

# **INTERVENTION TABLE 20**

**Point of Decision Prompts**

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
<b>United States</b>						
Coleman, Gonzalez (2001) Texas	<p>Point of decision prompts (signage) intervention to increase stair use in the community</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported</p> <p>Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study</p> <p><b>DURATION:</b> Not applicable</p> <p><b>SAMPLE SIZE:</b> 115,153 observations of individuals using the stairs/ escalators/ elevators in 4 sites (an airport, bank, office building, and library)</p> <p><b>PRIMARY OUTCOME:</b> Stair use</p> <p><b>MEASURES:</b> 1. Direct observations (stair use)</p> <p><b>DATA COLLECTION:</b> For this study, data was collected at all sites during an initial baseline phase (phase 1), followed by an intervention phase (phase 2), and a post-intervention phase (phase 3) without a sign. Signs were professionally mounted and message content appeared in both English and Spanish. To control for outside effects, there was a second intervention (phase 4) and a second post-intervention (phase 5). Baseline data was recorded for the second intervention during phase 3, and post-intervention was collected during phase 5. Each phase (1-5) lasted approximately 1 month. The overall reliability for observation categories was 0.99. One observer recorded individuals taking the stairs while another recorded individuals taking the elevator/ escalator. Observation periods lasting 30-60 minutes occurred 4 or more days per week (Monday-Friday), typically during 2 mornings and 2 afternoons each week.</p> <p><b>LIMITATIONS:</b> Baseline differences existed between the office building/library and the airport/bank that could affect results; no demographic information was collected; focus groups were not used for cultural tailoring</p>	<p>General population</p> <p>El Paso's population is 51.2% Female and 75% Hispanic (primarily Mexican decent)</p> <p><b>ELIGIBILITY:</b> All individuals using the stairs and escalators/ elevators. Individuals that were physically unable to use the stairs and those carrying heavy luggage were not analyzed the same as other individuals.</p> <p><b>EXPOSURE/ PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> The researchers were from the University of Texas-El Paso.</p> <p><b>THEORY/Framework:</b> Not reported</p> <p><b>EVIDENCE-BASED:</b> Not reported</p> <p><b>REPLICATION/ADAPTATION:</b> Not applicable</p> <p><b>ADOPTION:</b> Not applicable</p> <p><b>IMPLEMENTATION:</b> Not applicable</p> <p><b>FORMATIVE EVALUATION:</b> Not reported</p> <p><b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable</p> <p><b>FUNDING:</b> This study (intervention and evaluation) was funded in part by the Research Enhancement Fund award from the University of Texas - El Paso.</p> <p><b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>The individual promotion message at the bank (n=10,155 observations) significantly increased stair use among men (<math>\chi^2 = 276.25, p&lt;0.001</math>) and women (<math>\chi^2 = 117.81, p&lt;0.001</math>). Increased stair use persisted into phase 3 for men (<math>\chi^2 = 40.02, p&lt;0.001</math>) and women (<math>\chi^2 = 12.15, p&lt;0.001</math>).</li> <li>During phase 3, the individual promotion message at the airport (n=34,125 observations) significantly increased stair use among men (<math>\chi^2 = 11.36, p&lt;0.001</math>) and women (<math>\chi^2 = 35.51, p&lt;0.001</math>). Women's stair use remained elevated during phase 5 relative to phase 3 (<math>\chi^2 = 57.40, p&lt;0.001</math>), but stair use returned to phase 3 levels by phase 5 for men.</li> <li>The individual promotion message at the library (n=9,257 observations) was associated with significantly decreased stair use among men (<math>\chi^2 = 25.50, p&lt;0.001</math>) and did not change women's stair use, relative to phase 3. The decline in men's stair use persisted into phase 5 (<math>\chi^2 = 22.27, p&lt;0.001</math>).</li> <li>The family promotion message at the office building (n=8,361 observations) was associated with significantly decreased stair use among men (<math>\chi^2 = 34.67, p&lt;0.001</math>) but had no effect on female stair use. Decreases persisted into phase 3 for men (<math>\chi^2 = 13.47, p&lt;0.001</math>), but women's stair use increased relative to baseline during phase 3 (<math>\chi^2 = 22.52, p&lt;0.001</math>).</li> <li>The family promotion message at the airport (n=38,022 observations) significantly increased stair use among men (<math>\chi^2 = 288.00, p&lt;0.001</math>) and women (<math>\chi^2 = 84.01, p&lt;0.001</math>), with increases persisting into phase 3 for women (<math>\chi^2 = 33.82, p&lt;0.001</math>) but returning to baseline for men.</li> <li>The family promotion message at the library (n=15,233 observations) was significantly associated with decreased stair use among men (<math>\chi^2 = 38.55, p&lt;0.001</math>) but increased stair use among women (<math>\chi^2 = 83.64, p&lt;0.001</math>), with decreases persisting into phase 3 for men (<math>\chi^2 = 17.53, p&lt;0.001</math>) and increases persisting into phase 3 for women (<math>\chi^2 = 33.82, p&lt;0.001</math>).</li> </ol>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
