

Participant and public involvement in refining a peer-volunteering active aging intervention: Project ACE (Active, Connected, Engaged)

Withall, Janet; Thompson, Janice; Fox, Kenneth; Davis, Mark; Grey, Selena; De Koning, Jolanthe; Lloyd, Liz; Parkhurst, Graham; Stathi, Afroditi

DOI:
[10.1093/geront/gnw148](https://doi.org/10.1093/geront/gnw148)

License:
Creative Commons: Attribution-NonCommercial (CC BY-NC)

Document Version
Publisher's PDF, also known as Version of record

Citation for published version (Harvard):
Withall, J, Thompson, J, Fox, K, Davis, M, Grey, S, De Koning, J, Lloyd, L, Parkhurst, G & Stathi, A 2018, 'Participant and public involvement in refining a peer-volunteering active aging intervention: Project ACE (Active, Connected, Engaged)', *Gerontologist*, vol. 58, no. 2, pp. 362–375. <https://doi.org/10.1093/geront/gnw148>

[Link to publication on Research at Birmingham portal](#)

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Research Article

Participant and Public Involvement in Refining a Peer-Volunteering Active Aging Intervention: Project ACE (Active, Connected, Engaged)

Janet Withall, PhD,¹ Janice L. Thompson, PhD,² Kenneth R. Fox, PhD,^{2,3} Mark Davis, MSc,³ Selena Gray, MBChB, MD,⁴ Jolanthe de Koning, MSc,¹ Liz Lloyd, PhD,³ Graham Parkhurst, DPhil,⁴ and Afroditi Stathi, PhD^{1,*}

¹Department for Health, University of Bath, Claverton Down, UK. ²School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, Edgbaston, UK. ³Centre for Exercise, Nutrition and Health Sciences, School for Policy Studies, University of Bristol, UK. ⁴Centre for Transport and Society, Department of Geography and Environmental Management, University of the West of England, Bristol, UK.

*Address correspondence to Afroditi Stathi, PhD, Department for Health, University of Bath, Claverton Down, Bath BA2 7AY, UK. E-mail: a.stathi@bath.ac.uk

Received February 16, 2016; Accepted October 11, 2016

Decision Editor: Barbara J. Bowers, PhD

Abstract

Background: Evidence for the health benefits of a physically active lifestyle among older adults is strong, yet only a small proportion of older people meet physical activity recommendations. A synthesis of evidence identified “best bet” approaches, and this study sought guidance from end-user representatives and stakeholders to refine one of these, a peer-volunteering active aging intervention.

Methods: Focus groups with 28 older adults and four professional volunteer managers were conducted. Semi-structured interviews were conducted with 9 older volunteers. Framework analysis was used to gauge participants’ views on the ACE intervention.

Results: Motives for engaging in community groups and activities were almost entirely social. Barriers to participation were lack of someone to attend with, lack of confidence, fear of exclusion or “cliquiness” in established groups, bad weather, transport issues, inaccessibility of activities, ambivalence, and older adults being “set in their ways”. Motives for volunteering included “something to do,” avoiding loneliness, the need to feel needed, enjoyment, and altruism. Challenges included negative events between volunteer and recipient of volunteering support, childcare commitments, and high volunteering workload.

Conclusion: Peer-volunteering approaches have great potential for promotion of active aging. The systematic multistakeholder approach adopted in this study led to important refinements of the original ACE intervention. The findings provide guidance for active aging community initiatives highlighting the importance of effective recruitment strategies and of tackling major barriers including lack of motivation, confidence, and readiness to change; transport issues; security concerns and cost; activity availability; and lack of social support.

Keywords: Older adults, Physical activity, Community engagement, Intervention, Volunteering, Peer support, Multistakeholder, Qualitative

Globally, the number of people aged 60 years or older is expected to increase from 841 million in 2013 to more than 2 billion in 2050 (United Nations, 2013). Supporting

healthy aging to reduce health and social care costs is an increasingly high priority for public health (Foster & Walker, 2015; World Health Organization, 2015). The

evidence for the benefits of a physically active lifestyle is strong, illustrating consistent associations with better physical and mental health, improved mobility, well-being, and reduced risk of all-cause mortality in older adults (Bauman, Merom, Bull, Buchner, & Singh, 2016; Chodzko-Zajko et al., 2009; Hamer, de Oliveira, & Demakakos, 2014; Windle, Hughes, Linck, Russell, & Woods, 2010; Withall et al., 2014). However, only a small proportion of adults older than 65 years meet physical activity guidelines (Craig, Mindell, & Hirani, 2009; Department of Health, 2011). There are many gaps in the evidence base regarding how to support older people in increasing their physical activity. However, as the population ages and the demands for health and social care services increase, there is an urgent need to act (Stathi, Fox, Withall, Bentley, & Thompson, 2014). This is particularly pertinent as the connections between loneliness, isolation, and ill health becomes more well established (Cattan, White, Bond, & Learmouth, 2005).

Social connectedness is an independent predictor of older adults' health and well-being (Vermeulen, Neyens, van Rossum, Spreuwenberg, & de Witte, 2011). Social isolation is related to depression, cognitive impairment (Stathi et al., 2012), lower self-rated health (Wahrendorf & Siegrist, 2010), and higher susceptibility to dementia (Cattan et al., 2005). Social activity is significantly related to daily walking episodes (Richard, Gauvin, Gosselin, & Laforest, 2009), and neighborhood connectedness is linked with lower barriers to physical activity (Walker & Hiller, 2007). Increased physical activity is a likely mechanism through which social connectedness may lead to these positive outcomes. Among older adults, the frequency of trips outdoors is associated with higher levels of moderate-to-vigorous physical activity (Davis et al., 2011), better physical function, and greater independence (Vermeulen et al., 2011). Frequency of trips outdoors is influenced by a real or perceived lack of local amenities, activities, and groups (Marquet & Miralles-Guasch, 2015); confidence to engage with community activities; social support; and the availability of someone to attend activities with (Stathi et al., 2012). This interaction between social connectedness, frequency of trips away from home, and physical activity suggests that policies that encourage community engagement may provide several health and well-being benefits for older adults, particularly those who are currently inactive and socially isolated.

