice prompt was removed. 6. The collapsed data from weeks 1 through 4 and week 13 was compared with the follow-up data collected 5 weeks after the signage was withdrawn, there was a significant drop in stair climbing at the intervention site (OR=0.63, CI=0.55, 0.74) and generalization site (OR=0.84, CI=0.76, 0.92) after the banners were removed. 7. Stair use during follow-up remained significantly higher than at baseline, both at the intervention site (OR=1.67, CI=1.44, 1.94) and the generalization site (OR=1.15, CI=1.06, 1.26). 	<p>More Evidence Needed</p> <p>Design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Sampling / Representativeness Not Reported</p>

IMPACT TABLES

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
United States						
Author Coleman, Gonzalez (2001) Texas	Participation/Potential Exposure Not Applicable High-Risk Population Not Applicable Only cross-sectional data provided. General population (target population) El Paso's population is 51.2% Female and 75% Hispanic (primarily Mexican decent).	Representative Potential Population Reach Not Applicable Potential High Risk Population Reach Not Applicable	Intervention Components Not Applicable Only cross-sectional data provided. Point of decision prompts (signage) intervention to increase stair use in the community Feasibility Not Applicable Implementation Complexity Not Applicable	Population Impact Not Applicable High-risk Population Impact Not Applicable Sustainability Not Applicable	Not Reported	Not Reported
Author Boutelle, Jeffery (2001) Minnesota	Participation/Potential Exposure Not Applicable High-Risk Population Not Applicable Only cross-sectional data was provided. General population (target population)	Representative Potential Population Reach Not Applicable Potential High Risk Population Reach Not Applicable	Intervention Components Not Applicable Only cross-sectional data was provided. Point of decision prompts to increase stair use through change in the aesthetic environment using visual and audio enhancements. Feasibility Not Applicable Implementation Complexity Not Applicable	Population Impact Not Applicable High-risk Population Impact Not Applicable Sustainability Not Applicable	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<p>Author Russell, Hutchinson (2000) Midwest USA</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>High-Risk Population Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>General population (target population)</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>Promotional signs to increase stair use and decrease escalator use, "Save time, keep your heart healthy, use the stairs" and deterrent signs, "limit escalator use to staff and individuals unable to use the stairs"</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	<p>1. There was a significant interaction for age by week ($\chi^2=17.66$, $p<0.001$), indicating that stair use differed across point-of decision prompts for different age groups.</p> <p>2. Significant two-way interactions were found ($p<0.05$) for sex and age ($\chi^2=8.21$) and age by week ($\chi^2=17.66$). There was also a significant main effect for week of study ($\chi^2=31.62$).</p>
International						
<p>Author Kerr, Eves (2000) United Kingdom</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>High-Risk Population Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>General population (target population)</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>Promotional point of decision prompt sign to increase stair use</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	<p>1. As people with lower customary levels of activity were encouraged to use the stairs by the intervention, the aggregate activity score for stair users was reduced (no statistics).</p> <p>2. The main reason given for stair use was improved health (41.4%) whereas ease of use (30.3%) and laziness (24.2%) were the reasons cited by escalator users.</p>
<p>Author Kerr, Eves (2001) United Kingdom</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>High-Risk Population Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>General population (target population)</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>Point of decision prompts to promote stair use by incorporating different sized posters (A3-size poster [42 X 30 cm], A2-size poster [60 X 42 cm], A1-size [84 X 60 cm]) with different message content (one encouraging health and one encouraging convenience)</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<p>Author Kerr, Eves (2001) United Kingdom</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>High-Risk Population Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>General population (target population)</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>Use of poster prompts and stair-riser banners with various messages to promote stair use in a 6-week intervention.</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	Not Reported
<p>Author Webb, Eves (2007) United Kingdom</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>High-Risk Population Not Applicable</p> <p>Only cross-sectional data was provided.</p> <p>General population (target population)</p> <p>46% Male, 68% White, 84% were < 60 years old (intervention sample)</p> <p>39% Male, 76% White, 89% were < 60 years old (generalization sample)</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only cross-sectional data provided.</p> <p>Point of choice prompts provided to increase ascending stair using heart healthy and caloric output content</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	Not Reported