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## **Effectiveness of physical activity interventions in achieving behaviour change maintenance in young and middle aged adults: a systematic review and meta-analysis**

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Supplementary file 2: Summary of interventions of included studies and main results

Study descriptor					Results		
Reference	Country/ Study design	Population	Intervention/Theoretical framework	Control/Comparison	Outcome	Follow-up	Outcome Measures
<b>Community based PA interventions targeting men and women</b>							
Bennett, 2008 <sup>1</sup>	USA/Two-arm RCT.	N=72 90.3% female; mean age 58.0 years (SD 11.4); 95.8% white; 34.7% employed full-time.	N=35 6 months; Monthly 15-minute telephone calls with individually-tailored MI for PA, goal-setting, planning, information on safety, discussion on perceived exertion and problem-solving barriers/ TTM, SCT.	N=37 Monthly telephone calls asking about PA (no MI).	<b>Total energy expenditure in PA kcal/week</b> 6 months <b>NS: <math>d=0.16</math>, <math>p=0.57</math>.</b>  Results refer to an effect size and p-value test of significance using repeated-measures ANOVA.	Baseline and 6 months.	CHAMPS questionnaire: Total PA caloric expenditure/week (kcal/week).
Brown, 2006 <sup>2,3</sup>	Australia/ Quasi-experiment: controlled, pre-post design.	N=2,339 53.5% female; mean age 47.7 years; 6.2% student/unemployed/no work.	N=1,280 18 months; media campaigns, marketing strategies, promotion by health professionals, restructuring of local environment/Socio-ecological Model.	N=1,059 No intervention.	<b>MVPA mins/week</b> 18 months <b>NS: <math>SMD=0.04</math> (95% CI: -0.04, 0.12).</b>  Results refer to SMDs and 95% CIs for between group differences relative to baseline.	Baseline and 18 months	"Active Australia" survey: Time spent walking; moderate and vigorous PA during the previous week (mins/week).
Brownson, 2004 <sup>4</sup>	USA/ Quasi-experiment: controlled pre-post design.	N=1,233 75.4% female; mean age 51.0 years; 67.2% white; 17.2% earning less than \$10,000.	N=653 12 months; tailored newsletters, card-reader systems providing tailored feedback reports/Ecological framework.	N=580 No intervention.	<b>Walking time mins/week</b> 18 months <b>NS: <math>-1.4</math>, <math>p=0.91</math>.</b>  Results refer to net intervention effect.	Baseline and 18 months.	BRFSS: Total number of minutes walked in the past week and total minutes walked for exercise (mins/week).

Brownson, 2005 <sup>5</sup>	USA/ Quasi-experiment: controlled pre-post design.	N=1,531 76.5% female; mean age 53.1 years; 94.6% white; 7.6% earning less than \$10,000.	N=752 12 months; tailored newsletters, card-reader systems providing tailored feedback reports, promotion by health professionals, walking clubs/ Ecological framework.	N=779 No intervention.	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 12 months <b>NS: p=0.81</b>  Results refer to p-values for linear trend.	Baseline and 12 months.	BRFSS: Rate of meeting walking recommendations (% participants).
Bryan, 2013 <sup>6</sup>	USA/ Two-arm, RCT.	N=238 80.4% female; mean age 28.2 (SD 8.0); 67.1% white; 55.2% household income more than \$50,000.	N=123 12 months; information, goal setting, tracking using logs, individually tailored mailings/ TTM, SCT.	N=115 Information (non-PA), non-tailored mailings.	<b>Total PA mins/week</b> 6 months <b>NS: p=NS.</b>  12 months <b>+ve: p=0.02.</b>  Results refer to simple effects tests.	Baseline, 6 and 12 months.  NB. 6-month outcomes not included in meta-analysis.	7-Day PAR: Time spent in PA and intensity of PA over the last week (mins/week).
Buman, 2011 <sup>7</sup>	USA/Two-arm RCT.	N=81 82.7% female; mean age 63.4 years (SD 8.62); 91.4% white; 67.9% with a college degree or higher.	N=41 16 weeks; weekly group sessions, building self-management skills for PA initiation and maintenance, encouragement and feedback, goal-setting, social support, problem solving, use of mental imagery, relapse prevention, pedometers, access to exercise facility/ SCT,	N=40 Standard community-based approach, pedometers, access to exercise facility, two educational sessions and a PA prescription, basic health education	<b>LTEQ leisure-time MVPA mins/week</b> 18 months <b>+ve: d=0.32, p=0.04</b>  Results refer to effect sizes and p-values for Group X Time interaction from a repeated measures ANOVA.	Baseline, 16 weeks and 18 months.	LTEQ: Time spent in mild, moderate and strenuous leisure-time PA (mins/week).  Accelerometer: MVPA time (subsample of 22 participants).

			SDT.	sessions (non-PA).			
Castro, 2011 <sup>8</sup>	USA/ Three-arm, RCT.	N=181 65.8% female; mean age 59.1 years (SD 6.1); 67.4% Non- Hispanic White/Caucasian; 8.6% unemployed.	N=61 (Professional staff), N=61 (Peer mentors). 12 months; telephone advice on developing self-management skills and feedback via pedometers/ TTM, SCT.	N=59 Telephone advice to develop a healthy diet.	<b>CHAMPS Leisure-time MVPA mins/week</b> 6 and 12 months <b>+ve: 3.79, p=0.005.</b>  Results refer to a F- statistic for combined intervention groups vs. control.	Baseline, 6 and 12 months.	CHAMPS questionnaire: Time spent in leisure- time MVPA (mins/week).  Accelerometer: MVPA time (subsample of 30 participants).
De Cocker, 2007 <sup>9-11</sup>	Europe/ Controlled, pre-post design.	N=1,240 51.2% female; mean age 48.6 years (SD 13.7); 67.7% employed.	N=648 12 months; local media, web-based information and PA tips, street signs, pedometer packages/ Social Ecological Model.	N=592 No intervention.	<b>Pedometer steps/day</b> 12 months <b>+ve (pedometer steps):</b> 0.33, p<0.001.  48 months <b>NS (pedometer steps):</b> 0.9, p=NS.  Results refer to effect size at 12 months, t- statistic comparing completers at 48 months.	Baseline, 12 and 48 months.	Pedometer (steps/day).  Long form IPAQ: Total time spent in work, transport, domestic, gardening, leisure, walking, moderate and MVPA (mins/week).
Goyder, 2014 <sup>12</sup>	UK/ Three-arm, RCT.	N=282 53.9% female; mean age 54 years (SD 7.3); 87.2% white; 47.5% not employed.	N=186 2 months; interactive DVD, information on local facilities and opportunities for PA, MI by phone or in- person/ TTM, TPB.	N=96 No intervention.	<b>Accelerometer/Actihear t Total energy expenditure kcal/day</b> 6 months <b>NS: 51.5, p=0.59.</b>  Results refer to an adjusted mean difference for both intervention groups versus control.	Baseline and 6 months.	7-day accelerometry and Actiheart: Total energy expenditure (kcal/day), MVPA time (mins/day), meeting recommendations for MVPA (% participants).  SPAQ: self-reported moderate or strenuous PA (mins/week).

