

Interventions to increase physical activity amongst older people

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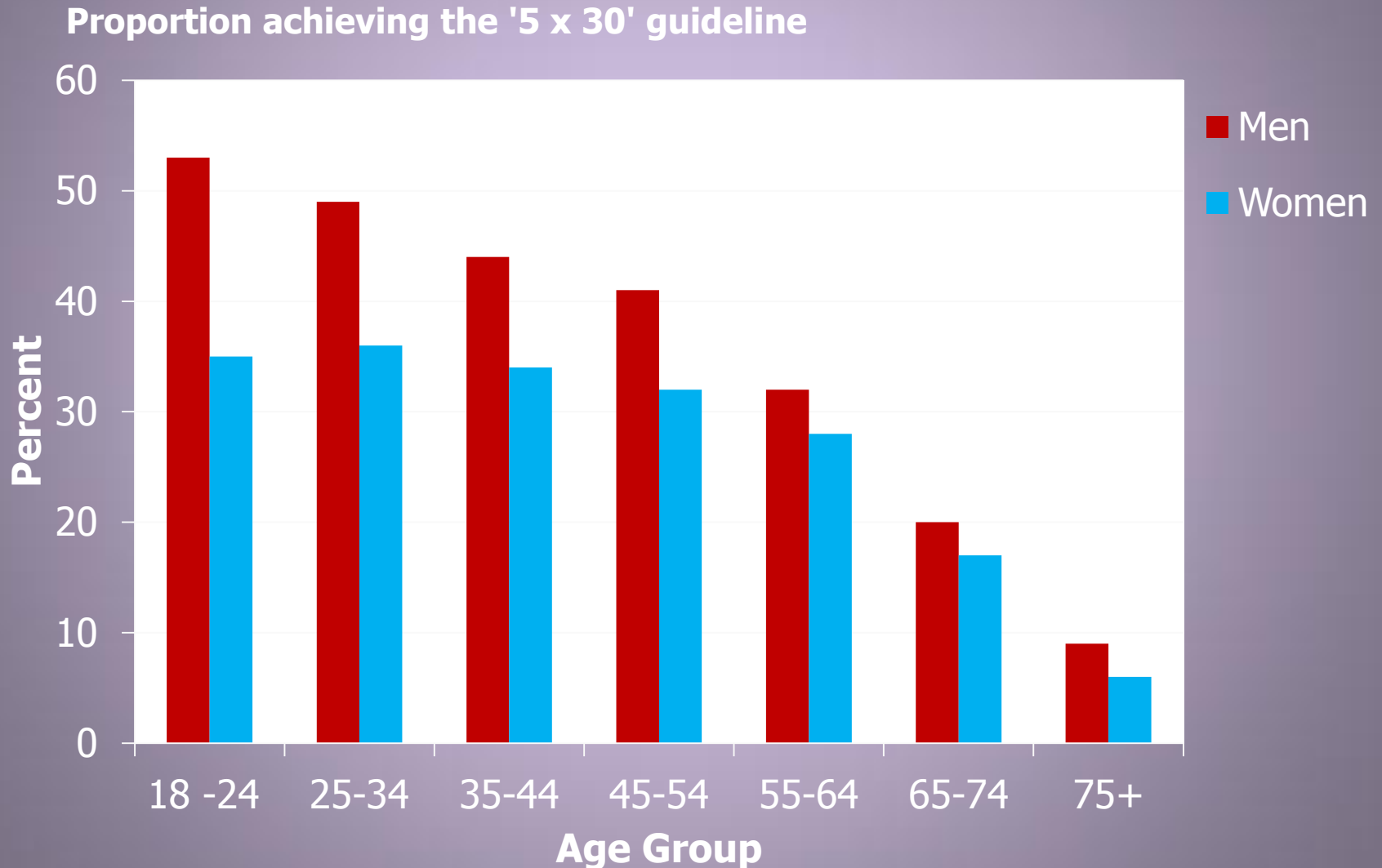
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Physical activity by age (England, 2008)



Start Active, Stay Active: A report on physical activity for health from the four home countries' Chief Medical Officers (2011)

Benefits of being active daily (adults >65years):

- Helps maintain cognitive function
- Reduces cardiovascular risk
- Helps maintain ability to carry out daily living activities
- Improves mood and can improve self-esteem
- Reduces the risk of falls

Other motivations?

