

Supplementary materials

Table 1: Example of search strategy conducted in OVID Medline

1 Counselling/ (31404)
 2 Motivational Interviewing/ (802)
 3 directive counselling/ (1851)
 4 distance counselling/ (12)
 5 (counsel* or motivational interview* or coach*).ti,ab. (92858)
 6 or/1-5 (107664)
 7 Lung Diseases, Obstructive/ (18094)
 8 Pulmonary Disease, Chronic Obstructive/ (28643)
 9 bronchitis/ (20309)
 10 bronchitis, chronic/ (1616)
 11 pulmonary emphysema/ (14959)
 12 (obstructive lung disease* or pulmonary disease* or bronchitis or
 pneumonia or pulmonary emphysema).ti,ab.(162032)
 13 (chronic and (lung disease or pulmonary disease or bronchitis or
 pneumonia)).ti,ab. (63523)
 14 (COPD or COAD or COBD or AECB).ti,ab. (32572)
 15 (obstructive and (pulmonary or lung\$1 or airway or airflow or
 bronchial or respirat*)).ti,ab. (58244)
 16 (emphysema and (lung or pulmonale or intra pulmonary
 interstitial or bulbous or bullous or lobular)).ti,ab.(8720)
 17 or/7-16 (223920)
 18 (((Clinical or randomised or randomized or controlled or non
 randomized or non randomised or pseudo randomised or pseudo
 randomized) and trial*) or single blind or double blind or
 random* allocate*).ti,ab. (649187)
 19 exp randomized controlled trial/ (428820)
 20 randomized controlled trials as topic/ (109353)
 21 controlled clinical trial/ (91582)
 22 exp clinical trial/ (754842)
 23 exp clinical trials as topic/ (301010)
 24 controlled clinical trials as topic/ (5257)
 25 non-randomized controlled trials as topic/ (77)
 26 Random Allocation/ (88438)
 27 or/18-26 (1306681)
 28 and/6,17,27 (161)
 29 limit 28 to yr="2006 -Current" (114)

Table 2: Summary of methodological quality of included studies (Physiotherapy Evidence Base scale [PEDro])

| Reference | Study met PEDro criteria (yes=1) | | | | | | | | | | PEDro score /10 | Quality ^a | |
|----------------------------|----------------------------------|-------------------|----------------------|------------------|------------------|--------------------|-------------------|---------------------------|--------------------|--|-------------------------|----------------------|------|
| | Eligibility criteria specified | Random allocation | Concealed allocation | Baseline similar | Subject blinding | Therapist blinding | Assessor blinding | 85% of measures available | Intention to treat | Statistical comparisons between groups | Point measures provided | | |
| Coultas et al. 2016 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 6 | high |
| Ranjita et al. 2016 | 1 | | | 1 | | | 1 | 1 | | 1 | 1 | 5 | fair |
| Altenburg et al. 2015 | 1 | 1 | | 1 | | | | | | 1 | 1 | 4 | fair |
| Burtin et al. 2015 | 1 | 1 | 1 | 1 | | | 1 | | | 1 | 1 | 6 | high |
| Hornikx et al. 2015 | 1 | 1 | | 1 | | | | 1 | | 1 | 1 | 5 | fair |
| Jennings et al. 2015 | 1 | 1 | | 1 | | | | 1 | | 1 | 1 | 5 | fair |
| Lou et al. 2015 | 1 | 1 | | 1 | | | | | | 1 | 1 | 4 | fair |
| Mendoza et al. 2015 | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | 1 | 7 | high |
| van der Weegen et al. 2015 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | 7 | high |
| Yuan et al. 2015 | 1 | 1 | | | | | | | | 1 | 1 | 3 | poor |
| Chen et al. 2014 | | | | 1 | | | | | | | | 1 | poor |
| Wei et al. 2014 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 6 | high |
| Zanotti et al. 2012 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 9 | high |
| Hilberink et al. 2011 | 1 | 1 | | | | | | 1 | | 1 | 1 | 4 | fair |
| Berry et al. 2010 | 1 | 1 | | 1 | | | 1 | | | 1 | 1 | 5 | fair |
| Hospes et al. 2009 | 1 | 1 | | 1 | | | | 1 | | 1 | 1 | 5 | fair |
| Kotz et al. 2009 | 1 | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 6 | high |
| Weekes et al. 2009 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 6 | high |
| Efraimsson et al. 2008 | 1 | 1 | 1 | 1 | | | | | | 1 | | 4 | fair |
| Christenhusz et al. 2007 | 1 | 1 | | 1 | | | | | | | 1 | 3 | fair |
| de Blok et al. 2006 | 1 | 1 | | 1 | | | 1 | | | 1 | 1 | 5 | fair |
| Wagena. et al. 2005 | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 | high |