Hansen, 2012 <sup>13</sup>	Europe/ Two-arm, RCT.	N=12,287 64.9% female; mean age 50.6 (SD 13.7).	N=6,055 16 weeks; website: individually tailored PA advice, recommendations, discussion forum/ TTM, TPB.	N=6,232 No intervention.	<b>Total PA mins/week</b> 6 months <b>NS:</b> p=0.25.  Results refer to between-group differences.	Baseline, 3 and 6 months.  NB. Not included in meta- analysis.	IPAQ: PA for work, transport, housework and gardening, and leisure time (mins/week).
Heesch, 2003 <sup>14</sup>	USA/ Three-arm, RCT.	N=378 43.9% female; mean age 47.6 years; 63.7% white.	N=130 (PRIME G), N=114 (PRIME C). 6 months; behavioural and cognitive, homework assignments, pedometers (phone or in-person)/ TTM, SCT.	N=134. 6 month YMCA membership .	<b>Moderate PA mins/week</b> 6 months <b>NS:</b> SMD=0.26 (95% CI: - 0.05, 0.56) (PRIME C) <b>+ve:</b> SMD=0.48 (95% CI: 0.16, 0.79) (PRIME G).  12 months <b>NS:</b> SMD=0.14 (95% CI: - 0.16, 0.45) (PRIME C) <b>NS:</b> SMD=0.11 (95% CI: - 0.20, 0.42) (PRIME G).  18 months <b>NS:</b> SMD=0.07 (95% CI: - 0.24, 0.38) (PRIME C) <b>NS:</b> SMD=0.06 (95% CI: - 0.26, 0.38) (PRIME G).  24 months <b>NS:</b> SMD=0.07 (95% CI: - 0.25, 0.39) (PRIME C) <b>NS:</b> SMD=0.04 (95% CI: - 0.29, 0.36) (PRIME G).  Results refer to SMDs and 95% CIs for between	Baseline, 6, 12, 18 and 24 months.	7-day PAR: Time spent in moderate, hard and very hard physical activities over 7 days (mins/week).

					group differences relative to baseline.		
Isaacs, 2007 <sup>15</sup>	UK/ Three-arm, RCT	N=943 67.3% female; mean age 57.0 years (SD 8.7); 76.0% white; 17.4% socio- economic classification 8 (not classified, never worked and long-term unemployed).	N=317 (Leisure centre), N=311 (Walking). 10 weeks; leisure centre classes or walking program/ TTM, Implementation- intention theory.	N=315. Tailored advice and information on PA (waiting list).	<b>MVPA mins/week</b> 6 months <b>+ve:</b> 53, p<0.01 (Walking vs. Advice) <b>NS:</b> 11 (95% CI: -17, 49) (Leisure centre vs. Advice).  Results refer to mean percentage change in differences between groups.	Baseline, 10 weeks and 6 months.	7 day PAR: Leisure-time activities, walking, occupational activity and work in the home over the previous 7 days (mins/week), meeting recommendations for MVPA (% participants).
Kamada, 2013 <sup>16,17</sup>	Japan/ Four-arm, cluster RCT.	N=4,414 53.8% female; mean age 60.7 years (SD 10.5); 68.7% employed.	N=1,107 (Aerobics; A), N=1,107 (Flexibility and muscle- strengthening; FM), N=1,122 (Aerobics, flexibility and muscle- strengthening; AFM). 12 months; delivery of information flyers, leaflets, posters and banners, outreach health education program, promotion by health professionals, social support from community leaders and lay health workers/ unclear theoretical underpinnings.	N=1,078 No intervention.	<b>Walking time mins/week</b> 12 months <b>NS:</b> SMD=0.07 (95% CI: - 0.09, 0.23) (A) <b>+ve:</b> SMD=0.19 (95% CI: 0.03, 0.35) (FM) <b>NS:</b> SMD=-0.03 (95% CI: - 0.19, 0.13) (AFM).  36 months <b>NS:</b> SMD=0.04 (95% CI: - 0.14, 0.22) (A) <b>NS:</b> SMD=0.02 (95% CI: - 0.16, 0.20) (FM) <b>NS:</b> SMD=-0.06 (95% CI: - 0.23, 0.12) (AFM).  Results refer to SMDs and 95% CIs for between-group differences relative to	Baseline, 12 and 36 months.	Walking time (mins/week). Engagement in flexibility PA (daily, not daily but occasionally, not at all), Muscle-strengthening PA (days/week), meeting ACSM-AHA recommendations for regular PA (% participants).

					baseline.		
King, 2007 <sup>18,19</sup>	USA/ Three-arm, RCT.	N=218 69.3% female; mean age 60.8 years (SD 5.5); 87.4% white; 63.9% employed.	N=73 (Human advice), N=75 (Automated advice) 12 months; PA counselling, goal- setting, pedometers (human or automated advice)/ SCT, TTM.	N=70 Weekly health education classes (non- PA).	<b>PAR At least moderate- intensity PA mins/week</b> 6 months <b>NS:</b> 0.41 (95% CI: -0.02, 0.29) (Automated advice). <b>NS:</b> 0.38 (95% CI: -0.05, 0.81) (Human advice).  12 months <b>NS:</b> 0.31 (95% CI: -0.12, 0.75) (Automated advice). <b>NS:</b> 0.28 (95% CI: -0.15, 0.71) (Human advice).  Results refer to F- statistics for combined intervention groups versus control.	Baseline, 6 and 12 months.	Stanford 7-day PAR: daily energy expenditure in at least moderate- intensity PA (kcal/kg/day) and time spent in at least moderate-intensity PA (mins/week).  CHAMPS: daily energy expenditure in at least moderate-intensity PA (kcal/kg/day) and time spent in at least moderate-intensity PA (mins/week).  Accelerometry: MVPA (subsample of 56 participants).
Lewis, 2013 <sup>20</sup>	USA/ Two-arm, RCT.	N=448 87.1% female; mean age 42.7 years; 69.9% white; 88.0% employed.	N=224 6 months; tailored feedback, manuals and tip sheets, self- monitoring/ TTM, SCT.	N=224 Information (non-PA).	<b>Total PA mins/week</b> 6 months <b>+ve:</b> 31.26, p=0.007.  12 months <b>+ve:</b> 39.06, p=0.001.  Results refer to mean differences between groups relative to baseline and p-values.	Baseline, 6 and 12 months.	Telephone-administered PAR: Time spent in total PA (mins/week).