Boutelle, Jeffery (2001) Minnesota	<p>Point of decision prompts to increase stair use through change in the aesthetic environment using visual and audio enhancements.</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study</p> <p><b>DURATION:</b> Not applicable</p> <p><b>SAMPLE SIZE:</b> 35,475 individual observations in the stairwell at the University of Minnesota School of Public Health</p> <p><b>PRIMARY OUTCOME:</b> Stair use</p> <p><b>MEASURES:</b> 1. Direct observations (stair use)</p> <p><b>DATA COLLECTION:</b> This study consisted of observations of stair and elevator usage during baseline, 2 interventions, and a follow-up. The baseline phase lasted 3 weeks, and each subsequent phase lasted 4 weeks. Observations were conducted after stand-up floor signs were placed near decision points, signs were hung above the elevators and doorways, artwork was placed in the stairwell, and music was played throughout the stairwell. Observers were located at the decision point at the foot of the stairs and elevator in a lobby area 3 days per week (Monday, Wednesday, and Friday), 3 hours per day. The number of people entering and leaving the stairwell or elevator was counted. Individual sex and direction of entering or exiting was recorded. Percentage of individuals using the stairs was computed for each day. Inter-observer agreement was greater than 98%.</p> <p><b>LIMITATIONS:</b> Researchers were unable to establish causality differences between the aesthetic effects of the music and artwork or novelty of the intervention itself</p>	<p>Individuals within the University of Minnesota School of Public Health building (targeted sample)</p> <p>Individuals with access to the stairs and elevators (evaluation sample)</p> <p>An informal survey of participants showed that approximately 1/3 did not have a key card and could not use the stairwell.</p> <p><b>ELIGIBILITY:</b> Individuals had to be able to physically use the stairs. For example, those carrying items larger than a briefcase or pushing carts were not able to use the stairs and were not eligible. Individuals with access to the stairwell had a key card.</p> <p><b>EXPOSURE/PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> The researchers were from the University of Minnesota School of Public Health</p> <p><b>THEORY/Framework:</b> Not reported</p> <p><b>EVIDENCE-BASED:</b> Not reported</p> <p><b>REPLICATION/ADAPTATION:</b> Not applicable</p> <p><b>ADOPTION:</b> Not applicable</p> <p><b>IMPLEMENTATION:</b> Not applicable</p> <p><b>FORMATIVE EVALUATION:</b> Not reported</p> <p><b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable</p> <p><b>FUNDING:</b> The study was supported by a grant from the National Institute of Diabetes and Digestive and Kidney Diseases and by a student award from the Division of Epidemiology, School of Public Health, University of Minnesota.</p> <p><b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>1. 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&lt;0.01), presumably indicating more downward than upward stair travel.</li> <li>2. 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).</li> <li>3. There was a main effect for intervention (F(3,131)=10.50, p&lt;0.01) and there were significant differences between baseline and the music-artwork intervention (p&lt;0.01), baseline and follow up (p&lt;0.01), the music- artwork intervention and the intervention involving signs only (p&lt;0.01), and the music-art intervention and follow up (p=0.03).</li> <li>4. There were no significant differences between baseline and the intervention involving signs only or between the signs only intervention and follow-up.</li> <li>5. There were main effects for intervention (F(3,265)=12.36, p&lt;0.01) and direction (F(1,265)=45.99, p&lt;0.01), showing an increase in stair use during intervention phases. There were also main effects for intervention (F(3,265)=12.93, p&lt;0.01) and sex (F(1,265)=4.11, p&lt;0.05).</li> </ol>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