^a Proportion of Pedro scores quality rated as High: n= 9 (41%); Fair: n=11 (50%); Poor: n=2 (9%), where quality ratings were high =6-10; fair=4-5; poor=≤ (Foley NC, Teasell RW, Bhogal SK, Speechley MR. Stroke Rehabilitation Evidence-Based Review: methodology. *Top Stroke Rehabil.* 2003;10:1-7.)

Supplementary materials

Table 3a: Summary of studies – physical activity

| Reference | Intervention | Duration (weeks) | Control/ comparator | Outcome (Unit) | Active intervention | | | Control/comparator | | | Effect size [95%CI] ^a |
|-----------------------|--|------------------|---------------------|--|-----------------------|-----------------------|------------------------------------|------------------------|------------------------|-------------------------|----------------------------------|
| | | | | | Pre-Mean (±SD) n= | Post-Mean (±SD) n= | Within group Difference Mean (±SD) | Pre-Mean(±SD) n= | Post-Mean (±SD) n= | Within group Difference | |
| Coultras et al. 2016 | Workbook, telephone call from health coach, automated supportive telephone messages. | 72 | Usual care | Dyspnoea (CRQ-D) | 4.48 (±1.30) n=149 | 4.50 (±1.39) n=113 | | 4.33 (±1.35) n=156 | 4.23 (±1.49) n=134 | | 0.19 [-0.06 - 0.44] |
| | | | | 6MWD (m) | 342.80 (±91.03) n=149 | 343.10 (±99.81) n=101 | | 337.50 (±96.37) n= 156 | 324.10 (±107.50) n=126 | | 0.18 [-0.08 - 0.45] |
| Altenburg et al. 2015 | PA counselling (total group: primary care, secondary care or PR) | 60 | Usual care | Steps (mean/d) | 4292 (±3270) n=78 | 4683 (±3861) n=49 | 218 (±2434) n=49 | 4132 (±3051) n=77 | 4255 (±4251) n=48 | -201 (±595) n=48 | 0.24 [-0.16 - 0.64] |
| | | | | Daily physical activity as steps (mean/d) + metabolic equivalents ^b | 6563 (±3650) n=78 | 7513 (±4588) n=49 | 443 (±4105) n=49 | 6238 (±3301) n=77 | 5450 (±3674) n=48 | -685 (±2702) n=48 | 0.32 [-0.08 - 0.73] |
| | PA counselling + PR (subgroup) | | PR (subgroup) | Steps (mean/d) | 2276 (±2220) n=31 | 2731 (±5116) n=10 | -569 (±3010) n=10 | 3668 (±2080) n=30 | 4724 (±3503) n=13 | -1137 (±2817) n=13 | 0.20 [-0.63 - 1.02] |
| | | | | Daily physical activity as steps (mean/d) + metabolic equivalents ^b | 5110 (±3176) n=31 | 4545 (±4819) n=10 | -213 (±5036) n=10 | 7371 (±2877) n=30 | 7239 (±3904) n=13 | -1827 (±3088) n=13 | 0.40 [-0.43 - 1.23] |
| Burtin et al. 2015 | PR + PA counselling with Sensewear armband | 24 | PR + Sham attention | %Δ Walking time (min/d) | 33 (±23) n=40 | | 3.13 (±4.66) n=28 | 29 (±20) n=40 | | -0.07 (±2.40) n=22 | 0.83 [0.25 - 1.42] |
| | | | | %Δ Time spent >3.6 METs (min/d) | 17 (±34) n=40 | | 0.99 (±9.5) n=28 | 12 (±18) n=40 | | 11.27 (±28) n=22 | -0.52 [-1.09 - 0.05] |
| Hornikx et al. 2015 | PA counselling + pedometer | 4 | Usual care | Δ Walking time (min/d) | 22 (±35) n=12 | | 13 (±16) n=12 | 20 (±17) n=15 | | 13 (±14) n=15 | 0.00 [-0.76 - 0.76] |
| | | | | Δ Steps per day (mean/d) | 1644 (±2751) n=12 | | 984 (±1208) n=12 | 1557 (±1319) n=15 | | 1013 (±1275) n=15 | -0.02 [-0.78 - 0.74] |
| | | | | Δ Walking intensity (m/s ² per d) | 1.46 (±0.25) n=12 | | 0.06 (±0.05) n=12 | 1.34 (±0.50) n=15 | | 0.08 (±0.06) n=15 | -0.36 [-1.12 - 0.41] |