Lilienthal, 2014 <sup>21</sup>	Canada/Two-arm RCT.	N=86 66.3% female; mean age 64.5 years (SD 7.8); 100% white; 26.1% with university degree.	N=43 Four weeks; 1-hour weekly sessions of telephone-based MI, tailored to fit their stage of change, individual barriers to PA, problem solving and encouragement, received a healthy active living guide/ TTM.	N=43 Received a healthy active living guide (information only).	<b>Moderate-intensity PA energy expenditure kcal/week</b> 6 months <b>NS: p&gt;0.10.</b>  Results refer to the Group X Time interaction term from a mixed ANOVA.	Baseline, 4 weeks and 6 months.	CHAMPS: total weekly caloric expenditure in moderate-intensity PA (MET value>3.0) (kcal/week).
Marcus, 1998 <sup>22,23</sup>	USA/Two-arm, RCT.	N=150 76.3% female; mean age 44.3 years (SD 10.8); 93.8% Caucasian; 17.5% unemployed.	N=78 6 months; individually-tailored reports and counselling messages, self-help manuals matched participant's stage of motivational readiness, feedback/unclear theoretical underpinning.	N=72 PA self-help manuals from the AHA.	<b>Total PA mins/week</b> 6 months <b>+ve: 8.03, p&lt;0.01.</b>  12 months <b>NS: p=0.10.</b>  Results refer to F-statistics for between-group differences.	Baseline, 1, 3, 6 and 12 months.	7-Day PAR: Time spent in total PA (mins/week), meeting CDC/ACSM recommendations for MVPA (% participants), reaching the motivational stage of "Action."
Marcus, Lewis, 2007 <sup>24</sup>	USA/Three-arm, RCT.	N=249 82.7% female; mean age 45.1 years (SD 9.3); 81.5% white; 56.2% with total annual household income >\$50,000.	N=81 (Tailored), N=82 (Standard). 12 months; educational and motivational materials, goalsetting, self-monitoring, feedback (web-based and mail)/ TTM, SCT.	N=86 Self-monitoring and access to study web-page.	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 6 months <b>NS (mins/week MVPA): p=0.52.</b>  12 months <b>NS (mins/week MVPA): p=0.45.</b>  Results refer to between groups differences.	Baseline, 6 and 12 months.	7-day PAR: time spent in PA (mins/week), meeting recommendations for MVPA (% participants).



<p>Marcus, Napolitano, 2007<sup>25-29</sup></p>	<p>USA/ Three-arm, RCT.</p>	<p>N=239 82.0% female; mean age 44.5 years (SD 9.6); 86.2% Caucasian; 90.4% employed.</p>	<p>N=80 (Telephone), N=81 (Print). 12 months; individually tailored messages, stage-targeted booklets, goal-setting, PA logs/ TTM, SCT.</p>	<p>N=78 Non-PA information (waiting list).</p>	<p><b>Total PA mins/week</b> 6 months <b>+ve: SMD=0.54</b> (95% CI: 0.14, 0.95) (Telephone). <b>NS: SMD=0.40</b> (95% CI: - 0.00, 0.81) (Print).  12 months <b>+ve: SMD=0.55</b> (95% CI: 0.13, 0.36) (Telephone). <b>NS: SMD=0.16</b> (95% CI: - 0.25, 0.57) (Print).  Results refer to SMDs and 95% CIs for between-group differences relative to baseline.</p>	<p>Baseline, 6 and 12 months.</p>	<p>7-day PAR: time spent in total PA (mins/week).  Accelerometer (30% participants wearing the accelerometer for at least 3 days).</p>
<p>Marshall, 2003<sup>30</sup></p>	<p>Australia/ Two-arm, RCT.</p>	<p>N=462 57.6% female; mean age 49.1 years (SD 5.7); 49.9% with at least 10 years of education.</p>	<p>N=227 Single mailing; tailored letter, Active Living booklet corresponding to current stage, plus any booklets aimed at higher stages of change/ TTM.</p>	<p>N=235 No intervention.</p>	<p><b>% participants meeting recommendations for 150 mins/week MVPA</b> 6 months <b>NS: OR=1.46</b> (95% CI: 0.98, 2.18).  Results refer to OR and 95% CI.</p>	<p>Baseline, 2 and 6 months.</p>	<p>2-week PAR: frequency of activity sessions lasting at least 10 mins, and average duration of each session (hours), meeting recommendations for MVPA (% participants).</p>

Martinson, 2008 <sup>31-34</sup>	USA/ Two-arm, RCT.	N= 1,049 72.4% female; mean age 57.1 years (SD 0.2); 94.9% white; 76.8% employed full-time.	N=523 24 months; interactive telephone and postal PA support, motivational campaigns, lending library of PA resources/ SCT, Relapse Prevention Theory.	N=526 Information about the 10,000 steps PA program, newsletters.	<b>Energy expenditure in MVPA kcal/week</b> 6 months <b>+ve:</b> 241, p=0.03.  12 months <b>+ve:</b> 224, p=0.04.  24 months <b>+ve:</b> 273, p=0.01.  Results refer to model- estimated least squares mean differences.	Baseline, 6, 12 and 24 months.	CHAMPS instrument: energy expenditure in MVPA (kcal/week), meeting CDC/ACSM recommendations for MVPA (% participants).
Reger-Nash, 2005 <sup>35,36</sup>	USA/ Quasi- experiment: controlled pre-post design.	N=1,472 67.5% female; mean age 57.1 years (SD 4.8); 94.5% white; 49.9% employed.	N=719 8 weeks; media campaign, public health educational activities, promotion by health professionals/ TPB, Elaboration Likelihood Model, Advertising Principles, TTM, Ecological Model.	N=753 No intervention.	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 6 months <b>NS:</b> OR=1.13 (95% CI: 0.67, 1.91).  12 months <b>NS:</b> OR=1.24 (95% CI: 0.69, 2.23).  Results refer to OR and 95% CI.	Baseline, 8 weeks, 3, 6 and 12 months.	BRFSS: Brisk walking, MVPA, meeting recommendations for MVPA (% participants).
Solomon, 2014 <sup>37</sup>	UK/ Stepped wedge cluster RCT (5 time periods).	N=10,412 61.2% female; mean age 58.4 years (SD 15.3); 19.3% in the highest quintile for multiple deprivation score.	N=4,693 12 weeks; PA opportunities, media, community volunteers, purchasing equipment/ Principles of community development.	N=5,719 No intervention.	<b>MET mins/week</b> 24 months <b>NS:</b> 171, p=0.07.  Results refer to adjusted comparisons.	Baseline and at the end of the 4 quarterly interventio n periods.	Short version IPAQ: meeting recommendations for MVPA (% participants), frequency and duration of PA in the previous seven days, vigorous- intensity activity, moderate-intensity

							activity, walking, and sitting behaviour (MET mins/week).
Van Stralen, 2009 <sup>38-41</sup>	Europe/ Three-arm, clustered RCT.	N=1,971 57% female; mean age 64 years (SD 8.6); 47% employed.	N=652 (Basic), N=733 (Environmental) 4 months; tailored letters, tailored information about PA opportunities, web-based forum and e-buddy system (Intervention-Plus)/ I-Change Model, TTM, HAPA, Precaution Adoption Process Model, Self-regulation theory, SDT.	N=586 One tailored letter, after completion of the research period (waiting list).	<b>Total PA days/week</b> 6 months <b>+ve: SMD=0.24</b> (95% CI: 0.06, 0.43) (Basic) <b>+ve: SMD=0.30</b> (95% CI: 0.12, 0.49) (Environmental).  12 months <b>NS: SMD=0.09</b> (95% CI: -0.09, 0.28) (Basic) <b>NS: SMD=0.09</b> (95% CI: -0.09, 0.28) (Environmental).  Results refer to SMDs and 95% CIs for between-group differences relative to baseline.	Baseline, 3, 6 and 12 months.	SQUASH: Time spent in PA (days/week), meeting recommendations for MVPA (% participants).
Wanner, 2009 <sup>42</sup>	Europe/ Two-arm, RCT.	N=1,531 74.9% female; mean age 43.7 years (SD 13.1); 24.9% with a university degree.	N=681 (intervention), N=162 (spontaneous users). 11 months; individually tailored counselling, motivational feedback, exercise sheets, organisational and motivational download forms/ TTM.	N=688 Non-tailored, static PA website.	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 6 months <b>NS: OR=1.00</b> (95% CI: 0.78, 1.30).  13 months <b>NS: OR=1.03</b> (95% CI: 0.80, 1.33).  Results refer to OR and 95% CIs.	Baseline, 6 weeks, 6 and 13 months.	Short questionnaire: 4 items on frequency and duration of moderate- and vigorous-intensity PA, meeting recommendations for MVPA (% participants).  Accelerometer: 7 days period, mean counts and time spent in MVPA (subsample of 133 participants).