Volunteering facilitates community engagement and is growing in popularity among older adults (van Groenou & van Tilburg, 2012). Volunteering is positively associated with mental well-being, quality of life, self-esteem, and reduced risk of depression (Cattan et al., 2005; McDonnall, 2011; McMunn, Nazroo, Wahrendorf, Breeze, & Zaninotto, 2009; Wahrendorf & Siegrist, 2010). It is also associated with higher levels of physical activity (Tan et al., 2009), moderated or delayed mortality (Okun, Yeung, & Brown, 2013), higher levels of social connectedness (Parkinson, Warburton, Sibbritt, & Byles, 2010), and trips away from home (Morrow-Howell, 2010). A limited number of studies

have shown volunteer-driven physical activity interventions to be a promising means of increasing participants' activity levels (Robertson, Hale, Waters, Hale, & Andrew, 2014).

This paper describes findings from qualitative work that helped modify and refine an active aging intervention. The initial ACE intervention was the output of a 12-month multisectoral collaborative network in the Avon region of the UK (AVONet), led by authors of this paper (Littlecott, Fox, Stathi, & Thompson, 2015). AVONet synthesized evidence from a wide range of sources, rigorously applied the UK Medical Research Council guidelines and good practice in participant and public involvement (PPI), in order to identify "best bet" strategies for tackling low levels of activity in older adults and to provide pragmatic guidance for public health policy makers and practitioners (Craig et al., 2008; Stathi et al., 2014). It identified the potential for an active aging intervention promoting the "get out and about" message and led to the development of a grant application for a pilot study of the Active, Connected, and Engaged neighborhoods (ACE) intervention which was subsequently funded by the Lifelong Health and Well-being Initiative (Gateway to Research, 2015).

ACE was a 2-year pilot study designed to test a practical, sustainable, and affordable approach to improving health and well-being in older adults by increasing trips out of the house, rather than directly promoting physical activity. ACE employed older volunteers (60 years or older) as "Activators," to support socially isolated older peers to increase their involvement in community activities and subsequently increase physical activity, social engagement, and mental well-being.

The Process Model of Lifestyle Behaviour Change (PMLBC), which is an adapted version of the Health Action Process model, was used to map out the intended processes of behavior change during the three stages of the ACE intervention: motivation, action, and maintenance (Gillison et al., 2015; Greaves et al., 2015). In accordance with Self-Determination Theory (SDT), which has been used to underpin a range of physical activity interventions (Teixeira, Carraça, Markland, Silva, & Ryan, 2012; Withall, Jago, & Fox, 2012), the ACE intervention particularly targeted the satisfaction of the need for relatedness, competence, and autonomy (Deci & Ryan, 2002).

Best practices for the development of community-based interventions consider community and end-user involvement to be a crucial constituent (Horodyska et al., 2015; Whelan et al., 2014), although most successful interventions include substantial participation from key stakeholders (Economos & Blondin, 2014). The aim of this study was to seek feedback and guidance by end-user representatives (older group participants and older volunteers) and stakeholders working in the area of active aging (volunteer managers) to refine ACE, a volunteer-led active aging intervention. This systematic, multistakeholder approach provides guidance relevant to other community initiatives where greater social engagement of isolated older adults is targeted.

Methods

Data Collection

The study used a qualitative methodology as it is highly appropriate for increasing understanding of complex personal and social phenomena such as engagement in physical and social activities. Qualitative approaches are particularly useful when, as in this case, there is limited existing knowledge (Patton, 2002).

This study is informed by the principles of social constructionism, according to which knowledge is constructed through interaction with other humans and their world. This reality is developed and communicated in a social setting (Crotty, 1998).

We targeted diverse stakeholders with experience in community-based initiatives aimed at engaging older adults. Three key groups were identified: older adults (65 years or older) who had participated in community groups and activities (older group participants), adults (60 years or older) who were experienced volunteers (older volunteers), and professional volunteer managers experienced in working with older adults (volunteer managers). Focus groups were undertaken with the older group participants to enable triangulation of the data and for pragmatic reasons, as groups of participants were usually attendees at the same community group. Focus groups were conducted with volunteer managers and semi-structured interviews with older volunteers as this was their preferred interview method.

All participants lived or worked in the city of Bristol, United Kingdom. The study was reviewed and ethically approved by the University of Bath Research Ethics Committee (EP 11/12 98). During design, data collection, and analysis, we attended to the consolidated criteria for reporting qualitative research (COREQ) (Booth et al., 2014).

All interested participants were provided with a participant information sheet, and written, informed consent was obtained prior to all interviews and focus groups. Demographic information was gathered on age, gender, ethnicity, education level, and marital status.

The interviewers, J. Withall, A. Stathi, and J. de Koning, are all experienced qualitative researchers in the field of active aging. Theoretical saturation was deemed to have been reached when focus groups and individual interviews revealed no further unique information.

Focus groups and interviews were audio taped using an Olympus VN2100PC digital voice recorder, transcribed verbatim, and coded to ensure anonymity and confidentiality. All transcribed texts were entered into NVivo Software for Qualitative Research 2002.

Data Source 1—Focus Groups With Older Adults Attending Community Groups and Activities (Older Group Participants, $n = 28$)

Older group participants were recruited at community groups such as lunch clubs, singing groups, and IT courses

for older adults. These groups were purposively selected from lists published by the City Council to reflect a range of age, gender, and socioeconomic background (Patton, 2002). We attended sessions to present the study and recruit participants face-to-face. Six focus groups were conducted between May and July 2012 and lasted 40–50 minutes.

An interview guide was developed to ensure consistency. The semi-structured format allowed participants to raise and explore related topics and issues. The opening question asked participants for reflections on their experience of attending groups or activities. The main elements of the guide focused on the decision to participate including motives, barriers, expectations, positive experiences, negative experiences, and the impact on day-to-day life. An outline of the ACE intervention was provided (Supplementary Appendix), and participants were asked for their first impressions, ACE's suitability for older adults, recommended methods of recruitment, potential barriers to participation, enablers, and ACE intervention structure and content. Two pilot interviews were first conducted with members of the target group. This process led us to refine the language used in the interview guide and to adopt a lay-person's language where needed.

Data Source 2—Interviews With Older Adults Who Were Experienced Volunteers (Older Volunteers, $n = 9$)

Older volunteers were recruited via the community organizations for whom they volunteered. A cross-section of voluntary organizations and roles were purposively selected to reflect a range of age, gender, and volunteering experiences (Patton, 2002). These included walk leaders, lunch club cooks, and befrienders. Selected organizations approached suitable study participants and sought their permission to be contacted by the study team. Semi-structured interviews were conducted between May and July 2012 in local community centers or at participants' homes and lasted 30–40 minutes. The same interview guide was used as for the focus groups with the addition of an opening question exploring the reflections on experiences of volunteering.