- Better sleep quality?
- Social aspects?
 - Better social connection?
 - improve quality of life?



Walking is acceptable

- Doesn't require scheduling
- Free
- Not too intense
 - If in poor health
 - Worried about injury
- Don't need other people
- Don't need kit
- Can do it anywhere
- Already do some

Walking groups

- Where people walk collectively in groups, with or without leaders' physical presence.
- Walking for Health (WfH) has established led group walks across England.
- Usually co-ordinated by local authorities.
- Currently run 600 schemes across England with 3400 groups, 70 000 regular walkers, and 10 000 volunteers



Do walking groups increase walking?



- Systematically searched electronic databases
- Experimental studies where people allocated to walking groups (or control groups)
- estimated change in amount of walking: frequency, duration or distance of walks
- Estimated overall effect of walking groups

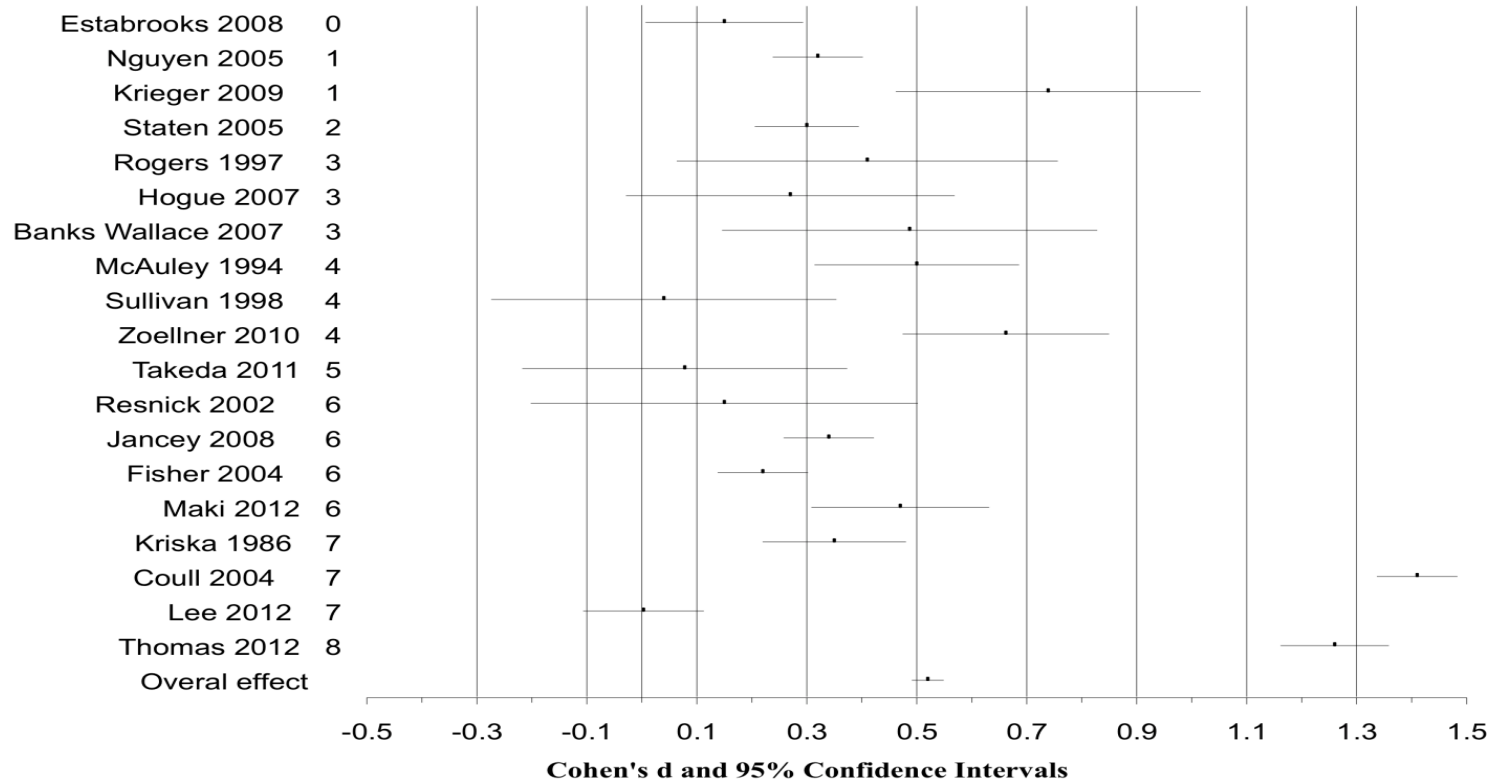
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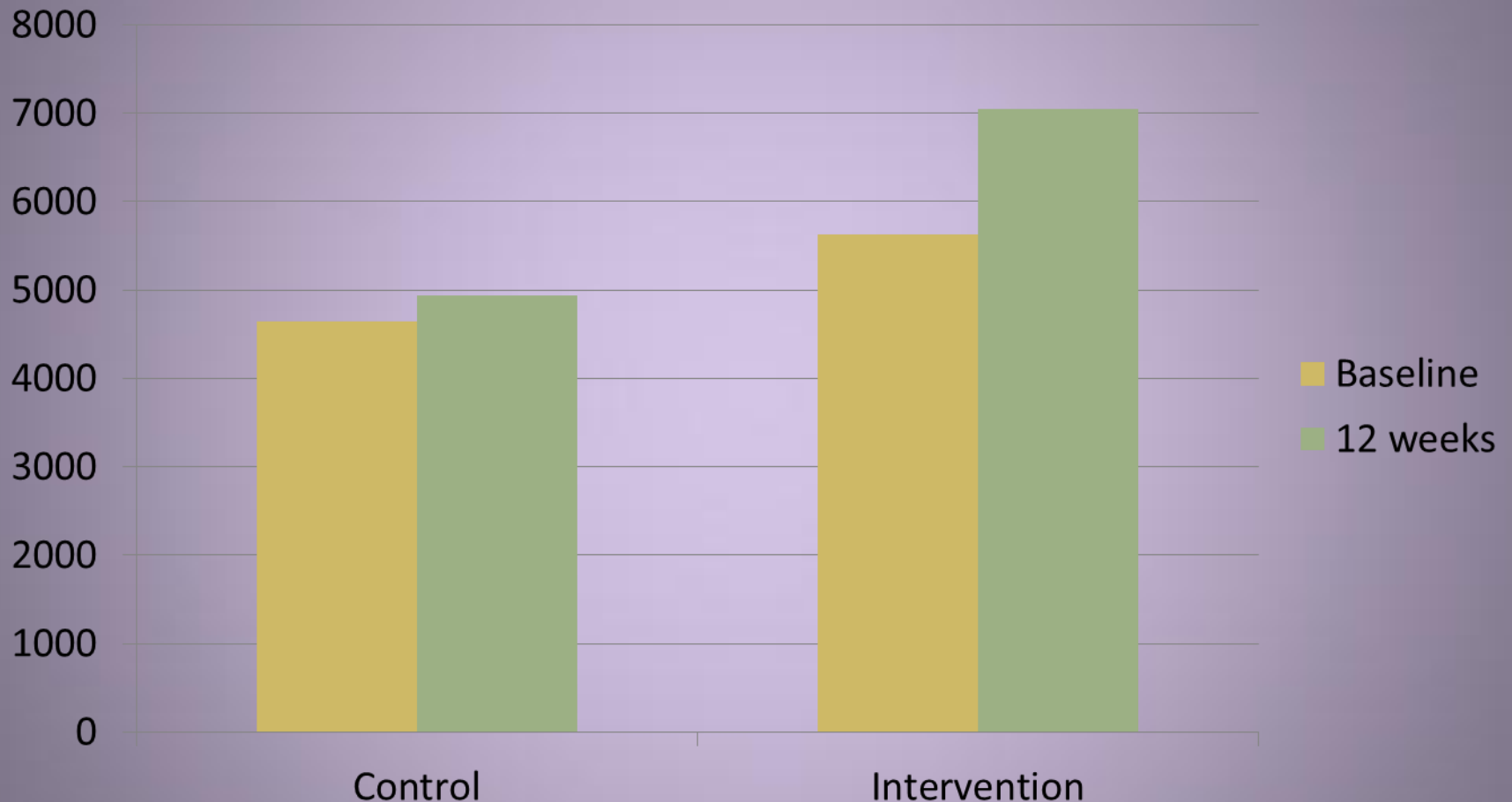
Overall effect