Wilcox, 2007 <sup>43,44</sup>	USA/ Two-arm, cluster RCT.	N=571 71.1% female; mean age 54 years (SD 17); 100% non-white; 35.6% earning less than \$25,000 per year.	N=311 24 months; promotion by pastors, church bulletin boards, bulletin inserts, health fairs, announcements, exercise CDs, skills- based program, website, media/ Social ecology, TTM.	N=260 12 months of the intervention (delayed control).	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 12 and 24 months <b>NS: p=0.08.</b>  Results refer to a repeated measures ANCOVA.	Baseline, 12 and 24 months.	BRFSS PA: Proportion doing 10 mins/week MVPA (% participants), meeting recommendations for MVPA (% participants).
Williams, 2011 <sup>45</sup>	USA/ Two-arm, RCT.	N=248 87.1% female; mean age 46.8 years (SD 10.0); 83.5% white; 64.9% with household income >\$50,000.	N=124 9 months; pedometers, video, additional in- person session/ TTM, SCT (10 constructs).	N=124 Individually tailored print-based program (5 constructs).	<b>Odds of achieving recommendations for 150 mins/week MVPA at follow-up</b> 6 months <b>NS</b> (odds of achieving 150 min/week MVPA): <b>OR=1.46</b> (95% CI: 0.84 to 2.54).  12 months <b>NS</b> (odds of achieving 150 min/week MVPA): <b>OR=1.50</b> (95% CI: 0.83 to 2.68).  Results refer to OR and 95% CIs.	Baseline, 6 and 12 months.  NB. 12- month outcomes not included in meta- analysis.	7-Day PAR: meeting recommendations for MVPA (OR).
Wilson, 2015 <sup>46</sup>	USA/ Three-arm, non- equivalent control group design.	N=434 61.8% female; mean age 51.1 years (SD 15.7); 100% African- American; 28.8% earning less than \$10,000.	N=133 (Full), N=164 (Walking only). 24 months; walking program with social marketing strategies to improve perceptions of safety and access to places for PA,	N=137 General Health Bi-annual health- related events (non- PA).	<b>Accelerometer MVPA mins/week</b> 12 months <b>NS: -0.19</b> (95% CI: -1.13 to 0.76).  Results refer to estimates from a mixed	Baseline, 12, 18 and 24 months.  NB. outcome reported	Accelerometer (7-day estimates): time spent in MVPA (mins/week).  Four-week PAR.

			incentives, walking trails, walks led by trained walking leaders and patrolled by off-duty police officers/ Ecological and social marketing perspectives.		model ANCOVA.	after 12 months not included in meta-analysis.	
<b>Community based PA interventions targeting men</b>							
Andersen, 2012 <sup>47</sup>	Europe/ Two-arm, RCT.	N = 150 0% female; mean age 37.3 years (SD 7.8); 100% Pakistani; 95% employed.	N=89 5 months; group exercise sessions, group lectures, counselling session, written material, phone call/ SCT.	N=61 Received baseline results. Organised exercise, a group lecture and written material (post-intervention).	<b>Accelerometer MVPA mins/day</b> 11 months <b>+ve:</b> 12 (p=0.003)  Results refer to adjusted delta difference between groups from an ANCOVA.	Baseline, 5 and 11 months.	Accelerometer: Total PA level (7 days). Time spent in sedentary behaviour, light-, moderate-, vigorous-, and very vigorous-intensity PA (mins/day).
Sheeran, 2013 <sup>48</sup>	UK/ Two-arm, RCT.	N=467 0% female; mean age 53.9 years (SD 12.4); 1% unemployed.	N=234 Intervention embedded in baseline questionnaire; grading positive outcomes and barriers to PA/ Protection Motivation Theory, SCT, Theory of Reasoned Action, TPB.	N=233 No intervention.	<b>Leisure-time PA Godin scale</b> 7 months <b>+ve:</b> $d=0.87$ , $p<0.01$ .  Results refer to effect sizes.	Baseline, 1 and 7 months.  NB. Not included in meta-analysis.	Godin, Jobin and Bouillon (1986) scale: 7-point leisure-time PA scale. 2 items from the Godin and Shephard (1985) Godin Leisure-Time Exercise Questionnaire: 8-point leisure-time PA scale.
<b>Community based PA interventions targeting women</b>							

Albright, 2005 <sup>49</sup>	USA/Two-arm RCT.	N=72 100% female; mean age 32.1 years (SD 10.0); 73% Latina; 70% earning less than \$20,000.	N=35 10 months; Telephone counselling for PA and mailed newsletters, problem-solving barriers, goal-setting, self-monitoring using pedometers and feedback, information on PA opportunities, increased awareness of social and environmental factors/unclear theoretical underpinnings.	N=37 Standard health education materials promoting initiation of PA (mail-based); pedometers provided (no counselling on self-monitoring).	<b>% participants meeting recommendations for 150 mins/week MVPA</b> 12 months <b>NS: OR=1.90 (95% CI: 0.65, 5.51).</b>  Results refer to OR and 95% CI.	Baseline, 6 and 12 months.  NB. 6-month outcomes not included in meta-analysis.	7-day PAR: Energy expenditure in PA of at least moderate intensity (kcal/week), meeting recommendations for MVPA (% participants).
Chen, 1998 <sup>50</sup>	USA/Two-arm, RCT.	N=128 100% female; mean age 36.5 years (SD 8.3); 45.6% Latina; 63.2% employed outside home.	N=62 8 weeks; tip sheets, instructions on how to begin a walking program and overcome barriers, telephone counselling/ SCT.	N=63 Received the same informational materials, one phone call.	<b>Walking mins/week</b> 30 months <b>NS: 0.23, p&lt;0.88.</b>  Results refer to a F-statistic from an ANCOVA.	Baseline, 2, 5 and 30 months.	National Health Interview Survey: walking time (mins/week).  Accelerometer (subsample of 31 participants).