Data Source 3—Focus Group With Managers of Volunteering Initiatives (Volunteer Managers, $n = 4$)

Volunteer managers were identified through established communication channels with major local service providers. One focus group was conducted in August 2012 with professional volunteer managers from major UK statutory and third sector organizations: Age UK, Bristol City Council, LinkAge, and Contact the Elderly. The interview guide explored volunteer managers' experiences of recruiting, managing, and working with volunteers, recruiting participants into programs and their opinions of the ACE intervention structure and content.

Analysis

J. Withall and J. de Koning used Framework Analysis to code the data within the themes directed by the interview topic guide (Ritchie, Lewis, Nicholls, & Ormston, 2013). Additional themes and subthemes were identified as the data were analyzed. The resulting coding structure was assessed by A. Stathi and other members of the research team, which guided the coding of the remaining data. Finally, the derived themes for all three sets of data (older group participants, older volunteers, and volunteer managers) were compared and similarities and differences were identified. The interpretation and analysis of the data were discussed and agreed by all seven authors (Gale, Heath, Cameron, Rashid, & Redwood, 2013).

The development of a coding scheme and a code checking protocol supported the dependability of the data. The data triangulation allowed for a comparison of the findings from two different methods of data collection and three different participant groups. This process allowed patterns of convergence to emerge and supported a comprehensive interpretation of the multiple data sources (Pope & Mays, 1995).

Results

Twenty-eight older group participants (25 women and 3 men, aged 65–85 years) who attended community-based activities were recruited into focus groups (Data source 1). Nine older volunteers (6 women and 3 men, aged 65–78 years) who worked with local voluntary groups were interviewed (Data source 2). A further focus group was conducted with four volunteer managers (all women; Data source 3). Participant characteristics are shown in Table 1.

The presented themes reflect the thematic structure of the interview guide: motivations, enablers of and barriers to engagement with community groups/activities; motivations, facilitators, and challenges of volunteering; and

reflections on ACE. Responses to the presentation of the ACE intervention (Supplementary Appendix) were broadly similar across older group participants, older volunteers, and volunteer managers, and these are presented together. Any differences are described and discussed.

Motives, Enablers of and Barriers to Engagement With Community Groups/Activities

These themes, subthemes, and supporting data are presented in Table 2. The reasons older group participants chose to engage in community activities were almost entirely social. Their participation led to a significant increase in social connections and relatedness. Some older group participants actively sought opportunities to “get out of the house” and engage with the outside world. Enablers of engagement were social support, in particular a companion to attend sessions with, and the availability of transport. Barriers to participation were not having anyone to attend with, lack of confidence (particularly to attend alone), fear of exclusion (from an established group) or “cliquiness,” bad weather, and lack of access to transport.

Motives, Facilitators, and Challenges of Volunteering

Older volunteers’ motives for engaging in volunteering activities included personal benefits (“something to do,” avoiding loneliness, a need to feel needed, enjoyment), altruism (to help the older generation), and external reasons (being asked to help by a friend/peer) (Table 3). The main positive impacts of volunteering were increased confidence, increased social contact, and a sense of achievement and purpose. Difficulties in volunteering included negative interpersonal events such as disputes with those being supported and/or their families, commitments to caring for grandchildren, and high volunteering workload, which several interviewees highlighted as an issue that is often overlooked.

Table 1. Demographic Characteristics of Older Adults (Data source 1) and Older Volunteers (Data source 2)

	Focus group participants (Data source 1; <i>n</i> = 28)		Interview participants (Data source 2; <i>n</i> = 9)	
	Mean	Range	Mean	Range
Age (years)	72.6	65–85	70.8	65–74
	<i>N</i>	%	<i>N</i>	%
Gender (female)	25	89.3	6	66.7
Ethnicity (White British)	28	100	9	100
Education				
Secondary education	18	64.3	6	66.7
Vocational training	8	28.5	3	33.3
College or university education	2	7.2	0	0
Marital status				
Married	12	42.9	3	33.3
Widowed	15	53.6	4	44.4
Divorced/separated	1	3.6	2	22.2

Table 2. Motives, Enablers of and Barriers to Engagement With Community Groups/Activities (Data source 1—Older group participants $n = 28$)

Main theme	Subtheme	Sample data
Motives for participating	Socializing	FG1: I came looking for company FG3 P4: It's the people isn't it? Keep Fit it keeps you fit and also you're meeting....
	Getting out and about	FG2 P4: It's getting you out, out of the home and meeting other people. FG3 P3: You sort of think well I don't want to sit in the chair and die do I? You want to get out and about.
Impact of participation	Increased social contacts	FG1: I've just loved it and I've made so many friends here. FG1: When you're singing you forget everything and when you've got problems you've got friends here, you can talk to them. FG6 P4: I just love it really. You meet people, you have a chat. Definitely it's good for the morale.
	Enjoyment	FG5 P2: And we have a laugh, P3: And quite a few of us are on our own anyway, P1: It's companionship isn't it
	Increased chances to get out and about	FG3 P4: I think no I've got to go out. I go mad if I stay in all the time. FG3 P4: It keeps your mind as well..that's important.
Enablers of activity participation	Socializing	FG2: I think the social side of things is more important than the exercise.
	Social support	FG4 P1: I'd feel I needed someone to take me. Otherwise I'd feel I was pushing in. FG2 P1: Well I came with a friend. I think you need some support
	Transport	FG4 P3: If there's anything going on through the church, trips and things like that she'll always offer us a lift.
Barriers to activity participation	Lack of confidence	FG2 P4:...on your own you don't know who you are going to meet.
	Lack of social support	FG3 P4: Nervous, I'm always nervous the first time I go anywhere ...as long as you've got someone to go with
	Sense of exclusion	FG4 P1: It's open to everybody except me. FG3 P4: I know people who've gone, even to churches and it's very cliquy, no-one talked to them and then that's it isn't it
	Weather	FG3 P1: We had that in the club 'Oh don't sit there that's so and so's seat' and I said 'it's anybody's seat'
	Transport	FG2 P3: Unfortunately it's to do with the weather because people don't get about if it's raining. FG2: I can't get around to get to the bus stop...it's such a long way to walk. I go to things that are near by.

Enablers of volunteering included confidence, local knowledge, and provision of good support to the volunteer. Hardly any barriers to volunteering were cited with cost, mainly relating to petrol and mileage, being the only major disincentive.

Reflections on the ACE Intervention Structure and Content

The following themes, subthemes, and supporting data are presented in Tables 4, 5, and 6, respectively. The data reflect the views of all three groups of participants in this study (older group participants, older volunteers, and volunteer managers).