<p>Russell, Hutchinson (2000)</p> <p>Midwest United States</p>	<p>Promotional signs to increase stair use and decrease escalator use were used with the descriptions, "Save time, keep your heart healthy, use the stairs" and "Limit escalator use to staff and individuals unable to use the stairs"</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported</p> <p>Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study</p> <p><b>DURATION:</b> Not applicable</p> <p><b>SAMPLE SIZE:</b> 3,369 observations of stair and escalator users</p> <p><b>PRIMARY OUTCOME:</b> Stair use</p> <p><b>MEASURES:</b> 1. Direct observations (stair and escalator use)</p> <p><b>DATA COLLECTION:</b> Observations were made over a five week period. During week 1, baseline data was taken. During week two, a health promotion sign was posted, During week 3, data was collected. During week 4, a sign was posted as a deterrent for using the escalator. During week 5, data were collected. Data were collected on Thursdays and Fridays from 9:00 am to 2:00 p.m. for five weeks during the summer, with days yielding most traffic. The observer sat at a bench, in an inconspicuous location, within direct view of the stairs and escalators. Inter-observer agreement was 98% on sex, age, and activity. On selected unannounced occasions across the study, one of the authors also collected data from 14.3% (n=483) of the overall sample in order to provide further evidence of reliability. Pilot testing determined cut-off categories for observations. Pilot data also determined the reliability of observations between individuals over and under 40 years old.</p> <p><b>LIMITATIONS:</b> Observations of age and sex were not ascertained through direct knowledge, which may have led to inaccuracies; the study was designed to be short and precludes any assumptions of long-term use</p>	<p>Individuals using the upward stairs and escalators at a Midwest regional airport</p> <p><b>ELIGIBILITY:</b> Individuals who were physically able to use the stairs were eligible for participation. In addition, individuals traveling with young children, or carrying more than one piece of travel luggage were not eligible as stair use was difficult in these cases.</p> <p><b>EXPOSURE/PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> Researchers were from Eastern Illinois University and Florida State University.</p> <p><b>THEORY/Framework:</b> Not reported</p> <p><b>EVIDENCE-BASED:</b> Not reported</p> <p><b>REPLICATION/ADAPTATION:</b> Not applicable</p> <p><b>ADOPTION:</b> Not applicable</p> <p><b>IMPLEMENTATION:</b> Not applicable</p> <p><b>FORMATIVE EVALUATION:</b> Not reported</p> <p><b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable</p> <p><b>FUNDING:</b> Not reported</p> <p><b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b></p> <ol style="list-style-type: none"> <li>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 (<math>\chi^2=35.10</math>, <math>p&lt;0.0001</math>) 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.</li> <li>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%; <math>X^2=21.37</math>, <math>p&lt;0.001</math>).</li> <li>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%; <math>X^2=22.50</math>, <math>p&lt;0.001</math>).</li> <li>4. For both interventions, there was a significant increase in stair use compared to weeks when no sign was present (<math>X^2=35.10</math>, <math>p&lt;0.0001</math>).</li> <li>5. There were no statistically significant differences between the two signs for increasing stair use over baseline (<math>X^2=0.06</math>, ns).</li> <li>6. There was a significant interaction for age by week (<math>X^2=17.66</math>, <math>p&lt;0.001</math>), indicating that stair use differed across point-of decision prompts for different age groups.</li> <li>7. Significant two-way interactions were found (<math>p&lt;0.05</math>) for sex and age (<math>X^2=8.21</math>) and age by week (<math>X^2=17.66</math>). There was also a significant main effect for week of study (<math>X^2=31.62</math>).</li> </ol>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
<b>International</b>						
Kerr, Eves (2000) United Kingdom	<p>Promotional point of decision prompt sign to increase stair use</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study <b>DURATION:</b> Not applicable <b>SAMPLE SIZE:</b> 658 stair (n=270) and escalator (n=388) users (interviews) <b>PRIMARY OUTCOME:</b> Stair use <b>MEASURES:</b> 1. 14 day physical activity recall (gender, age, physical activity stage of change, intensity and frequency of activities) 2. Observations (stair and escalator use, awareness of the poster) <b>DATA COLLECTION:</b> Interview data from two studies in a Birmingham shopping mall were combined. Both interventions conducted two weeks of baseline data collection followed by up to four weeks of stair-use promotion poster exposure. During the four weeks, researchers hung the poster at the point of choice between the escalators and the stairs. Interviews were conducted at the top of the stairwell (5 rotating interviewers; inter-rater reliability r=0.76). To assess physical activity, stage of change for exercise and a modified 14 day physical activity recall were obtained (test-retest reliability r=0.80). For analysis, each activity was weighted for its intensity (vigorous=9; moderate=5, light=3) and then multiplied by the weekly frequency of the activity to give a total activity score. <b>LIMITATIONS:</b> The study was not randomized; data was self-reported</p>	<p>General population <b>ELIGIBILITY:</b> Not reported <b>EXPOSURE/PARTICIPATION:</b> Not reported</p>	<p><b>LEAD AGENCY:</b> The researchers were from the University of Birmingham, Edgbaston, Birmingham. <b>THEORY/Framework:</b> Not reported <b>EVIDENCE-BASED:</b> Not reported <b>REPLICATION/ADAPTATION:</b> Not applicable <b>ADOPTION:</b> Not applicable <b>IMPLEMENTATION:</b> Not applicable <b>FORMATIVE EVALUATION:</b> Not reported <b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable <b>FUNDING:</b> Not reported <b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b> 1. Logistic regression analyses showed that stair use significantly increased during the intervention periods (p&lt;0.00001). 