Hertogh, 2010 <sup>51</sup>	Europe/ Two-arm, RCT.	N=189 100% female; mean age 58.7 years (SD 4.4); 5.3% primary school education only.	N=96 12 months; group aerobic exercise sessions and home- based MVPA exercise sessions/ unclear theoretical underpinnings.	N=93 Received newsletters, carried on with usual levels of PA.	<b>MET hours/week</b> 12 months <b>+ve: <math>d=4.9</math></b> (95% CI: 2.1 to 8.2).  24 months <b>NS: <math>d=0.7</math></b> (95% CI: -1.4 to 3.5).  Results refer to effect sizes (median value intervention-median value control).	Baseline, 12 and 24 months.	Modified Baecke Questionnaire: Household activities, sports and leisure time activities over the past year (duration, frequency, intensity) (MET hours/week).
Kriska, 1986 <sup>52</sup>	USA/ Two-arm RCT.	N=229 100% female; mean age 57.5 years (SD 4.2).	N=114 24 months; walking groups, log sheets, social gatherings, newsletters/ unclear theoretical underpinnings.	N=115 No intervention.	<b>LSI activity monitor day counts/hour</b> 12 months <b>+ve: <math>SMD=0.42</math></b> (95% CI: 0.15, 0.68).  24 months <b>+ve: <math>SMD=0.37</math></b> (95% CI: 0.11, 0.63).  Results refer to SMDs and 95% CIs for between-group differences relative to baseline.	Baseline, 12 and 24 months.	LSI Activity Monitor: Day and evening counts (counts/hour).  Paffenbarger Survey: average number of city blocks waked/day, flights of stairs climbed/day, and the frequency and duration of sport and recreational activity during the past week.
Mailey, 2014 <sup>53</sup>	USA/ Three-arm, RCT.	N=141 100% female; mean age 37.3 years (SD 6.7); 80.1% white; 13.5% earning less than \$40,000.	N=47 (Intervention), N=48 (Intervention Plus). 1 month; group sessions on behaviour modification strategies, discussion, problem-solving,	N=46 Data collection only (waiting list).	<b>Accelerometer MVPA mins/day</b> 6 months <b>NS: 1.72, <math>p=0.18</math>.</b>  Results refer to interaction effects for repeated-measures	Baseline, 1 and 6 months.	Accelerometers: MVPA counts (mins/day).  Godin Leisure-Time Exercise Questionnaire: Frequency of strenuous, moderate, and light PA for at least 15 min per

			pedometer, electronic log, goal setting, information, exercise sheets, monthly telephone calls after 6 months (Intervention Plus)/ SCT.		ANOVA.		session during a typical week.
Marcus, 2013 <sup>54,55</sup>	USA/ Two-arm RCT.	N=266 100% female; mean age 40.7 years (SD 10.0).	N=132 6 months; goal-setting, self-monitoring by pedometers and logbooks, problem solving around barriers, enlisting social support, self-reward, feedback reports, information provision/ TTM, SCT.	N=134 Information (non-PA).	<b>PAR MVPA mins/week</b> 6 months <b>+ve: 41.36, p&lt;0.01.</b>  12 months <b>+ve: 51.99, p&lt;0.01.</b>  Results refer to mean differences between groups controlling for baseline, and p-values.	Baseline, 6 and 12 months.	7-Day PAR: time spent in MVPA (mins/week).  Accelerometer: minutes of MVPA/week (subsample of 198 participants).
McTiernan, 2004 <sup>56,57</sup>	USA/ Two-arm, RCT.	N=173 100% female; mean age 60.7 years (SD 6.8); 86.6% white; 28.9% employed full-time.	N=87 12 months; exercise prescription, home and facility-based exercise program/ unclear theoretical underpinnings.	N=86 Stretching and relaxation sessions, asked not to change exercise habits.	<b>MVPA mins/week</b> 12 months <b>+ve: SMD=0.98 (95% CI: 0.66, 1.30).</b>  Results refer to SMD, 95% CIs for between-group differences relative to baseline.	Baseline and 12 months.	Minnesota PA Questionnaire: Frequency, duration and intensity of PA over the previous 3 months (mins/week).
Napolitano, 2006 <sup>58-61</sup>	USA/ Three-arm, RCT.	N=280 100% female; mean age 47.3 years (SD 10.7); 94.6% white; 18.6% unemployed.	N=93 (Choose to Move), N= 95 (Jumpstart) 12 weeks (Choose to Move, one booklet and letter) and 6 months (Jumpstart, tailored feedback report and letter)/ TTM, SCT.	N=92 Information (non-PA).	<b>At least moderate-intensity PA mins/week</b> 12 months <b>NS: SMD=0.08 (95% CI: -0.27, 0.44) (Choose to Move).</b> <b>NS: SMD=0.05 (95% CI: -0.30, 0.40) (Jumpstart).</b>	Baseline, 3 and 12 months.	7-Day PAR: Time spent in PA of at least moderate-intensity (mins/week).



					Results refer to SMDs, 95% CIs for between-group differences relative to baseline.		
Opdenacker, 2008 <sup>62,63</sup>	Europe/ Two-arm, cluster RCT.	N=169 100% female; mean age 53.7 years (SD 12.3); 43.9% employed.	N=81 6 months; one information meeting, self-help booklet, and monthly reminder letters/ TTM, SCT.	N=88 No intervention.	<b>Accelerometer total activity counts/5 days</b> 6 months <b>+ve:</b> 5.38, p<0.05.  Results refer to F-statistics for Time X Group interaction.	Baseline and 6 months.	Accelerometer: 5 days (total counts).  Long-form IPAQ: PA at work, during transportation, in leisure time, and in household and yard work, together with daily sitting time.
<b>Primary care based PA interventions targeting men and women</b>							
Bull, 1998 <sup>64,65</sup>	Australia/ Three-arm, controlled trial with allocation to groups using a balanced design based on the day of the week.	N=763 65.3% female; mean age 49.7 years.	N=193 (Standard), N=223 (Tailored). 2 days; 2 to 3 minutes of verbal advice on exercise from the Family Physician, standard or tailored pamphlet on exercise/ TTM, SCT.	N=347 No intervention.	<b>% participants classified as "now active" defined as undertaking at least one episode of PA in the last fortnight</b> 6 months <b>+ve:</b> 30% control and 38% combined intervention reported doing some PA, p<0.02.  12 months <b>NS:</b> 31% control and 36% combined intervention reported doing some PA, p=NS.	Baseline, 1, 6 and 12 months.  NB. Not included in meta-analysis.	NHF of Australia Risk Factor Prevalence Survey No.3: Proportion of respondents classified "Now active", total number of sessions, total PA time in the previous 2 weeks.
Carroll, 2010 <sup>66</sup>	USA/ Two-arm, cluster RCT.	N=394 69.0% female; mean age 46 (SD 11.4); 36.0% white; 31.0% earning less than	N=187 6 months; 4 personalised PA reports, tips for increasing activity, questions to ask	N=207 Same protocol (non-PA).	<b>Total PA mins/week</b> 6 months <b>NS:</b> 139 (intervention), 109 (control), p=0.45.  Results refer to increases	Baseline and 6 months.	7-Day PAR: time spent in moderate and vigorous-intensity leisure and non-leisure activities over the preceding 7 days (mins/week).