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|----------------------------|--|----|------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------|---------------------------------|------------------------------|--------------------------------|--------------------------|
| van der Weegen et al. 2015 | SMSP activity monitor feedback tool | 36 | Usual care | Time spent in ≥ 3 METs (min/d) | 39.29 (± 18.1) n=65 | 48.82 (± 23.8) n=65 | | 44.13 (± 20.3) n=68 | 42.4 (± 18.9) n=68 | | 0.30 [-0.04 - 0.64] |
| | SMSP alone | | Usual care | Time spent in ≥ 3 METs (min/d) | 47.47 (± 26.5) n=66 | 45.34 (± 31.3) n=66 | | 44.13 (± 20.3) n=68 | 42.4 (± 18.9) n=68 | | 0.11 [-0.23 - 0.45] |
| | SMSP + activity monitor feedback tool | | SMSP alone | Time spent in ≥ 3 METs (min/d) | 39.29 (± 18.1) n=65 | 48.82 (± 23.8) n=65 | | 47.47 (± 26.5) n=66 | 45.34 (± 31.3) n=66 | | 0.13 [-0.22 - 0.47] |
| Mendoza et al. 2015 | Pedometer assisted counselling | 12 | Standard counselling | Steps (mean/d) | 4008 (± 2253) n=52 | | 3080 (± 3254.8) n=50 | 3956 (± 2723) n=50 | | 138.3 (± 1950.4) n=47 | 1.08 [0.66 - 1.51] |
| Zanotti et al. 2012 | PR + osteopathic manipulation | 4 | PR + sham osteopathy | 6MWD (m) | 297.0 (± 59.3) n=10 | 369 (± 80.0) n=10 | | 281.0 (± 97.4) n=10 | 304.7 (± 96.6) n=10 | | 0.73 [-0.18 - 1.63] |
| Berry et al. 2010 | Behavioural lifestyle activity program | 48 | Traditional exercise therapy | CHAMPS-PA >1.84 METs (kcal/week) | 2502 (± 1327) n=41 | 2342 (± 1411.2) n=61 | | 2500 (± 1452) n=55 | 2213 (± 1526) n=55 | | 0.09 [-0.28 - 0.45] |
| | | | | 6MWD (m) | 410.7 (SD not reported) n=87 | 408.1 (± 82) n=61 | | 410.7 (SD not reported) n=89 | 430.5 (± 83) n=69 | | -0.27 [-0.62 to 0.07] |
| Hospes et al. 2009 | Exercise counselling | 12 | Usual care | Steps (mean/d) | 7087 (± 4058) n=20 | 7872 (± 3962) n=18 | | 7539 (± 3945) n=19 | 6172 (± 3194) n=17 | | 0.47 [-0.20 - 1.14] |
| de Blok et al. 2006 | PA counselling + PR and pedometer | 9 | PR | Steps (mean/d) | 2140 (± 1123) n=8 | 3927 (± 2169) n=8 | | 2334 (± 1074) n=8 | 3554 (± 1674) n=8 | | 0.93 [-1.20 to 1.58] |

^a Where within group differences were reported, these were used to calculate effect sizes. Where no within group differences were reported, effect sizes were calculated from post values.

^b Metabolic equivalent estimates of self-reported daily activities have been converted into step estimates.