Recruitment

The ACE intervention was well received by all three groups and considered to be a highly worthwhile intervention, but the challenge of participant recruitment was recognized by all interviewees who suggested a range of recruitment methods: Door-drops (leafleting) had a mixed reaction, as although

they could potentially reach those who are quite isolated, they are often perceived as junk mail and dismissed. Recruiting at places where inactive older people might gather such as churches and sheltered accommodation was proposed, however, individual face-to-face recruitment is time consuming and not always well received. A personalized approach (letter) and the use of local media were suggested. Professionals and older volunteers advocated seeking referrals from General Practitioners (family doctors), social services, and third sector organizations. Free food and drinks were commonly proposed to attract people to events. Table 4 shows the influences on recruitment as reported by older group participants and Table 5 as reported by volunteers. In order of prevalence, these were transport issues and accessibility of activities; ambivalence and being "set in their ways"; anxiety or lack of confidence to engage with groups or activities; availability of a choice of appealing activities; security concerns; and cost of attending sessions and petrol and mileage.

The volunteer managers discussed the issues of recruitment and management of volunteers in depth. Key mechanisms proposed for recruiting volunteers included word

Table 3. Motives, Facilitators, and Challenges of Volunteering (Data source 2—older volunteers $n = 9$)

Main theme	Subtheme	Sample data
Motives for volunteering	Something to do	I1: I'd just taken early retirement so... I was looking for something to do.
	Avoiding loneliness	I3: if you're volunteering you meet people, make friends with people, I2: I was determined I was not going to get isolated and lonely.
	Altruism	I10: it's time we took the older ones (forward) as well'
	Peer influence	I11: (A volunteer) asked me if I could give her a hand... Here I am!
Impact of volunteering	Feeling needed	I10: To be needed myself is very important...he says that Monday morning (befriending visit) is the highlight of his week. I2: Without fail their final word is... don't forget to ring me next week and don't ever pack this in.
	Enjoyment	I3: I loved being busy every day
	Confidence	I6: Definitely oh yea, I can talk to anybody now I10: ... (Organising walks) it's constantly expanding my inquisitiveness, my search for ideas ...It's broadened me tremendously.
	Social	I9: It's just nice to say hello and 'how are you?' ...it is a nice little casual friendship.
	Sense of achievement	I3: People saying thank you really. Isn't it? It's great,
	Purpose	I6: That makes me feel really good, I've gone something good today. I made an old man happy. I look forward to the next day now. Instead of thinking... 'what on earth am I going to do with my life?'
	Negative interpersonal events	I11: When they moan. 'I don't like this walk' and 'it's raining', well I have no control over it, I2: (lady's son said) 'there's no need for you to come in here...' it made me feel, that he thought I was after her.. money
Enablers of volunteering	Workload	I3: In the end, it got too much for me then, and I just gave it all up because I felt a bit ill then ...I've retired gracefully,
	Confidence	I10: I've worked with children who've had problems and I think that too has added to my confidence, I3: (what was good about the management?) You've only got to ring em up and they're there.
	Knowledge Support	I1: Best management to manage volunteers? You've got to listen. I9: It's the motivational side. Someone staying interested in the fact that you're doing it, makes you interested in carrying on.
Barriers to volunteering	Cost	I6: I just can't (do it without petrol money). I'm only on a low pension at the moment. I2: if I didn't have the bus pass... on a pension ...you just wouldn't be able to do it.

of mouth via existing volunteers, recruitment of group participants, via community groups and events, local media, and volunteer recruitment organizations/websites (Table 6). A face-to-face conversation, an email exchange, completion of an application form, emphasis of the commitment required, and taking up references were all suggested elements of the screening process. Although retired volunteers often had low drop-out rates, issues of care of grandchildren during school holidays could arise. An emphasis on the altruistic nature of volunteering was also suggested as a motive for involvement. Paying expenses was thought to be an enabler of a wider range of people volunteering. Experience showed that beyond the "compulsory" initial training volunteers' engagement with ongoing training should not be time consuming whereas adding a social dimension may be an incentive. Older volunteers emphasized the importance of volunteers being thanked and appreciated. Having volunteer coordinators available to help deal with problems, including over-demand from participants, was regarded as more important than regular face-to-face supervision.

Meeting Schedule and Time Commitment

The initial ACE intervention proposed 8–9 meetings between ACE Activators and their participants over 6 months, starting weekly then reducing. There were concerns from all three groups that this wouldn't be sufficient to firmly embed participants in community activities. Flexibility and reacting to individual participants' needs were suggested. Regular meetings were preferred to support habit formation. Flexibility was suggested to work around existing commitments.

The initial version of the ACE intervention suggested that each Activator work with 4–5 participants. This was considered too large a commitment by the older volunteers. Starting with one or two participants and then building was advised.

Sustainability

The ACE intervention aimed to use two mechanisms to sustain behavior change. The first was to establish participants as regular attendees at activities and to support the building of social connections, thus enabling the Activator to gradually withdraw. Older volunteers in particular acknowledged that

Table 4. Data Source 1: Results From Focus Groups With Older Group Participants Reflecting on the ACE Intervention (6 groups, $n = 28$)