2. 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). 3. 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. 4. 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>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
Kerr, Eves (2001) United Kingdom	<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><b>OTHER INTERVENTION COMPONENTS:</b> <i>Multi-component:</i> Not reported <i>Complex:</i> Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study <b>DURATION:</b> Not applicable <b>SAMPLE SIZE:</b> 67,925 observations for all 4 studies in Birmingham City; study 1 shopping center (n=13,934), study 2 shopping center (n=16,084, study 3 train station (n=25,319), study 4 shopping center (n=12,588) <b>PRIMARY OUTCOME:</b> Stair use <b>MEASURES:</b> 1. Observations (gender, age, presence of children and bags, stair or escalator use, number of users) <b>DATA COLLECTION:</b> Trained data collectors made observations using a coding system to identify gender, age (grey hair and appearance of over 60 years old), children (between waist and shoulder height of the accompanying adult), and the presence of bags (inter-observer reliability r=0.82). Observations were conducted in different environments where signs with multiple sizes and different message content were hung. Study 1, 3, and 4 had a 2 week baseline and 2 week intervention period. Study 2 had a 3 week baseline and 3 two-week intervention periods. Pedestrian traffic was identified by using tally counters to keep a running total of numbers of individuals. Observers in each location counted women and men. Pedestrian traffic was recorded every half hour as the total number of people on the escalators and stairs. During study 3, pilot sessions tested inter-observer agreement and commuter behavior. <b>LIMITATIONS:</b> Exposure effect from the first poster cannot be ruled out as a factor for impact reported with the second poster message, thus the two cohorts were unlikely to be totally independent.</p>	<p>General population <b>ELIGIBILITY:</b> Children were only eligible if they were accompanied by an adult. <b>EXPOSURE/PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> The researchers were from the University of Birmingham, UK. <b>THEORY/Framework:</b> Theory of operant conditioning. <b>EVIDENCE-BASED:</b> Multiple stair climbing interventions were used to develop the intervention <b>REPLICATION/ADAPTATION:</b> Not applicable <b>ADOPTION:</b> Not applicable <b>IMPLEMENTATION:</b> Not applicable <b>FORMATIVE EVALUATION:</b> Not reported <b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable <b>FUNDING:</b> Not reported <b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b> 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>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
Kerr, Eves (2001) United Kingdom	<p>Use of poster prompts and stair-riser banners with various messages to promote stair use in a 6-week intervention.</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study <b>DURATION:</b> Not applicable <b>SAMPLE SIZE:</b> 23,979 observations of stair and escalator users at a shopping mall (12,018=control, 11,961= intervention) <b>PRIMARY OUTCOME:</b> Stair use <b>MEASURES:</b> 1. Observations and coding system (number of people using stairs and escalators) <b>DATA COLLECTION:</b> At the intervention site, 2-weeks of baseline observation and 2 weeks of poster intervention were followed by 2 weeks during which banners, containing multiple messages were placed on stair risers. The control site had 2-weeks of baseline observations followed by 4 weeks of poster promotions. Observations were made on alternate days at each location between 11 AM and 1 PM to include day and lunchtime shoppers. Overall pedestrian traffic volume was calculated as the total number of people using the escalators and stairs during each half-hour period. Traffic volume was entered into the logistic regression models as a continuous variable. <b>LIMITATIONS:</b> Not reported</p>	<p>General population <b>ELIGIBILITY:</b> Day and lunchtime shoppers at 2 shopping malls who utilized stairs and/or escalators <b>EXPOSURE/PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> Researchers from the University of Birmingham in Birmingham, England organized the study and collected and analyzed the data. <b>THEORY/Framework:</b> Not reported <b>EVIDENCE-BASED:</b> Researchers used their previous studies using banners and posters placed on stairs as background for this study. <b>REPLICATION/ADAPTATION:</b> Not applicable <b>ADOPTION:</b> Not applicable <b>IMPLEMENTATION:</b> Not applicable <b>FORMATIVE EVALUATION:</b> Not reported <b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable <b>FUNDING:</b> The study was supported by the Joel and Barbara Alpert Children of the City Endowment. The work of Drs Sharfstein and Sandel was supported by a Health Resources and Services Administration Institutional National Service Award. <b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b> 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>