Included studies ordered by quality



A Kassavou, A Turner, & DP French. Do interventions to promote walking in groups increase moderate physical activity? A systematic literature review with meta-analysis. (*International Journal of Behavioral Nutrition and Physical Activity*)

Typical result (Maki, 2012)



N=150 Japanese adults (aged 65 to 80 years; mean = 72 years)

Walking groups (age of walkers)

- Average age in 19 studies ranged from 44 years to 88 years
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Walking groups (age of walkers)

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- Overall, average age of 4752 participants was 59.8 years.
- So we looked at effects by those over and under 60 years...
- Interventions which targeted adults under 60 years old had smaller effects ($d=0.48$) than interventions that target older adults ($d=0.57$).

But...what happens outside of research studies?

- To do this we looked at groups run by Coventry City Council as part of WfH
- Interviewed:
 - 8 walkers (average 61 years) who joined groups
 - Followed up 5 of these walkers three months later
 - 8 walk leaders
 - 3 walk co-ordinators
- Why do people attend and keep attending?



Why do walkers join?

Be/remain socially connected

“the social aspect, chatting to people, making friends and hopefully getting a social circle which I don’t have at the moment “
(baseline walker Claire, 64 years old)

“they like the social interaction, I think that’s probably the biggest, the chance to get out of the house meet with other people”
(walk leader Nancy, 36 years old)

“the people who actually join the program I would say probably mainly social reasons “ (walk coordinator Susan, 41 years old)

What do walkers expect?

Meet other walkers similar to themselves - with similar needs

“I was expecting some people to be in the same boat as me.... I thought they would be people that they are looking for something to do with the social aspect same as me, and also its a nice way to keep fit without pumping out in the gym” (baseline walker Maria, 56 years old)

No previous expectations

“I don’t really know what I expected at all ...I didn’t really have any ideas what we were going into or what to expect” (baseline walker Judy, 54 years old)

What are challenges to attending?

“as I said to begin with was very very hard it took me 3weeks to pluck up the courage to actually go”

Interviewer: why was that?

Interviewee: “just nerves and lack of confidence”

(baseline walker Samantha, 63 years old)

Why do walkers keep attending?

“because there were people there that had gone through the same experience I had, so they knew exactly what it’s like, and you bond together.....it makes you feel you are a person on the same planet as other people ...you’ve got the same problems, same illnesses, weaknesses....sharing people’s worries, helping to relieve them...at least you can try” (follow-up walker Samantha 63 years old)

*“...to meet people that they like, who they get on with...”
(walk leader John, 63 years old)*

“is the social thing that keeps them going every week to the walk... talk to other people that they’ve maybe have the same or similar issues to himself” (walk coordinator, Ann 30 years old)

Why do walkers not keep attending?

“I wouldn’t say that people are as friendly as I hoped they would be” (follow up walker Jenny, 63 years old)

“... and after you have had enough you make your excuses and ah, or probably just go walking on your own you know” (follow up walker Dianna 58 years old)

“maybe they don’t feel that the group is their type of people...but I think sometimes it could put them off, because they may don’t have similar experiences to them” (walk coordinator Jude 26 years old)

What walk leaders do to help walkers' needs?