Main theme	Subtheme	Sample data
First reactions to ACE		FG6: No, it's very worthy and I hope it's successful FG6: It's a good idea
Potential influences on participant recruitment	Transport	FG2: It's all very wellbut if you can't get to the places it's rubbish really FG2: Well I think the essential thing is the transport.. It's all very well hearing of all these nice things if you can't get there.
	Lack of confidence	FG1: Some people are incredibly shy and don't really want to get involved with others. Some do tend to retreat within themselves.
	Lack of motivation	FG3: I think lots of people would like to do things but can't get that step forward. FG5: There's a lot would rather be on their own, they don't want to participate FG1: Some people think they've done enough FG6: They get like that. They just see an invitation and they just recycle it. My mum got like that.
	Availability of activities	FG1: You need a choice of activities going on, because I can imagine there's some places where there's not much happening FG2: It's just knowing what's available for a lot of people.
	Fear	FG4: The main mentality of the older age group is 'I don't open my door to anyone' and you see on the doors No cold callers, Not only have you got to be sure the Activators are honest you've got to break down that mentality that everybody is dishonest ...
	Cost	FG5: Everything costs money. People go to a couple of them. They can't get to it all can they, because it all costs money.
Recruitment methods	Challenge of recruitment	FG2: How would you get these people to come? FG5: How are you supposed to find them if they never go anywhere?
	Leafletting	FG2: Lots of people would like to do things but can't get that step forward... if something went through their door they might think oh I'll ring that FG3: With leaflets not everybody reads them.
	Via community groups	FG3: We're lucky here because we come to church and you get told what's going to happen through the week. FG6: I think you're going to have to go into existing groups really – and extend that. They will all know somebody who...
	Personalized mail	FG3: Our history lady she always writes to us doesn't she?
	Local newspapers	FG3: I always if I'm on the bus pick up a Metro. You see things in there.
	Refreshments	FG1: I think food is always good, food available and drink.
ACE structure	Number of meetings	FG1: Well I don't think a couple of weeks (at once a week) would be sufficient because they've only just got into their heads that they are going out. I think a month – 6 weeks would be better than 2 weeks because ...they've got to get into the habit of going FG3: Meet 3 or 4 times then make an adjustment if you need to, ask them 'what do you think', get some feedback.
	Scheduled or flexible	FG1: I would certainly prefer to know if it was every Wednesday or every Tuesday. I would prefer it to be scheduled ... FG1: On a regular basis they are perhaps more likely to do that and to get into a habit
	Venue	FG6: At the person's home? Some people are cautious about ... With vulnerable adults... you have to be very careful on one to one.
Forming participant groups	Gradual process	FG1: They ought to get to know their Activator first and before they become part of the wider group. I think that might be ...better. FG5: You get a volunteer to go see 3 people and then there's another volunteer that goes to see a different 3 people and then they could say 'Right shall we all try and get together and have a cup of tea' So you've got 6 people who are meeting for a cup of tea
Communication methods	Mobile phones	FG2: I can but I don't give my number out to anybody except for family...if I fall down FG5: I've got one... I can't use it
	Email/internet	FG3: Most people have got their phones and computers it's just that we haven't FG1: When you are dealing with older people you have to bear in mind that more 70 year olds don't use computers

Table 5. Data Source 2: Results From Interviews with Older Volunteers Reflecting on the ACE Intervention ($n = 9$)

Main theme	Subtheme	Sample data
First reactions to ACE		P2: I don't think it's good I think it's more than that, I think there's a need, I think there is a need for it. P9: I think the idea behind it is good, all these bridges are very important, P10: I think it's a wonderful, wonderful idea
Participant recruitment	Ambivalence	P5: It's a good idea, the only thing is ...the people you're trying to get to is often the hardest people to get to... I don't want to sound pessimist, your biggest problem is getting to these people really. P6: I don't know how you will persuade someone to go out...but it does take a huge step
	Lack of confidence	P2: when you haven't done it for ages you get this thing about.. 'I wonder if I'll like it, I wonder if anybody will be there' P2: 'I'm too old', it's their mental attitude, 'I'm retired, I'm retired not, I can't do that', 'I can't do this', 'I can't do that'.
Recruitment methods	Other commitments	P5: It's quite surprising how many people although they're retired, are committed... 7 days a week, for grandchildren. If you've got grandchildren in school, all that sort of thing. It does happen
	Referrals	P2: I mean that's the way you're going to find out, the Social services and the NHS, P5: ... the only way you can do it is to go um to... the local GPs.
	Direct contact	P1 Block knocks. Knock on every door in every tower block.. and just listen. You see what they say. We've had a tremendous success with ...that. We entered the blocks, we listened.. we listened to what they said and we did it.
	Media	P2: The media is very good to use, we don't use it enough as far as we're concerned. The local press, you know ...and but photos and those sort of things, that would be, there would be photos in the paper and people would say 'oh what's that'
	Leafletting	P5: I did a lot of work, I went everywhere I went to every church in the area, I think the best form of advertising, especially these days quite frankly, is leaflets through doors. I don't think how else you could do it other than a leaflet drop.
	Personalized mail	P10: Older people like letters and cards. With our folk quite often a letter will go out, or a card will go out, they love that. 'oh it came through the post' (laughs), and it's really, really important that it's hand written. I want to open it then.
ACE structure	Frequency	P6: I think it's at least once a week. A week is a long time, sitting on their own. P10: I think you are right that you would need 3 or 4 meetings and then you could step back for a while, otherwise the person you are meeting with will become too reliant on you, and that would be a danger in a one to one situation.
	Forming participant groups	P10: I think the activator will know when the time is right to bring the folk together, it may be 'well I'll bring those two together', and see what happens, and then 'let's see if we put the other two together', but the activator will become very aware of the needs. P6: little groups together? That would be a good idea. We expect each volunteer to support 2 or 3 people, do you think that's too much?
Managing volunteers	Workload	P6: That's probably too much. You should start off with one and move on from there.
	Peer support	P1: It will build them a support system, by being together, and also it will be an opportunity to exchange information... P9: I think initially, possibly when people are unsure about how it's working and perhaps get a little thing going, to help thank,
	Supervision	P4: Um.. once every 6 weeks or something? You wouldn't want it too often P9: I don't know, we did try during a volunteer ... meeting and that didn't really get off the ground you know, so...
Role of coordinator	Providing someone to talk to	P3: It would be nice to have a back up, somebody call you and see how it's going, and vice versa. P10: ... A listening service (laughs) first and foremost. P1: Best management manage volunteers? you've got to listen...and always leave them a way out. Very important.
	Communication	Internet/e-mail P1: People use phones and um, people send me emails, I don't read them, I'm a dinosaur I like to talk to people. Mobile phones P6: I think I've put a fiver on it since I've had it. 2005. It's in my hand bag, I never use it. P2: I use it myself, but what I'm saying is you'll find that because some people can't they'll say 'oh can't use the computer'

Table 6. Data Source 3: Results From Focus Group With Volunteer Managers Reflecting on the ACE Intervention (n = 4)