		\$35,000.	physicians, activity prescription/ TTM.		relative to baseline for each group and p-value for between-group differences.		
Elley, 2003 <sup>67</sup>	New Zealand/ Two-arm, cluster RCT.	N=878 66.5% female; mean age 57.9 years (SD 11.2); 47.0% of lower economic status.	N=451 12 months; promotion by health professionals, goal-setting, MI, newsletters, feedback/ unclear theoretical underpinnings.	N=427 No intervention.	<b>Total energy expenditure kcal/kg/week</b> 12 months <b>+ve: 9.38, p=0.001.</b>  Result refer to adjusted difference between groups.	Baseline and 12 months.	Questionnaire from Auckland heart study: Recall of PA over 3 months, total and leisure time expenditure of energy (kcal/kg/week).
Estabrooks, 2011 <sup>68</sup>	USA/ Two-arm, RCT.	N=115 61% female; mean age 48.8 years (SD 11.9); 60% white.	N=56 8 weeks; educational handouts, action plans, friendly competitions, group discussions and goals (telephone and group contact)/ Group dynamics principles.	N=59 Self-help guide to personal action planning for PA, reference guides with local resources for PA, one telephone contact.	<b>MVPA mins/week</b> 9 months <b>+ve: 4.25, p&lt;0.05.</b>  Results refer to ANOVA F-statistics and p-values for between-group differences relative to baseline.	Baseline, 3 and 9 months.	BRFSS: Time spent in moderate and vigorous PA (mins/week).

Graham-Clarke, 1994 <sup>69</sup>	Australia/ Three-arm, RCT.	N=758 52% female; mean age 52.1 (SD 11.2).	N=270 (Video), N=233 (Video + self-help). 12 months; cardiovascular risk assessment and tailored video (Lifestyle counselling using videos arm), self-help instructional materials (Lifestyle counselling using videos and self- help instructional materials)/ TTM.	N=255. Cardiovascul ar risk assessment and feedback.	<b>Energy expenditure kcal/kg/hour</b> 12 months <b>NS</b>  Results refer to between-group differences relative to baseline.	Baseline, 4 and 12 months.  NB. Not included in meta- analysis.	Risk Factor Prevalence Survey No.3: Frequency and duration of vigorous activities, moderate activities, and walking over previous 2 weeks. 4 questions covering PA were included in the Heart Health Checklist (three on current activity levels and one on intentions).
Grandes, 2009 <sup>70,71</sup>	Europe/ Two-arm, cluster RCT.	N=4,317 65.6% female; mean age 50.0 years (SD 15.0); 52.5% manual workers.	N=2,248 15 minute appointment; promotion by health professionals, advice, educational materials, individualised PA plans/ Health Belief Model, SCT.	N=2,069 No intervention.	<b>MVPA mins/week</b> 6 months <b>+ve:</b> 24.87 (95% CI: 11.33 to 38.40).  12 months <b>NS:</b> 2.01 (95% CI: -12.56 to 16.59).  24 months <b>NS:</b> 7.33 (95% CI: -9.75 to 24.42).  Results refer to baseline- adjusted change.	Baseline, 6, 12 and 24 months.	7-Day PAR: Time spent in leisure and occupational MVPA (mins/week), meeting recommendations for MVPA (% participants).

Green, 2002 <sup>72</sup>	USA/ Two-arm, RCT.	N=316 52.5% female; mean age 44.1 years; 91.5% white.	N=159 3 months; introductory letter, motivational statement, reading materials on fitness, healthcare team support, telephone calls from behavioural health specialists, goal setting, problem solving/ TTM.	N=157 No intervention.	<b>Total PA PACE score</b> 6 months <b>+ve:</b> p=0.049.  Results refer to between group differences relative to baseline.	Baseline and 6 months.  NB. Not included in meta- analysis.	PACE: 11-item PACE score measuring the change in PA level.
Hillsdon, 2002 <sup>73</sup>	UK/ Three-arm, RCT.	N=1,658 51.0% female; mean age 54.9 years (SD 5.7); 9.4% non-white; 2.7% unemployed.	N=551 (Brief negotiation), N=544 (Direct advice). 12 months; MI, feedback, pros and cons, decision making (Brief negotiation arm), information on benefits and risks, telephone calls and health check at 11 months (Direct advice giving arm)/ Health Belief Model.	N=563. Health check at 11 months.	<b>Energy expenditure in PA kcal/kg/week</b> 12 months <b>NS</b> (energy expenditure): 3.7, p=0.39.  Results refer to difference in weekly energy expenditure, expressed as a percentage of energy expenditure at 12-month follow-up, adjusted for baseline covariates.	Baseline and 12 months.  NB. Not included in meta- analysis.	Minnesota Leisure Time PA Questionnaire: Energy expenditure in PA (kcal/kg/week).
Kinmonth, 2008 <sup>74-77</sup>	UK/ Three-arm, RCT.	N=365 62% female; mean age 40.6 years (SD 6.0).	N=120 (In-person), N=124 (Telephone). 12 months; advice leaflets on PA benefits, goal-setting, action- planning, self- monitoring, using rewards, goal-review, using prompts, building support from family and friends,	N=121 Advice leaflet.	<b>Total PA MET hours/week</b> 6 months <b>NS:</b> -0.23 (95% CI: -9.68, 9.23).  <b>PA ratio dayPAR</b> 12 months <b>NS:</b> -0.04 (95% CI -0.16, 0.08).	Baseline, 6 and 12 months.	dayPAR: Energy expenditure on daytime PA, expressed as a ratio to measured resting energy expenditure by monitoring participants' heart rates over 3 consecutive days.  EPIC Norfolk PA Questionnaire: Total

			relapse prevention (telephone or at home)/ TPB.		Results refer to adjusted intervention effect and 95 CI for combined intervention groups vs. control.		reported activity (total MET hours/week).
Naylor, 1999 <sup>78</sup>	UK/ Four-arm, non-randomised controlled trial.	N=294 76.9% female; mean age 42.4 years (SD 15.1).	N=178 (Stage-based materials and counselling), N=39 (Stage-based materials only), N=36 (Non-stage based advice). 30 minutes; stage-oriented exercise materials with counselling (arm 1), stage-oriented exercise materials without counselling (arm 2), and non-staged materials with counselling for exercise (arm 3)/ TTM.	N=41 No intervention.	<b>Weekly Total PA energy score</b> 6 months <b>NS</b> (total activity): 0.36, p=0.906.  Results refer to an interaction effect of time and group from a repeated measures ANCOVA and p-value.	Baseline, 8 weeks and 6 months.  NB. Not included in meta-analysis.	AAQ: frequency, duration and intensity of exercise.  SEBC: 1 (pre-contemplation) to 5 (maintenance).
Norris, 2000 <sup>79</sup>	USA/ Two-arm, RCT.	N=822 52.1% female; mean age 54.9 years (SD 15.8); 90.9% white; 82.2% with some college education.	N=362 4 weeks (PACE) and 5 months (enhanced PACE); Counselling, educational materials. Booster telephone calls and postcard mailings (enhanced PACE)/ TTM.	N=460 No intervention.	<b>PASE Total PA mins/week</b> 6 months <b>NS</b> : 0.1, p=0.91.  Results refer to percentage difference between groups and p-values.	Baseline and 6 months.	Washburn's PASE, modified with subscales obtained for leisure time and household activity (mins/week).  PACE score: 11 items.  Paffenbarger's PA index (kcal/week).