Express lack of confidence to deal with walkers' different needs

“you know you have to strike the balance and it's impossible to achieve some times well you must have some as I say knowledge of people who might not be too well for instance and this is the difficult one,.... the type of the people you've got is very difficult some times.... ”

(walk leader Matt 73 years old)

Are not aware of how group integration can be achieved

“I don't know really, just manage to, oh just happens..... I don't know its something that we are lucky that the walkers, all the long term walkers we've

got are a nice group of people, so they are open and they are accepting others you know” (walk leader Barbara 73 years old)

Use characteristics of their personality to motivate walkers

“...I mean he can do a bit with his personalitysome people they’ve got things to do I suppose you, know and they have commitments or trying something else and say I’ve got other things to do, so they drop out but ehmmm there is no solution to that one, I’ve never thought about it but I can’t see anybody solving it” (walk leader Matt 73 years old)

“but I think its quite important for a walk leader volunteer to be fairly sociable, because is a very social event to go on a walk, so if they have sound enthusiastic or a little bit chatty that would definitely be a bonus for them” (walk coordinator Susan, 41 years)

“the training it tells them how important is the social aspect...I think because we haven’t identified the right people”
(walk coordinator Jude, 26 years)

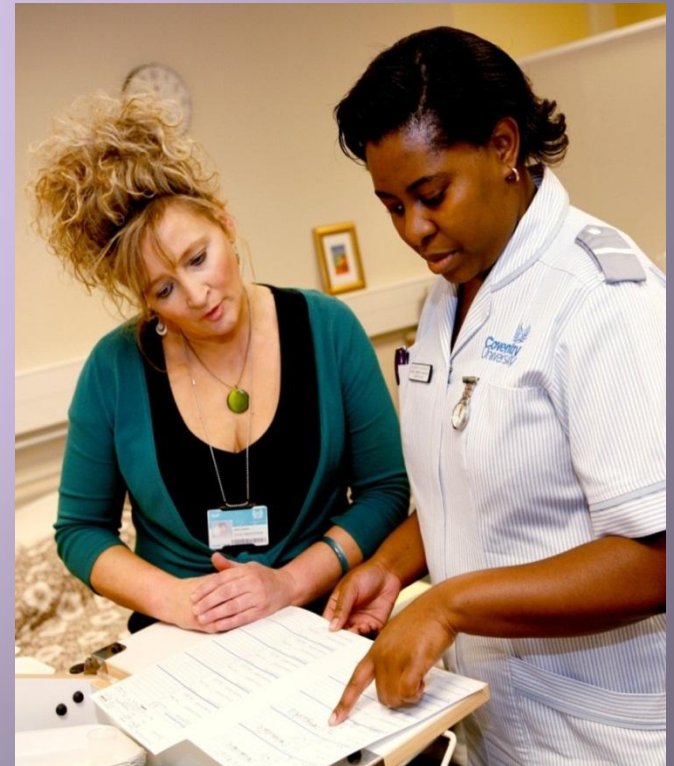
Summary: how can this be improved?

- Achieving social benefits seems to motivate people to join walking groups
- Dissatisfaction with social cohesion and walking effects seems to be associated with walkers' drop out from walking groups
- Walk leaders recognise the reasons that people join and drop out from walking groups but some seem to lack the confidence, awareness and skills to effectively help walkers.



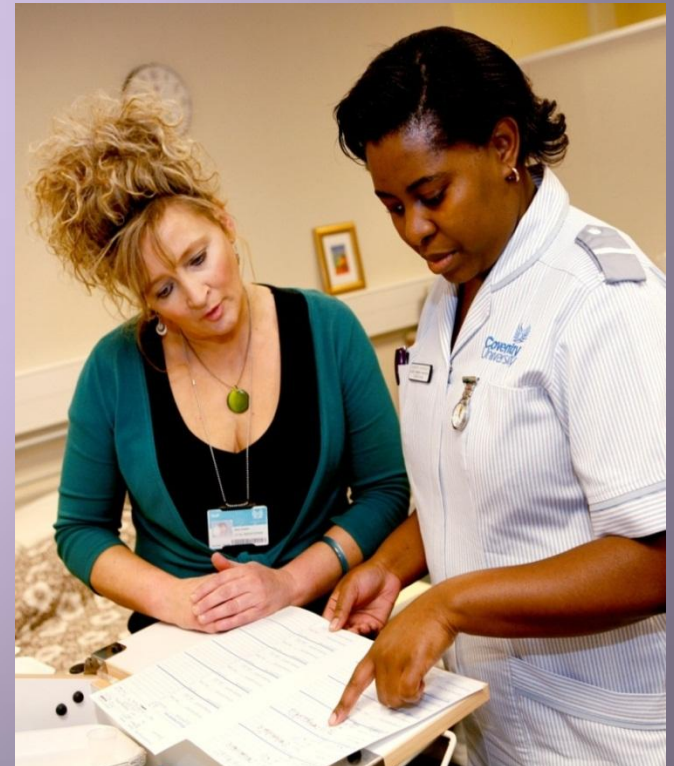
Developed Training

- For walk leaders in Coventry
- Aimed to increase confidence, awareness and skills to effectively help walkers.