Key: 6MWD = six minute walk distance; CHAMPS = Community Health Activities Model Program for Seniors physical activity questionnaire; CRQ-D = Chronic Respiratory Disease Questionnaire-Dyspnoea; METs = metabolic equivalents; PA = physical activity; PR = pulmonary rehabilitation; SMSP = self-management support program

Supplementary materials

Table 3b: Summary of studies – smoking cessation

| Reference | Intervention | Study duration (weeks) | Control/ comparator | Outcome | Active intervention | | | Control/comparator | | | RR or OR [95%CI] p= |
|-----------------------|--|------------------------|-----------------------------------|-------------------------------------|----------------------|----------------------------|----------------------|----------------------|----------------------------|----------------------|------------------------------|
| | | | | | Pre- (n=sample size) | Post- (n=positive outcome) | Within group %change | Pre- (n=sample size) | Post- (n=positive outcome) | Within group %change | |
| Jennings et al. 2015 | Multifaceted intervention including smoking cessation counselling | 13 | Usual care | 30 d readmission (n=readmitted) | 93 | 18 | 19% | 79 | 18 | 23% | NR |
| Yuan et al. 2015 | Multifaceted intervention including smoking cessation counselling | 864 | Usual care | New cases of COPD (incidence) | 377 | 36 | 10% | 399 | 62 | 16% | NR |
| | | | | COPD mortality (incidence) | 89 | 33 | 37% | 118 | 55 | 47% | NR |
| | | | | Abstinence (self-reported) | 468 | 178 | 38% | 479 | 101 | 21% | NR |
| Chen et al 2014 | Smoking cessation counselling | 24 | SC advice | Abstinence (self-reported) | 42 | 17 | 40% | 43 | 8 | 19% | OR=3.0 (crude calculated) |
| Hilberink et al. 2011 | Counselling and nicotine replacement therapy (subgroup) + Counselling and nicotine replacement with bupropion (subgroup) | 52 | Usual care | Abstinence (self-reported) | 519 | 75 | 14.5% | 148 | 11 | 7.4% | OR=2.1 [1.1–4.1] p=0.027 |
| | | | | Abstinence (biochemically assessed) | 519 | 39 | 7.5% | 148 | 5 | 3.4% | OR=2.3 [0.9–6.0] p=0.083 |
| Kotz, et al 2009 | Confrontational counselling + nortriptyline | 52 | Non-confrontation + nortriptyline | Abstinence (Continine - validated) | 116 | 13 | 11.2% | 112 | 13 | 11.6% | OR= 0.96 [0.43–2.18] p=0.961 |

Supplementary materials

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|------------------------|---|-----------------|---|--|-----|----|-------|-----|----|------|--------------------------------|
| Efraimsson et al. 2008 | Confrontational counselling + nortriptyline | 52 | Usual care – smoking cessation advised by GP | Abstinence (Continine - validated) | 116 | 13 | 11.2% | 68 | 4 | 5.9% | OR=2.02 [0.63–6.46] p=0.236 |
| | Non-confrontation) + nortriptyline | 52 | Usual care – smoking cessation advised by GP | Abstinence (Continine - validated) | 112 | 13 | 11.6% | 68 | 4 | 5.9% | OR=2.10 [0.66–6.73] p=0.211 |
| | Multifaceted intervention including smoking cessation counselling | Between 12 - 20 | Usual care | Smoking status (self-report cessation) | 16 | 10 | 37.5% | 14 | 14 | 0 | OR=17.9 (crude calculated) |
| | Smoke-Stop-Therapy | 52 | Minimal intervention strategy for lung patients | Abstinence (Continine - validated) | 114 | 22 | 19% | 111 | 10 | 9% | RR=2.22 [1.06–4.65] |
| | Bupropion + counselling group | 26 | Placebo + counselling | Abstinence (self-reported confirmed urinary cotinine levels ≤60 ng/mL) | 44 | 12 | 27.3% | 48 | 4 | 8.3% | NR |
| Wagena et al. 2005 | Nortriptyline + counselling group | 26 | Placebo + counselling | Abstinence (self-reported confirmed urinary cotinine levels ≤60 ng/mL) | 52 | 11 | 21.2% | 48 | 4 | 8.3% | NR |

Key: NR = not reported (and not included in meta-analysis).