Source	Intervention Components	Study Design and Execution	Reach	Adoption, Implementation and Process Evaluation	Enforcement/Sustainability	Impacts and Outcomes
Webb, Eves (2007) United Kingdom	<p>Point of choice prompts provided to increase ascending stair using heart healthy and caloric output content.</p> <p><b>OTHER INTERVENTION COMPONENTS:</b> Multi-component: Not reported Complex: Not reported</p>	<p><b>DESIGN:</b> Cross-sectional study <b>DURATION:</b> Not applicable <b>SAMPLE SIZE:</b> 29,713 (intervention site) and 47,553 (generalization site) pedestrians at a shopping center <b>PRIMARY OUTCOME:</b> Physical activity <b>MEASURES:</b> 1. Direct observation (stair and escalator use, gender, age, ethnicity, baggage carried) <b>DATA COLLECTION:</b> For this study, there was a 2-week baseline period followed by a 13-week intervention. During the intervention message banners were installed at the intervention site. Observations were taken in weeks 1 through 4 of the banner phase and again in week 13. Five weeks after the intervention had been removed; a 2-week follow-up observational period was conducted. Using a pool of 4 alternating observers, pedestrian traffic was simultaneously monitored in both sites. An investigator stood near the top of the stairs/escalator at a perpendicular angle such that they were out of view of pedestrians boarding below. Observations were conducted using the previously defined protocol. Data were collected on Tuesday and Friday between 12:30 pm and 4:00 pm. Inter-observer agreement was 100% for stair/escalator use, 99% for gender, 94% for age, 97% for ethnicity, and 97% for baggage. A convenience sample of 532 pedestrians were interviewed to assess their recall of the intervention <b>LIMITATIONS:</b> Pedestrian traffic at the generalization site was 60% greater than at the intervention site; there may be confounding variables that influenced stair/escalator use for which researchers did not account for in the current study; the atrium was accessible from other parts of the shopping complex; individuals may not have traveled through the intervention area</p>	<p>General population 46% Male, 68% White, 84% &lt; 60 years old (intervention sample) 39% Male, 76% White, 89% &lt; 60 years old (generalization sample) <b>ELIGIBILITY:</b> Not reported <b>EXPOSURE/PARTICIPATION:</b> Not applicable</p>	<p><b>LEAD AGENCY:</b> Researchers were from Kingston University and the University of Birmingham <b>THEORY/Framework:</b> Socioecological model <b>EVIDENCE-BASED:</b> Observation methods and message content were taken from previously conducted research studies. <b>REPLICATION/ADAPTATION:</b> Not applicable <b>ADOPTION:</b> Not applicable <b>IMPLEMENTATION:</b> Not applicable <b>FORMATIVE EVALUATION:</b> Not reported <b>PROCESS EVALUATION:</b> Not reported</p>	<p><b>RESOURCES:</b> Not applicable <b>FUNDING:</b> Not reported <b>STRATEGIES:</b> Not applicable</p>	<p><b>PHYSICAL ACTIVITY:</b> 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). <i>Follow-up:</i> 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>

## REFERENCES

- Boutelle, K.N., Jeffery, R.W., Murray, D.M., and Schmitz, M.K.H. (2001). Using signs, artwork, and music to promote stair use in a public building. *American Journal of Public Health*. 91(12): 2004-2006.
- Coleman, K.J. and Gonzalez, E.C. (2001). Promoting stair use in a US-Mexico border community. *American Journal of Public Health*. 91(12): 2007-2009.
- Kerr, J., Eves, F., and Carroll, D. (2000). Posters can prompt less active people to use the stairs. *Journal of Epidemiology and Community Health*. 54(12): 942-943.
- Kerr, J., Eves, F., and Carroll, D. (2001). Encouraging stair use: Stair-riser banners are better than posters. *American Journal of Public Health*. 91(8): 1192-3.
- Kerr, J., Eves, F.F., and Carroll, D. (2001). The influence of poster prompts on stair use: The effects of setting, poster size and content. *British Journal of Health Psychology*. 6(Part 4): 397-405.
- Russell, W.D. and Hutchinson, J. (2000). Comparison of health promotion and deterrent prompts in increasing use of stairs over escalators. *Perceptual and Motor Skills*. 91(1): 55-61.
- Webb, O.J., and Eves, F.F. (2007). Promoting stair climbing: Intervention effects generalize to a subsequent stair ascent. *American Journal of Health Promotion*. 22(2): 114-119.