Main theme	Subtheme	Sample data
Volunteer recruitment	Word of mouth	P1: Word of mouth is a huge one ... if your neighbour or your friend has done it...
	Referrals	P2: So it's agencies working together, knowing about each other and referring people on,
	Utilizing group participants	P3: we have a sort of 'Grow your own volunteer' model....people get involved in the scheme, get engrossed in the group and start to own it.... we encourage that, skill build, confidence build
	Volunteer agencies	P4: We advertise on VOSCUR (Supporting Voluntary Action) if we want to fill specific roles and utilise Volunteer Bristol a lot as well. P3: Working through the volunteer agencies people will come for a bit, they don't have that sense of ownership....
Screening volunteers	Press relations	P1: We did get people through campaigns in newspapers.
	Local groups/ organizations	P3: I personally feel that the Neighborhood Partnerships are a really good source of support. ...they have various forums and monthly meetings and activators in the community.
	For suitability	P1: We've got an application form, and I'll talk or have an email chat with somebody. We also take up two references.
Minimizing volunteer drop out	For commitment	P3: We would go through the role with them and the tasks so they know whether they want to commit to it or not.
	Commitment	P4: Make it really clear. 6 months, have that end goal (the ACE commitment would be 12 months)
	Clarity of commitment	P2: Just having to fill in that form and think about the commitment all helped weed out the ones that aren't bothered. P1: You'll be surprised most people will probably stick the course if you are up front at the beginning about the commitment involved and what the role involves as long as you give people enough information.
	Reinforce altruism	P3: Its the altruistic element of volunteering so the more you reinforce that and how worthwhile volunteering is then people will continue
Volunteer training	Other commitments	P2: You should definitely find out whether they have any child care responsibility because some volunteersbasically can't do a lot of volunteering during the summer holidays because they have to look after their grandchildren.
	Formal or informal	P1: I meet all the volunteers that can make a day...I'll go through the manual and answer lots of questions. We don't do formal training. P1: To be honest the take up has been a bit disappointing... and they are usually the ones who are more engaged
	Take up	P3: We put on all sorts of wonderful training and think people will be really interested...the take up is quite bad (Yeah) P3: It is how you package it, there has to be something that is appealing to them, rather than a formal training session.
	Recognition	P3: it's a recognised training. Something that they feel proud they've actually achieved, although it's not an onerous training it's practical as well, and at the end of that day they all go away feeling ..so it's a booster.
Managing volunteers	Low take up of supervision	P4: ...we invite them to meetings once every six months but take up isn't brilliant. Group supervision is a really good time saving tool. P3: We have a volunteer forum. It was a good idea but unfortunately the take up wasn't brilliant so after about a year it just stopped....the take up is low
	Non face-to-face contact	P3: I think the trust has been built to the extent that we don't necessarily have to see them regularly they just know they can call. And we support with lots of communication, newsletters, bulletins and emails... volunteer thank you events so they feel recognised and supported P1: I couldn't possibly talk to all my volunteers, the coordinators are my point of contact...if they've got a problem they can come to me
	Peer support	P2: Peer support can be really, really useful. The same issues come up, the same questions. It's just incentivising them to do it really P2: It is nice for them to be able to get together and talk about their individual experiences
Participant recruitment and retention	Recruitment methods	P2: The community mental health team...they might be able to help you... Community Police Support Officers? P3: The Council Housing and Tenancy support network is very good. Health Centres have newsletters that go out.
	Transport	P2: That's usually when they stop going to things when they can't get transport. That's a huge issue. P2: What if it's raining and the bus doesn't turn up

Table 6. Continued

Main theme	Subtheme	Sample data
Volunteer (Activator) role	Workload	Every Activator would have four to five participants to support? P2: That's quite a lot of visits for one volunteer in a week. P1: You might find that once people have met with someone a few times they might be more confident to take on more people.
ACE structure, meeting venue, scheduling	Venue	P1: If they have lost confidence or are scared of getting out then ... go to their homes, have a cuppa with them
	Organization	P1: Flexible, that the two people can arrange together
	Communication	P2: I'd say don't exchange numbers. That keeps an appropriate distance between people. The coordinator could be the go between
Role of coordinator	Participant group meetings	P2: And I suppose it could compare the goals they'd been set as well... Talk about what groups they might be getting involved in, what they'd like to do. Like Weight Watchers where everyone motivates everyone else. P3: Could be very simply over a coffee...you get the people together and they don't feel like they're being pushed into something.
	Skills	P2: I've put in the role to build team spirit and have occasional get togethers with the befrienders.... the coordinator can facilitate that. It's quite a special role ..for someone has the social and organising skills
	Responsibilities	P2: The coordinator could keep an eye on the boundaries between volunteers and participants and make sure they are not becoming too involved, and that the older people aren't making unreasonable demands on them. P3: An audit of what is available locally. The coordinator could work with other local contacts to do that.

dependency could become an issue and that “stepping back” should be supported. The second element was the forming of ACE participant groups to offer peer support and build an “ACE identity” and sense of belonging. This was widely considered to be a beneficial approach without overlooking the individual participants’ preferences and readiness to change.

Communication

Computer and mobile phone use was slightly more common among older volunteers than older group participants. However, many of those who owned mobile phones commonly kept them for family use and/or emergencies and they were often not checked regularly. Very few older group participants used a computer regularly, and most considered this to be common among their peers.

Discussion

The aim of this study was to seek feedback and guidance by end-user representatives (older group participants and older volunteers) and stakeholders working in the area of volunteering (volunteer managers) to further develop and refine a volunteer-led active aging intervention. Although it specifically informs the refinement of the ACE intervention, by reporting the barriers to, and enablers of, community activity engagement and getting out and about it also provides guidance for the development of other active aging community interventions. The findings of this study led to significant changes in the structure and content of the ACE intervention as outlined in the following section.

The ACE Intervention

The literature indicates that interventions with high contact frequency increase the likelihood of behavior change (Greaves et al., 2011). However, in a public health setting, this needs to be balanced with financial constraints and program sustainability. The number of meetings between Activators and participants suggested in the initial ACE intervention was regarded as too prescriptive. Therefore, the intervention was adapted to guide Activators to provide support flexibly until participants became confident to attend activities alone.

The power of a group setting in facilitating engagement in organized activities is well known (Burke, Carron, Eys, Ntoumanis, & Estabrooks, 2006). The findings of this study stressed the importance of social interaction among the ACE intervention participants as well as between activators and their supported participants. As a result, the number of opportunities for ACE participants to meet each other was increased to facilitate the formation of social networks and build an “ACE” group identity, defined as a shared sense of belonging to the ACE group. However, it was stressed that the Activators’ training should actively consider individual participants’ preferences, confidence, and readiness for forming ACE groups.

The initial ACE model anticipated that each Activator would support 4–5 participants. The findings of our study indicated that this was likely to be too great a burden and that a more manageable number would be 2–3 participants per Activator as a maximum.

This study highlighted the importance of participant autonomy and therefore it was decided that although the scheduled meetings would be regular to help participants establish routines, they should be arranged around participants' schedules and not be preset. Free and low cost activities were incorporated into the list of local activities provided. This list was intended to be a dynamic, allowing participants to add their own knowledge of local initiatives and further enhancing their autonomy.

Forty percent of older adults use e-mail or text messaging and 42.7% use the internet, with higher usage associated with younger age, male gender, White race, and higher education level (Gell, Rosenberg, Demiris, LaCroix, & Patel, 2013). However, data from this study indicated that mobile phones and computers are only used regularly by a minority of the target group, indicating decisions based on national statistics should be made with caution for this cohort. As a result, it was decided that ACE intervention would primarily rely on paper-based methods of communication while monitoring the use of electronic devices for future intervention adaptations.