Developed Training

- For walk leaders in Coventry
- Aimed to increase confidence, awareness and skills to effectively help walkers.
- Not acceptable!
- **Volunteers**, so generally not interested in this stuff.
- Limits to what can be done.



What predicts objectively assessed maintenance?

- We recruited 114 walkers who already had attended WfH schemes for at least three months (range 3 to 123 months), in Coventry, Birmingham, Stoke-on-Trent, or Nuneaton & Bedworth.
- They completed questionnaires
- Looked at their attendance records three months later.
- Worked out what predicted continued attendance at WfH groups, after adjusting for group clustering.

Maintenance...

- Was not predicted by:
 - Duration of past attendance
 - Level of habit.
- Was predicted by:
 - Overall satisfaction
 - Satisfaction with health outcomes
 - Satisfaction with social outcomes
 - Recovery self-efficacy

What behaviour change techniques are most effective at promoting physical activity self-efficacy and behaviour in older people?



Funded by Macmillan Cancer Support

Why self-efficacy?

- Self-efficacy is a key construct within health psychology: “Beliefs about whether one can produce certain actions” (Bandura, 1997, p29)
- Consistently associated with adult physical activity.
- We previously did reviews of intervention studies which reported change in self-efficacy and change in physical activity (for both adults 16-60 years and obese adults [BMI>30])
- Current review looked at intervention studies with adults of 60 years and over.

Methods

- Systematically searched electronic databases
- Experimental studies with people over 60 years allocated to physical activity interventions (or control groups)
- Non-clinical samples and not institutionalised
- estimated change in (a) self-efficacy, and (b) physical activity. Estimated overall effect of walking groups
- Coded intervention contents and linked to size of change

Results (to date)

- Found 24 intervention groups with descriptions of interventions (often poor) & change in self-efficacy
- Overall N= 6349 older adults
- Medium sized effect on self-efficacy ($d=0.27$)
- Only 17% of variance attributable to sampling error
- Results still somewhat provisional (final review will included more studies, so results subject to change)