Supplementary materials

Table 3c: Summary of studies – single studies targeting specific behaviours

| Reference | Intervention | Study duration (weeks) | Comparator/control | Target behaviour of counselling | Outcome (unit) | Active intervention | | | Control/comparator | | | Effect size ^a (95% CI) |
|---------------------|--|------------------------|------------------------|---------------------------------|-------------------------------------|------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|------------------------------------|-----------------------------------|
| | | | | | | Pre-Mean (±SD) n= | Post-Mean (±SD) n= | Within group Difference Mean (±SD) | Pre-Mean (±SD) n= | Post-Mean (±SD) n= | Within group Difference Mean (±SD) | |
| Lou et al. 2015 | Health management program with counselling | 208 | Usual care | Self-management | BODE index (0-10) | 4.0 (±3.7) n=4197 | | 0.4 (±0.3) n=3418 | 4.0 (±3.7) n=4020 | | -0.7 (± 0.5) n=2803 | 2.73 (2.66 - 2.80) |
| | | | | | 6MWD (m) | 367 (±62.96) n=4197 | | 16 (±7) n=3418 | 366 (±62.96) | | -27 (±12) n=2803 | 4.49 (4.4 - 4.58) |
| Ranjita et al. 2016 | Integrated Approach of Yoga Therapy - yogic counselling | 12 | Usual care | Stress management | Dyspnoea end 6MWT (Borg scale 0-10) | 5.08 (±1.40) n=36 | 3.84 (±1.75) n=36 | | 5.25 (±1.61) n=36 | 4.93 (±2.02) n=36 | | -0.58 (-1.05 - -0.11) |
| | | | | | Fatigue (Borg 0-10) | 4.91 (±1.34) n=36 | 3.64 (±1.64) n=36 | | 4.78 (±1.69) n=36 | 4.51 (±1.68) n=36 | | -0.52 (-0.99 - -0.05) |
| | | | | | 6MWD (m) | 298.36 (±65.2) n=36 | 357.81 (±73.45) n=36 | | 304.67 (±67.59) n=36 | 321.08 (±80.17) n=36 | | 0.48 (0.01-0.85) |
| Wei et al. 2014 | Pharmaceutical care with education and telephone counselling | 48 | Usual care | Medication adherence | Medication compliance score (%) | 58.6 (±12.6) n=58 | 66.5 (±8.6) n=42 | | 54.2 (±11.5) n=59 | 54.4 (±12.5) n=45 | | 1.12 (0.67 – 1.57) |
| Weekes et al. 2009 | Dietary counselling | 48 | Dietary advice leaflet | Dietary energy intake | Dietary intake (kcal/d) | 1974 (±371) n=31 | 1979 (±285.74) n=28 | | 1931 (±425) n=28 | 1785 (±286.12) n=22 | | 0.68 (0.11 – 1.26) |

^a Where within group differences were reported, these were used to calculate effect sizes. Where no within group differences were reported, effect sizes were calculated from post values.

Key: BODE = composite score of body mass index, airflow obstruction, dyspnoea and exercise capacity; 6MWD = six-minute walk distance; 6MWT = six minute walk test.

Supplementary materials

Table 4: Summary of Behaviour change techniques (BCTs) used in intervention and control groups of included studies. Only BCTs which were reported in at least one study are included within the summary table.