Pinto, 2002 <sup>80</sup>	USA/ Two-arm, RCT.	N=298 72% female; mean age 45.9 years (SD 12.4); 45.0% white; 85.0% employed.	N=150 6 months; Telephone- Linked Communication (TLC-PA), pedometers, tasks based on stage of change, feedback reports/ TTM, SCT, Decision Making Theory.	N=148 TLC-Eat arm promoted healthy eating behaviour.	<b>Energy expenditure in moderate-intensity PA kcal/kg/day</b> 6 months <b>+ve: SMD=0.28</b> (95% CI: 0.02, 0.53).  Results refer to SMD and 95% CIs for between group differences relative to baseline..	Baseline, 3 and 6 months.	7-day PAR: Energy expenditure in moderate, hard, and very hard activity for occupation and leisure (kcal/kg/day).  Stage of Motivational Readiness for PA: modified version of a standardised questionnaire to assess motivational readiness for vigorous-intensity PA.
<b>Primary care based PA interventions targeting women</b>							
Lawton, 2008 <sup>81</sup>	New Zealand/ Two-arm, RCT.	N=1,089 100% female; mean age 58.9 years (SD 6.9); 15.0% lower socio-economic status.	N=544 6 months; promotion by health professionals, counselling sessions, MI, telephone support/ unclear theoretical underpinnings.	N=545 No intervention.	<b>Total PA mins/week</b> 12 months <b>+ve: SMD=0.24</b> (95% CI: 0.13, 0.36).  24 months <b>NS: SMD=0.09</b> (95% CI: - 0.03, 0.21).  Results refer to SMDs and 95% CIs for between group differences relative to baseline.	Baseline, 12 and 24 months.	Long-form New Zealand PA Questionnaire: PA carried out in the past 7 days (type, context, intensity, and duration) (mins/week).
<b>Work and university based PA interventions targeting men and women</b>							

Aittasalo, 2004 <sup>82</sup>	Europe/ Three-arm, pre-post, RCT.	N=155 56% female; mean age 44 years (SD 9); 39% classified as manual workers.	N=52 (Counselling), N=51 (Counselling and fitness) 12 months; PA goals, PA plans, PA diary, review of goals and plans, Participants in the Counselling + Fitness testing group also performed fitness tests at baseline, 6 and 12 months/ PRECEED-PROCEED Model, TTM.	N=52 No intervention.	<b>Pedometer steps/day</b> 6 months <b>NS:</b> 4.9% (p=0.33).  12 months <b>NS:</b> 0.2% (p=0.97).  Results refer to group differences for combined intervention vs. control from an ANCOVA.	Baseline, 6 and 12 months.	Pedometer (steps/day), 7-day PA diary (activity mode, duration and self-rated intensity of all leisure-time PA sessions lasting more than 10 minutes).  IPAQ: Inactivity time.
Calfas, 2000 <sup>83,84</sup>	USA/ Two-arm, RCT.	N=338 45.3% female; mean age 24.2 years (SD 2.0); 60.4% European American; 79.8% working full or part-time.	N=170 15 weeks; weekly lecture, peer-led lab, benefits and risks, methods of behavioural self- management, mail and phone follow-up/ TTM, SCT.	N=168 Lectures and newsletters (non-PA).	<b>Moderate PA hours/week</b> 12 and 24 months <b>NS:</b> 0.008, p=NS.  Results refer to partial eta-squared of treatment condition by time effect, from repeated measures ANCOVA.	Baseline, 12 and 24 months.	7-day PAR: Time spent in moderate-intensity PA (hours/week) and total energy expenditure.
Hallam, 2004 <sup>85</sup>	USA/ Two- arm controlled trial.	N=180 53.3% female; mean age 37.2 years; predominantly white; 51.7% completed college degree.	N=60 2 weeks; Four one- hour sessions with homework assignments, self- regulation and time management, goal- setting and goal revision, identifying expected outcomes, social support, reinforcement	N=120 Orientation to fitness facility, instruction on use of the equipment, all members of the fitness facility were	<b>Total PA days/week</b> 6 and 12 months <b>+ve:</b> $d=0.56$ , $p<0.001$ .  Results refer to an effect size and p-value test for Group X Time interaction using repeated-measures ANOVA.	Baseline, 6 weeks, 6 and 12 months.  NB. Not included in meta- analysis.	7-day PAR: Time spent in total PA over the previous seven days (mins/week and days/week).

			contingencies, relapse prevention, access to on-site exercise facility/ SCT.	offered a personal exercise program and personal fitness evaluation.			
Hunter, 2013 <sup>86</sup>	UK/ Quasi-experiment: controlled, pre-post design.	N=406 67.0% female; mean age 43.3 years (SD 9.4); 4.2% staff grade 5+.	N=207 12 weeks; PA tracking, web-based monitoring, feedback, goal setting, financial rewards/ Learning Theory.	N=199 PA tracking, web-based monitoring, feedback.	<b>MVPA mins/week</b> 6 months <b>NS:</b> p=0.48.  Results refer to an independent samples t-test for normally distributed continuous variables.	Baseline, 6 and 12 weeks and 6 months.	GPAQ: Self-reported time spent in workplace PA (mins/week).  PA tracking system: Objectively measured minutes of PA.
Mutrie, 2002 <sup>87</sup>	UK/ Two-arm, RCT.	N=295 64% female; mean age 38 years (range 19-69); 76% employed in professional and managerial jobs.	N=145 6 months; written interactive materials, activity diaries, workplace map with information on local facilities, reflective strips/ TTM.	N=150 The control group received the pack 6 months post-baseline (waiting list).	<b>Odds of increasing walking</b> 6 months <b>+ve:</b> 1.93 (95% CI: 1.06, 3.52).  Results refer to the average relative increase in the time spent walking to work for someone given the Intervention vs. control and 95% CI.	Baseline and 6 months.  NB. Not included in meta-analysis.	7-day PAR: time spent walking to work, odds of increasing walking (OR).  Stage of change for active commuting (adapted from a previous study).
Okazaki, 2014 <sup>88</sup>	Japan/ Two-arm RCT.	N=77 35.2% female; mean age 19.2 years (SD 1.27); Japanese university students.	N=49 4 months; computer-based program, goal-setting, instructions on strength and stretch training, feedback and comparisons,	N=28 Non-PA health course.	<b>Energy expenditure in MVPA kcal/day</b> 12 months <b>NS</b>  Results refer to p-value of the time X group	Baseline, 4 and 12 months.  NB. Not included in meta-	IPAQ: total energy expenditure in moderate-intensity PA, vigorous-intensity PA, and walking (kcal/day).



