

The acceptability of a behaviour change intervention to reduce time spent sedentary in people with long term conditions and low mood

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# Background

Adults with long term conditions and depression report the lowest levels of physical activity compared with the general population (Everson-Hock, Green et al. 2016)

Lower levels of physical activity may partly account for higher rates of poorer health outcomes and higher rates of mortality (Tremblay et al. 2010).

- increases the risk of additional LTCs (WHO 2010; Lee 2012)

- exacerbates the symptoms of depression (Cooney et al. 2013)

To date, no intervention targeting sedentary behaviours in this population group has been developed in the UK

# An approach to move a Little & Often

reduce the duration of screen-based sedentary behaviours (eg. watching television or using the computer/ tablet) by increasing the frequency and duration of mild physical activity such as walking

Developed using the Behaviour Change Wheel (Michie et al, 2014) and from synthesising findings of systematic review and qualitative studies, and through PPI work

Intervention component	Behaviour change technique (BCT) Taxonomy v1 (Michie, et al. 2013).	Targets	How the BCT was operationalised
A short 3 minute animated video	information about health consequences	Reduce motivation for sedentary behaviours	Raise awareness of the consequences of prolonged sedentary time
A 16 page booklet	self-monitoring of behaviour, mental rehearsal of successful performance, action planning, goal setting behaviour, commitment, social support (practical), self-talk	<p>Increase motivation for physical activity</p> <p>Capability for physical activity (psychological capacity to carry out behaviour)</p>	<p>monitor daily activity (diary), imagine successfully doing an activity and specifically how they did this (mental simulation exercises, Taylor, et al. 1998), make commitments to be active (implementation intentions/ “if-then plans”, Gollwitzer 1993), practical advice</p>
An online peer to peer support group on Facebook	commitment, social support (unspecified), social support (practical) and social support (emotional)	<p>Motivation for physical activity</p> <p>capability (psychological capacity) for physical activity</p> <p>social opportunity for physical activity</p>	<p>share commitments on the Facebook group, encourage each other and share any advice that they have found helpful.</p> <p>Social media was used as a prompt for behaviour change</p>

# Qualitative evaluation

To explore the acceptability of the intervention to this population group

# Data collection and analysis

Semi-structured interviews with 15 participants, two to four weeks post intervention

Most commonly reported LTCs = diabetes (7 participants), arthritis (6).

Mean number of LTCs= 2.47 (SD 1.4)

Had to score  $\geq 8$  on the HADS depression subscale at 2 time points

mean= 11.93, SD= 3.63 at the first assessment

mean= 12.46, SD= 3.58 at the second

10 were female

Mean age was 51 (SD 18.43), age range 23 to 79

Ethnicity= 14 white British, 1 black British/ Caribbean

# Data collection and analysis

Interviews recorded and transcribed verbatim

Data were analysed deductively using thematic analysis to examine the acceptability of intervention components

Results are presented within the Theoretical Framework of Acceptability (Sekhon, et al 2017)

7 constructs

Opportunity costs:- the extent to which benefits, profits or values must be given up to engage in the intervention

## **Ethicality: the extent to which the intervention has good fit with an individual's value system**

Participants liked the overall message of the intervention and that the focus was on increasing activity through every day tasks

*I used to sit and think, I'll do something tomorrow when I hadn't done anything all day, but now if I do something I'm more likely to think about doing something else tomorrow. Little and often, it's not too overwhelming, is it? PT9*

The majority of participants either did not have access to Facebook or did not want to use it. For those who did join, they were reluctant to post on there and they felt the group had too few members

*I didn't really use it to be honest, but I'm not a big Facebooker and I'm also not very interested in the whole chatroom. PT3*



# Affective attitudes: how an individual feels about the intervention

Participants had mixed feedback about the intervention. Some reported that they liked the video/ booklet components.

*I think that's what's so invaluable for me. Because it even made me feel good when I was reading the booklet, because I was going, well, actually, I'm doing this anyway and I just need to maybe push myself a little more. PT6*

Some participants noted that it was things that they already do

*[the video] was things that we already knew. It was informative for somebody brand new to this sort of situation. But for people who have had it for a number of years, everything was obvious. There was nothing there that gave me more information than I already have. PT12*

## **Intervention coherence:- the extent to which the participant understands the intervention and how it works**

Commitments in the form of implementation intentions (if-then plans) were poorly understood. Participants did not talk about commitments in terms of how they could be more active. Instead, they associated this section of the booklet with planning in the event of a negative experience when going out or planning what they needed to take out with them.

*I didn't really think too deeply about [if-then plans], because it's so simple. I just think if I have to go to the shop, I put my coat on, get in the car and go to the shop. PT9*

## **Burden:- the perceived amount of effort that is required to participate in the intervention**

Participants felt they needed more practical guidance in visualising when and how they could be more active, and in completing the tables in the booklet (action planning)

*If I feel well right now, then do something from the lists, which is quite useful sort of mantra to have and to keep in mind. I think it's quite useful for me to have that in mind, I'm feeling okay, I should do something. Then if I'm meeting someone try to include walking but then I wasn't quite sure... I thought it would be better if you could give examples. PT3*

## **Self efficacy:- the participant's confidence that they can perform the behaviour(s) required to participate in the intervention**

Most participants felt that they wanted to go through the booklet on their own. Some participants explained that they involved loved ones in thinking about how and when they could be more active.

*I've been quite lucky as in my partner is really helpful. Because otherwise I'd just sit and do nothing, but because we've, he's now conscious like I want to try and do bits and pieces where I can, we've sat down and looked at a typical day of where I could fit it in. PT8*

## **Perceived effectiveness:- the extent to which the intervention is perceived as likely to achieve its purpose**

Participants reported breaking up periods of sitting with doing household tasks such as cleaning, and that they spent more time seeing friends and with their partners, going to the supermarket, and being in the garden.

*If I'd made something to eat or I'd done something, rather than thinking, oh, I'll leave it till later, and thinking I'm feeling good, it's out of the way. So I started changing the way I did things slightly because while I've got the energy I might as well. PT6*

*Well, like, I could spend a whole day sat here watching that, watching this, nipping next door. Whereas, now, I take the dog for a walk about three times a day, and I even go out into the garden more. And, shopping, I do more things. PT9*

# Summary of Findings

Participants reported substituting screen based sedentary behaviours with mild physical activity or sedentary activities other than watching television. They linked the intervention with doing more household tasks, trips to the supermarket, and spending time with friends.

The content of the intervention fitted with participants' values however delivering the intervention on a social media platform had low ethicality

Sections of the booklet using the BCT commitment, action planning, and mental rehearsal of successful performance had lower intervention coherence

# Conclusion and Consequences

Content of the intervention: sections based on BCTs commitment, mental rehearsal of successful performance, and action planning need to be refined. The BCT practical social support could be expanded on further to help guide participants on how to be a little more active.

Delivery of the intervention: deliver the content of the booklet in different formats, and omit the social media group

**Thank you**

**Any questions?**

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