| Studies assessing physical activity | | | | | | | | | | | | | | Studies assessing smoking cessation | | | | | | | | | | | | | | Single studies | | | | | | | | | | | | | | | | | | | |
|--|---------------------|---|-----------------------|---|--------------------|---|---------------------|---|---------------------|---|----------------------------|---|---------------------|-------------------------------------|-------------------|---|--------------------|---|---------------------|---|----------------|-----------------------|---|------------------|---|------------------|---|-----------------------|---|------------------|---|------------------------|---|--------------------------|---|--------------------|----|----------------|-----------------|---|---------------------|---|-----------------|---|--------------------|--|----------------|
| | Coultas et al. 2016 | | Altenburg et al. 2015 | | Burtin et al. 2015 | | Hornikx et al. 2015 | | Mendoza et al. 2015 | | van der Weegen et al. 2015 | | Zanotti et al. 2012 | | Berry et al. 2010 | | Hospes et al. 2009 | | de Blok et al. 2006 | | BCT count (n=) | Jenning s et al. 2015 | | Yuan et al. 2015 | | Chen et al. 2014 | | Hilberink et al. 2011 | | Kotz et al. 2009 | | Efraimsson et al. 2008 | | Christenhusz et al. 2007 | | Wagena et al. 2005 | | BCT count (n=) | Lou et al. 2015 | | Ranjita et al. 2016 | | Wei et al. 2014 | | Weekes et al. 2009 | | BCT count (n=) |
| Was counselling the sole intervention? Group (I/C) | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | I | C | | | | |
| BCT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.1 Goal setting (behaviour) | Y | | | | Y | | y | Y | Y | | | | | | Y | | | | | Y | 7 | | | | | | Y | Y | | Y | Y | | | | | | 4 | Y | | | | | | Y | 2 | | |
| 1.2 Problem-solving | Y | | | | Y | | Y | | | Y | | | | | | | | | | | 4 | Y | | Y | | Y | | | | Y | Y | | Y | | | | 6 | Y | | | | | | Y | 2 | | |
| 1.3 Goal setting (outcome) | | | Y | | | | | | | | | | | | | | Y | | | | 2 | | | | | | | | | | | | | | | | 0 | | | | | | | 0 | | | |
| 1.4 Action planning | Y | | | | | | | | | Y | | | | | | | | | | | 2 | | | | | | Y | Y | | Y | Y | | Y | | | | 5 | | | | | | | 0 | | | |
| 1.5 Review behavioural goals | Y | | | | Y | | y | | Y | | | | | | Y | | | | Y | | 6 | | | | | | | Y | Y | | | | | | | 2 | | | | | | Y | 1 | | | | |
| 1.9 Commitment | | | | | | | | | | | | | | | Y | | | | | | 1 | | | | | | | | | | | | | | | 0 | | | | | | | 0 | | | | |
| 2.1 Monitoring of behaviour by others without feedback | | | | | | | | | | | | | | | | | | | | | 0 | | | | | | | | | | | | | | | 0 | Y | | | Y | | | 2 | | | | |
| 2.2 Feedback on behaviour | | | | Y | | Y | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | 0 | | | | | | | 0 | | | | |
| 2.3 Self-monitoring of behaviour | | | Y | | | | y | | Y | | | | | | y | | Y | | y | | 6 | | | | | | | Y | Y | | | | | | 2 | | | | | | | | 0 | | | | |
| 2.6 Biofeedback | | | Y | | | | | | | | | | | | | | | | | | 0 | | | | | | | | Y | | Y | | | | 2 | | | | | | | | 0 | | | | |
| 3.1 Social support (unspecified) | Y | | Y | | Y | | | Y | Y | Y | | Y | Y | Y | Y | Y | Y | Y | Y | | 11 | Y | | Y | | Y | | Y | Y | | Y | | Y | Y | Y | Y | 12 | Y | | Y | | Y | | Y | 4 | | |
| 3.3 Social support (emotional) | | | | | | | | | | | | | | | | | | | | | 0 | | | | | | | | | | | | | | | 0 | Y | | | | | | | 1 | | | |
| 4.1 Instruction on how to perform the behaviour | Y | | | | Y | | y | | | | | | | | y | Y | | | y | Y | 7 | | | Y | | Y | | | | Y | | | | | 3 | Y | | y | | | | Y | | 3 | | | |

Supplementary materials

[illegible]

^a included counselling only on one intervention, counselling plus pharmacological support in a second intervention group

Key: I = intervention groups; C = control group; 'Y' =yes included in intervention or control/comparator; 'Y' = not reported as part of counselling in intervention but included as part of intervention;