			information provision, weblog for interacting with other participants and researchers, email tip sheets related to personal goals and barriers / SCT, Health Belief Model.		interaction term in a repeated-measures analysis of variance.	analysis.	
Plotnikoff, 2007 <sup>89,90</sup>	Canada/ Three-arm, RCT.	N=507 73.2% female; mean age 43.4 years (SD 9.0); 1.2% household income <\$20,000.	N=176 (Standard), N=165 (Stage-matched). 12 months; Stage-matched printed booklets or standard PA booklets/ SCT, TTM, TPB, Protection Motivation Theory.	N=166 No intervention.	<b>MET mins/week</b> 6 months <b>NS:</b> 0.56, p=0.58.  12 months <b>NS:</b> 0.68, p=0.39.  Results refer to F-statistics for between group differences, combined intervention groups vs. control.	Baseline, 6 and 12 months.	Modified version of the Godin Leisure-Time Exercise Questionnaire: Frequency, duration and intensity (i.e. light, moderate or strenuous) of weekly PA sessions (mins/week).
Slootmaker, 2009 <sup>91</sup>	Europe/ Two-arm, RCT.	N=102 60% female; mean age 31.8 years (SD 3.5); 65% "highly educated".	N=51 3 months; PA monitor (PAM), brief web-based tailored PA advice, goal setting/ unclear theoretical underpinnings.	N=51 One brochure and general advice on PA recommendations.	<b>MVPA mins/week</b> 8 months <b>NS:</b> 74 (95% CI: -119 to 267).  Results refer to adjusted coefficients.	Baseline, 3 and 8 months.	AQuAA: Time spent in light-, moderate-, and vigorous-intensity PA, and sedentary time (mins/week).

**Work and university based PA interventions targeting women**

Sriramatr, 2014 <sup>92</sup>	Thailand/ Four-arm, RCT.	N=220 100% female; mean age 19 years.	N=55 (I-P), N=55 (I-NP) 3 months; Intervention with pre-test (I-P) or the intervention with no pre-test (I-NP), web-based, self- monitoring (pedometer), goal setting, emails/ SCT.	N=55 (C-P), N=55 (C-NP) Control with pre-test (C- P) or control with no pre- test (C-NP). Computer instruction and pedometers.	<b>Pedometer steps/day</b> 6 months <b>+ve:</b> p<0.01.  Results refer to a series of ANOVA tests.	Baseline, 3 and 6 months.	Pedometer: 3 days (steps/day).  Thai version of the Godin-Shephard Leisure- Time PA Questionnaire: Total weekly leisure-time PA.
Wadsworth, 2010 <sup>93</sup>	USA/ Two- arm RCT.	N=91 100% female; college students.	N=45 24 weeks; Six weekly emails and web-pages, four monthly booster emails, access to an e- counsellor, written information, goal- setting, time management, self- monitoring, social support, reinforcements, relapse prevention, expectancies of exercise, overcoming barriers, anticipation of relapse, natural history of exercise, and building of exercise self-efficacy, exercise recommendations, safety advice, campus PA opportunities, comparison with others/ SCT.	N=46 Written information containing exercise recommend ations, safety advice, campus PA opportunitie s, and information on how they compare to others. Advised to begin a moderate- intensity PA program.	<b>Moderate-PA days/week</b> 6 months <b>NS:</b> d=0.03, p=0.13.  Results refer to an effect size and p-value from a multivariate ANCOVA with baseline score as the covariate.	Baseline, 6 weeks and 6 months.	Short version IPAQ: frequency of moderate PA over the previous 7 days (days/week).

-ve: negative intervention effect (intervention versus control); +ve: positive intervention effect (intervention versus control); NS: non-significant intervention effect (intervention versus control); AAQ: Activity Assessment Questionnaire; ACSM: American College Sports Medicine; AHA: American Heart Association; AQuAA: Activity Questionnaire for Adolescents and Adults; ANCOVA: Analysis of covariance; ANOVA: Analysis of variance; BRFSS: Behavioural Risk Factor Surveillance System; CDC: Centres for Disease Control; CHAMPS: Community Healthy Activities Model Program for Seniors; CPM: Counts per minute; CST: Chester Step Test; GPAQ: General Physical Activity Questionnaire; HAPA: Health Action Process Approach; IPAQ: International Physical Activity Questionnaire; kcal: kilocalories; kg: kilogram; LSI: Large Scale Integrated; LTEQ: Leisure-time Exercise Questionnaire; MET: Metabolic Equivalent Task; mins: minutes; MI: Motivational interview; N/A: Not applicable/not conducted; NHF: National Heart Foundation; OR: odds ratio; PA: Physical activity; PAR: Physical Activity Recall; PACE: Physician-Based Assessment and Counselling for Exercise; PASE: PA Scale for the Elderly; RCT: Randomised controlled trial; RT: Randomised Trial; SCT: Social Cognitive Theory; SDT: Self Determination Theory; SEBC: Stage of Exercise Behaviour Scale; SE: standard error; SMD: standardised mean difference; SPAQ: Scottish Physical Activity Questionnaire; SQUASH: Short Questionnaire to Assess Health Enhancing PA; TPB: Theory of Planned Behaviour; TTM: Transtheoretical Model

## Summary

Characteristics	N (%)
<b>Location</b>	
USA	32 (52)
Europe (excluding UK)	10 (16)
UK	9 (15)
Australia	4 (6)
New Zealand	2 (3)
Japan	2 (3)
Thailand	1 (2)
Canada	2 (3)
<b>Study design</b>	
RCT	45 (73)
Cluster RCT	7 (11)
Quasi-experiment (controlled pre-post)	6 (10)
Controlled trial	2 (3)
Non-equivalent control group design	1 (2)
Stepped wedge cluster RCT	1 (2)
<b>Participant population</b>	
Mean age <52.5 years	39 (63)
Mean age ≥52.5 years	23 (37)
All female trial	12 (19)
All male trial	2 (3)
Both gender trial	48 (77)
<b>PA measures</b>	
Objective measures	18 (29)
Subjective measures	61 (98)
IPAQ <sup>1</sup>	7 (11)
GPAQ <sup>2</sup>	1 (2)
2-week/7-day recall	20 (32)
CHAMPS <sup>3</sup>	5 (8)
BRFSS <sup>4</sup>	5 (8)
Pedometer	3 (5)
Accelerometer	12 (19)
Other	25 (40)
N.B. several studies employed more than one form of measurement	
<b>Setting</b>	
Community	39 (63)
Primary care	13 (21)
Work/University	10 (16)
<b>Theory</b>	

Transtheoretical Model	31 (50)
Social Cognitive Theory	27 (44)
Social -ecological model	7 (11)
Theory of Planned Behaviour	6 (10)
Health Belief Model	3 (5)
Protection Motivation Theory	2 (3)
Other	7 (11)
Unclear	9 (15)

N.B. several studies employed more than one behaviour change theory

***Type of physical activity***

General	38 (61)
Walking	20 (32)
Leisure time	2 (3)
Muscle strength/flexibility	2 (3)

***Intervention characteristics***

Group-based exercise	14 (23)
Individual exercise	12 (19)
Group-based information	21 (34)
Individual information	52 (84)

N.B. several studies adopted more than one approach

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<sup>1</sup>International Physical Activity Questionnaire

<sup>2</sup>General Physical Activity Questionnaire

<sup>3</sup>Community Healthy Activities Model Program for Seniors

<sup>4</sup>Behavioural Risk Factor Surveillance Survey

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