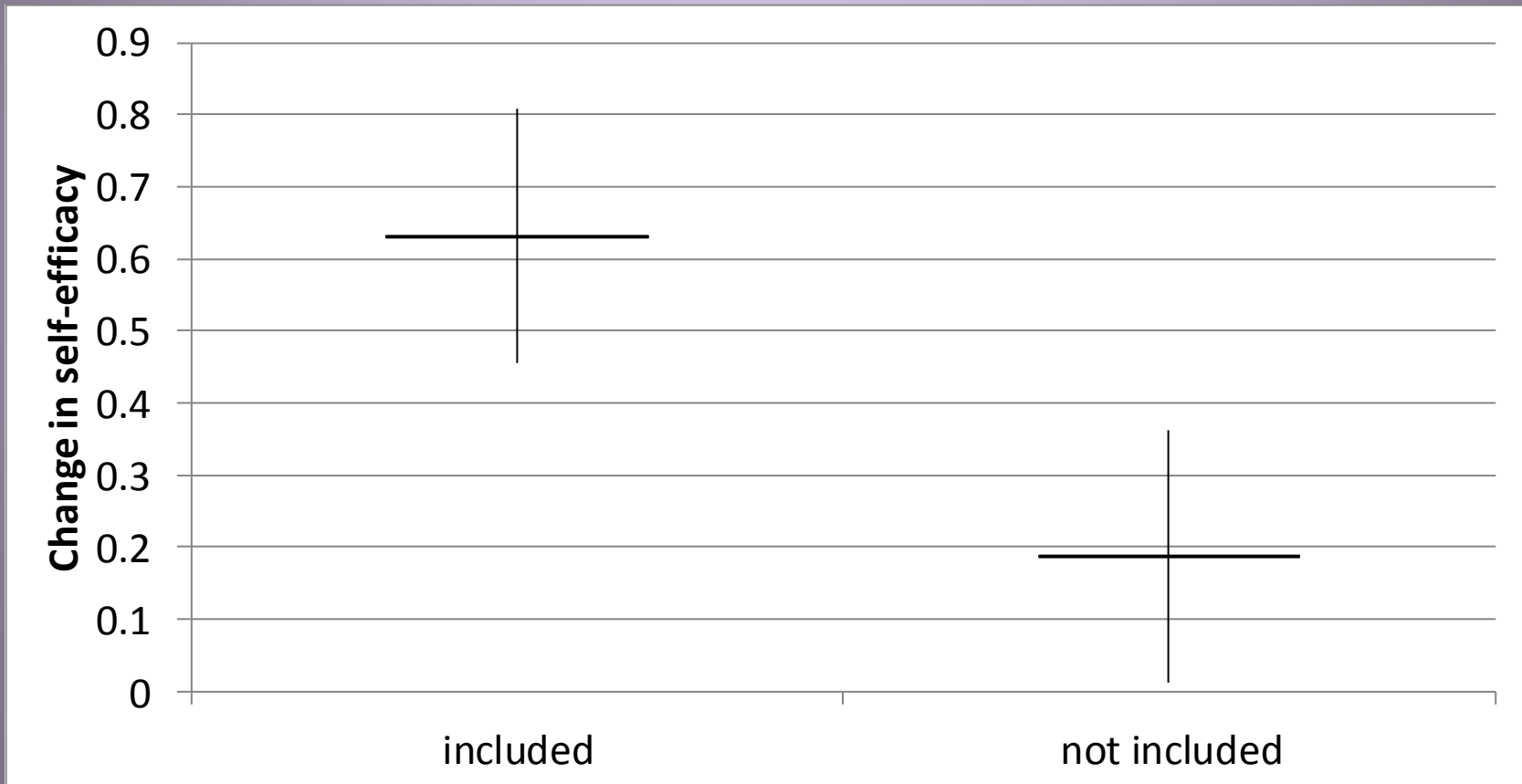
Most popular techniques used (N=24)

- Prompt practice (n=16)
- Provide instruction on how to perform behaviour (n=15)
- Provide information on consequences of behaviour in general (n=9)
- Barrier identification/ problem solving (n=9)
- Goal setting (behaviour) (n=7)
- Prompt self-monitoring of behaviour (n=7)
- Action planning (n=6)
- Model/ demonstrate the behaviour (n=6)

What increases physical activity?

- Provide rewards contingent on effort or progress towards behaviour***
 - praise or rewarding the person **for attempts** at achieving a behavioural goal
- Prompt practice***
 - Prompt the person to rehearse and repeat the behaviour or parts of it (as homework)
- Prompt self-monitoring of behaviour***
 - Asked to keep a record of behaviour (not just for research purposes), e.g. diary or pedometer
- Provide feedback on performance***
 - Provide participant with data about their own recorded behaviour or comment on a discrepancy between behavioural performance and a set goal or others' behaviour
- Goal setting (behaviour)*
 - make a behavioural resolution - encouraging people to decide to change or maintain change.

Provide feedback on performance



$p < 0.001$

What decreases physical activity?

- Provide information on where and when to perform the behaviour***
 - Involves telling the person about when and where they might be able to perform the behaviour
- Model/ demonstrate the behaviour***
 - Involves **showing** the person how to correctly perform a behaviour, in person or remotely
- Provide rewards contingent on successful behaviour**
 - Reinforcing successful performance of the behaviour, including praise and encouragement
- Provide information on consequences of behaviour in general**
 - What are the benefits of physical activity
- Action planning*
 - detailed planning of what the person will do including, as a minimum, when, and where to act.

Summary/ Implications

- Results of this review suggest techniques to include in physical activity interventions for older adults, e.g. rewards contingent on effort
- But be cautious about about others, e.g. providing rewards contingent on successful behaviour
- However, for activities like walking groups, may not really be about physical activity per se – but about valued/ enjoyable activities.
- How make more enjoyable?
- How give older people services that they want?

Thank you

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