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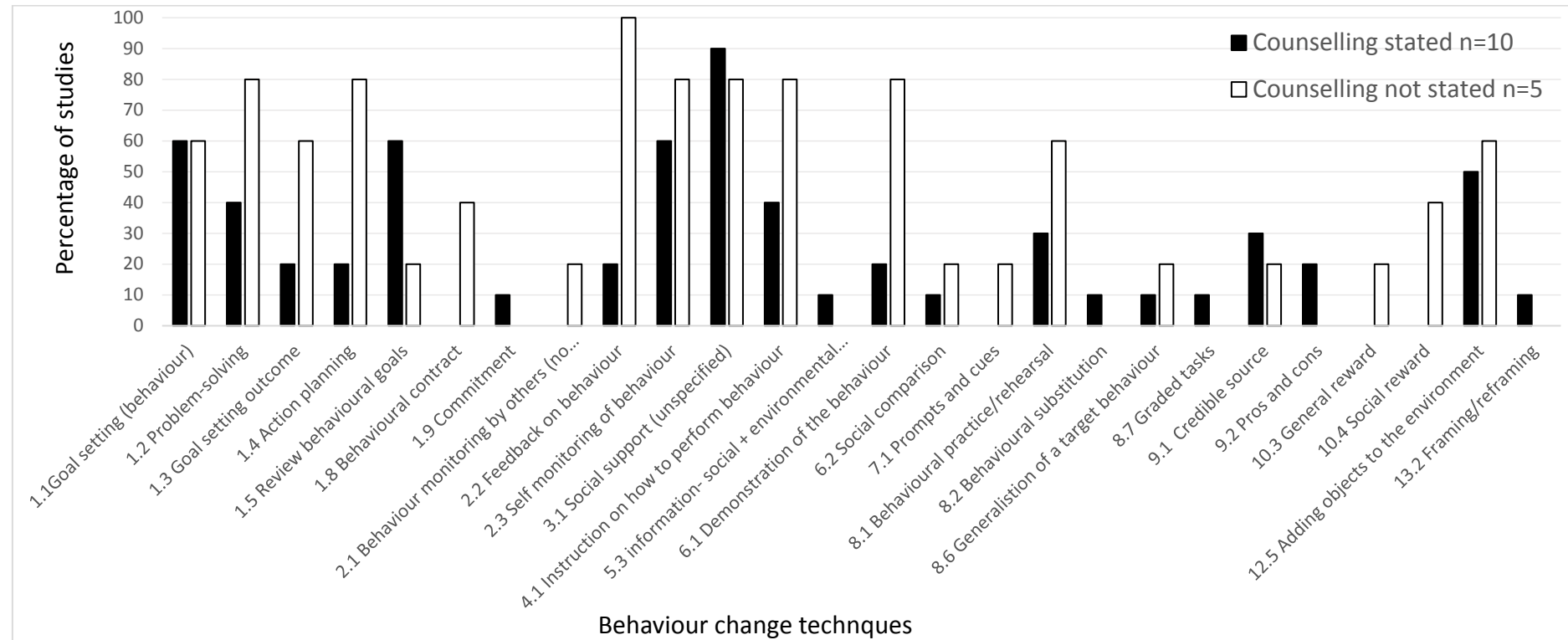
Table 5: Summary of secondary outcomes

| Reference | | Uptake (%) ([number screened/number enrolled]x100) | Withdrawal rate intervention group (%) | Withdrawal rate control group (%) |
|-----------------------|------|--|--|-----------------------------------|
| Coultas et al. | 2016 | 5.8 | 24.2 | 14.1 |
| Ranjita et al. | 2016 | 29.0 | 12 | 10 |
| Altenburg et al. | 2015 | 90.0 | 29 | 30 |
| Burtin et al. | 2015 | 47.0 | 30 | 45 |
| Hornikx et al. | 2015 | 56.6 | 20 | 0 |
| Jennings et al. | 2015 | 14.0 | 0 | 0 |
| Lou et al. | 2015 | 99.0 | 18.6 | 30 |
| Mendoza et al. | 2015 | 58.0 | 4 | 6 |
| van der weegen et al. | 2015 | 36.8 | 16.8 | 4.4 |
| Yuan et al. | 2015 | 6.1 | 19.4 | 21 |
| Chen et al. | 2014 | NR | NR | NR |
| Wei et al. | 2014 | 49.8 | 27.6 | 23.7 |
| Zanotti et al. | 2012 | 54.1 | 0 | 0 |
| Hilberink et al. | 2011 | NR | 4.5 | 3.9 |
| Berry et al. | 2010 | 24.9 | 28.6 | 22.5 |
| Hospes et al. | 2009 | 69.6 | 10 | 10.5 |
| Kotz et al. | 2009 | 17.0 | 12 | 19.5 |
| Weekes et al. | 2009 | 12.4 | 35.5 | 39.3 |
| Efraimsson et al. | 2008 | 47.3 | NR | NR |
| Christenhusz et al. | 2007 | NR | NR | NR |
| de Blok et al. | 2006 | 70.0 | 20 | 27 |
| Wagena et al. | 2005 | 41.7 | 14 | 13.5 |
| Mean | | 43.6 | 17.2 | 16.9 |
| SD | | 27.0 | 10.5 | 13.4 |

Key: NR = not reported

Supplementary materials

Figure S1. Comparison of behavioral change techniques (BCTs) reported within physical activity interventions which reported (n=10) or did not report the term counselling (n=5) to describe the intervention.



**Studies that did not report the term counselling as part of the intervention description were excluded from the current review but were included*