Recruitment

Recruitment is an issue that confounds the potential impact of many public health interventions (McHenry et al., 2015; Stineman et al., 2011; Withall et al., 2012). It was the first issue raised by most older group participants and older volunteers: "How would you get these people to come?" Clearly effective recruitment strategies tackling the major barriers to participation (lack of motivation, confidence, and readiness to change; transport issues; security concerns; and cost) were essential if the ACE intervention was to be fully tested as a feasible community-based public health intervention. The ACE recruitment materials and the Activator training program were refined to focus on addressing these barriers.

A lack of confidence or competence among potential participants has been shown to negatively impact engagement, particularly in physical activity (Costello, Kafchinski, Vrazel, & Sullivan, 2011). This issue was commonly cited and reinforced the importance of ACE's focus on "getting out and about more." Low confidence often leads to a powerful reluctance to attend an unfamiliar group alone (Crombie et al., 2004; Withall et al., 2012), with a particular fear of feeling excluded by a long-established social network or "cliquiness." These data strongly supported the ACE intervention focus on providing "someone to go with" (the Activator) as a means of tackling concerns about attending alone and providing an ally in establishing connections with the group. ACE recruitment materials were adapted to highlight the provision of this support to help those affected overcome this barrier. In addition, a focus on day rather than evening activities and a reference to the involvement of all academic institutions involved were added to the materials to tackle any security concerns.

There is significant evidence that ambivalence and being "set in their ways" negatively impact the adoption of improved health behaviors among older adults (Crombie et al., 2004; Moschny, Platen, Klaaßen-Mielke, Trampisch, & Hinrichs, 2011). This was tackled in the recruitment materials by placing more emphasis on the breadth of activities available, through providing several examples of groups and programs to suit a wide range of interests. Opportunities for socializing are a powerful motivator for older people to engage in activities, and the findings of this study strongly supported this (Devereux-Fitzgerald, Powell, Dewhurst, French, & Sharp, 2016). This became a major focus of the ACE intervention recruitment materials, as was the role of the "Activator" as an important source of social support and social interaction.

Many of the recruitment mechanisms proposed in this study have been routinely tested as methods of recruitment into research (Knechel, 2013; McMurdo, Witham, & Gillespie, 2005). However, despite direct, personalized invitation to participate being a relatively successful means of recruiting research participants, it is not an approach commonly used in public health programs. Based on the findings of the study, it was decided that the ACE recruitment process would include direct approaches to sheltered housing complexes: the seeking of referrals from social services, churches, and a wide range of community groups and the utilization of local media (newspapers and radio), but that the main thrust of the recruitment strategy would be a personalized mailed invitation supported by a leaflet door drop.

Volunteers are vital to many community-based interventions (Time Bank, 2015), without whom success and sustainability are jeopardized. However, there is limited literature available to provide guidance on maintaining commitment and avoiding drop out. The findings of this study indicate some key strategies for tackling these issues. These include making the level of commitment required clear at recruitment, establishing a thorough screening process ideally incorporating an application form, providing a detailed and realistic role description, organizing a face-to-face meeting, and requiring references. The older volunteers stressed that overburdening volunteers with supervision and training should be avoided. As a result, Activators' supervision meetings were organized in groups rather than one-to-one, incentivizing attendance with an opportunity for social interaction and exchange of experiences, successes, and challenges. The identification of the importance of high quality volunteer support led to the enrichment of the ACE intervention with a paid volunteer Coordinator role who would provide Activators with support and advice, acknowledgment, and appreciation.

Theoretical Implications

In accordance with the PMLBC, the theoretical framework of the ACE intervention, the findings highlighted that behavior change among the target group would not be a

linear process and that specific attention had to be paid to supporting motivation and activation and sustaining behavior change (Gillison et al., 2015).

In order to address these challenges, we incorporated Motivational Interviewing techniques (Miller & Rollnick, 2012) into the Activator training program providing simple tools and techniques with which to evaluate readiness to change and tailor the motivational plan to the individual's needs. Adhering to the PMLBC, and based on the findings of this study, some ongoing face-to-face support and increased telephone support were also added to the Activator role.

The findings of this study provide further support for fine tuning the intervention to satisfy the need for relatedness, autonomy, and competence according to the principles of SDT (Deci & Ryan, 2002; Teixeira et al., 2012). As a result, we included limited-term support (6 months) with a detailed action plan for gradual disengagement of the Activators to avoid creating dependencies. We enhanced relatedness with the provision of social support via an Activator, the facilitation of relationships building at community activities and the creation of ACE participant groups.

Strengths and Weaknesses

The major strength of this study is the provision of an example of best practice in the development of an intervention using a systematic multistakeholder approach with PPI at its heart. Using a rigorous approach, this study identified a comprehensive list of factors that could positively impact recruitment and retention of older adults and older volunteers into an intervention designed to increase physical activity and community engagement. This study also described the process of refining an intervention, addressing practical issues, and increasing the possibility for success.

The three groups of participants (older group participants, older volunteers, and volunteer managers) were recruited via different recruitment strategies, with the aim of developing an in-depth understanding of a phenomenon (engagement in community groups and activities) rather than making probabilistic generalizations to a population (Popay, Rogers, & Williams, 1998). The different perspectives reported show the importance of having such a broad range of inputs which is a key element of all phases of ACE development.

All recruited participants in this study had experiences of engaging with some form of community activity. They might not have provided a full account of the barriers people who never engage with such activities might face. However, many participants only engaged with one group and were able to present the challenges of engaging with unfamiliar groups. In addition, people who volunteer to participate in active aging studies may differ from those who do not as they are usually more physically and socially active, are healthy, and have higher socioeconomic status. Finally, all participants were White British; this limits the generalizability of the findings as they are not reflective of the views of ethnically diverse older adults.

Conclusion

The initial ACE intervention was refined using a systematic multistakeholder approach and with close adherence to guidelines for developing complex interventions. This rigorous approach led to the refinement of the ACE intervention in order to be tested at a subsequent stage for feasibility and acceptability via a pilot study. The fact that ACE is rooted in community thinking with PPI at its heart increases its potential to transfer successfully to a community setting, once effectiveness and cost-effectiveness have been established. The findings also provide guidance for similar community initiatives by highlighting the importance of effective recruitment strategies that tackle major barriers (lack of motivation, confidence, and readiness to change, transport issues, security concerns, and cost), offering a range of appealing activities, actively supporting increased social interaction and providing social support to attend. In volunteer-led schemes, being clear about the level of commitment required and thorough screening are key, while excessive supervision and training should be avoided. Volunteers appreciate being well supported and having their contribution regularly acknowledged.

The positive reaction of all stakeholders toward the ACE intervention indicates that there is a strong potential for peer-volunteering approaches developed using the PMLBC and underpinned by SDT, to support older adults in engaging in community activities. This theoretical framework will be evaluated through a rigorous process evaluation in subsequent studies.

Supplementary Material

Please visit the article online at <http://gerontologist.oxfordjournals.org/> to view supplementary material.

Funding

The ACE project was funded by the Medical Research Council managed Lifelong Health and Well-being Phase 2 Initiative (Grant ID 98858).

Acknowledgments

We thank all the study participants for their time and generosity.

References

- Bauman, A., Merom, D., Bull, F. C., Buchner, D. M., & Singh, M. A. F. (2016). Updating the evidence for physical activity: summative reviews of the epidemiological evidence, prevalence, and interventions to promote "active aging." *The Gerontologist*, 56(Suppl. 2), S268–S280. doi:10.1093/geront/gnw031
- Booth, A., Hannes, K., Harden, A., Noyes, J., Harris, J., & Tong, A. (2014). COREQ (Consolidated Criteria for Reporting Qualitative Studies). In D. Moher, D. G. Altman, K. F. Schulz, I. Simera, & E. Wager (Eds.), *Guidelines for reporting health*

- research: A user's manual (pp. 214–226). Oxford, UK: John Wiley. doi:10.1002/9781118715598.ch21
- Burke, S. M., Carron, A. V., Eys, M. A., Ntoumanis, N., & Estabrooks, P. A. (2006). Group versus individual approach? A meta-analysis of the effectiveness of interventions to promote physical activity. *Sport and Exercise Psychology Review*, 2, 19–35.
- Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: A systematic review of health promotion interventions. *Aging & Society*, 25, 41–67. doi:10.1017/s0144686x04002594
- Chodzko-Zajko, W. J., Proctor, D. N., Fiatarone Singh, M. A., Minson, C. T., Nigg, C. R., Salem, G. J., & Skinner, J. S. (2009). Exercise and physical activity for older adults: American College of Sports Medicine position stand. *Medicine and Science in Sports and Exercise*, 41, 1510–1530. doi:10.1249/mss.0b013e3181a0c95c
- Costello, E., Kafchinski, M., Vrazel, J., & Sullivan, P. (2011). Motivators, barriers, and beliefs regarding physical activity in an older adult population. *Journal of Geriatric Physical Therapy*, 34, 138–147. doi:10.1519/jpt.0b013e31820e0e71
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. *British Medical Journal*, 337, a1655. doi:10.1136/bmj.a1655
- Craig, R., Mindell, J., & Hirani, V. (2009). *Health survey for England 2008: Physical activity and fitness*. Leeds, UK: The NHS Information Centre for Health and Social Care. Retrieved December 14, 2015, from http://www.ic.nhs.uk/webfiles/publications/HSE/HSE08/HSE_08_Summary_of_key_findings.pdf
- Crombie, I. K., Irvine, L., Williams, B., McGinnis, A. R., Slane, P. W., Alder, E. M., & McMurdo, M. E. T. (2004). Why older people do not participate in leisure time physical activity: A survey of activity levels, beliefs and deterrents. *Age and Aging*, 33, 287–292. doi:10.1093/ageing/afh089
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage.
- Davis, M. G., Fox, K. R., Hillsdon, M., Coulson, J. C., Sharp, D. J., Stathi, A., & Thompson, J. L. (2011). Getting out and about in older adults: The nature of daily trips and their association with objectively assessed physical activity. *International Journal of Behavioural Nutrition and Physical Activity*, 8, 116–125. doi:10.1186/1479-5868-8-116
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY: The University of Rochester Press.
- Department of Health. (2011). *Start active, stay active: A report on physical activity for health from the four home countries' Chief Medical Officers*. Retrieved December 14, 2015, from http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_128210.pdf
- Devereux-Fitzgerald, A., Powell, R., Dewhurst, A., French, D. P., & Sharp, T. (2016). The acceptability of physical activity interventions to older adults: A systematic review and meta-synthesis. *Social Science & Medicine*, 58, 14–23. doi:10.1016/j.socscimed.2016.04.006
- Economos, C., & Blondin, S. (2014). Obesity interventions in the community. *Current Obesity Reports*, 3, 199–205. doi:10.1007/s13679-014-0102-2
- Foster, L., & Walker, A. (2015). Active and successful aging: A European policy perspective. *The Gerontologist*, 55, 83–90. doi:10.1093/geront/gnu028
- Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology*, 13, 117. doi:10.1186/1471-2288-13-117
- Gateway to Research. (2015). The Avon network for the promotion of active ageing in the community. Retrieved December 16, 2015, from <http://gtr.rcuk.ac.uk/project/D2AC5A4B-6E17-4C5F-9304-B2F9798DC988>
- Gell, N. M., Rosenberg, D. E., Demiris, G., LaCroix, A. Z., & Patel, K. V. (2013). Patterns of technology use among older adults with and without disabilities. *The Gerontologist*, 55, 412–421. doi:10.1093/geront/gnt166
- Gillison, F., Stathi, A., Reddy, P., Perry, R., Taylor, G., Bennett, P., ... Greaves, C. (2015). Processes of behavior change and weight loss in a theory-based weight loss intervention program: A test of the process model for lifestyle behavior change. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 2. doi:10.1186/s12966-014-0160-6
- Greaves, C., Gillison, F., Stathi, A., Bennett, P., Reddy, P., Dunbar, J., ... Francis, M. (2015). Waste the waist: A pilot randomised controlled trial of a primary care based intervention to support lifestyle change in people with high cardiovascular risk. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 1. doi:10.1186/s12966-014-0159-z
- Greaves, C. J., Sheppard, K. E., Abraham, C., Hardeman, W., Roden, M., Evans, P. H., & Schwarz, P. (2011). Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. *BMC Public Health*, 11, 119. doi:10.1186/1471-2458-11-119
- Hamer, M., de Oliveira, C., & Demakakos, P. (2014). Non-exercise physical activity and survival: English Longitudinal Study of Aging. *American Journal of Preventive Medicine*, 47, 452–460. doi:10.1016/j.amepre.2014.05.044
- Horodyska, K., Luszczynska, A., van den Berg, M., Hendriksen, M., Roos, G., De Bourdeaudhuij, I., & Brug, J. (2015). Good practice characteristics of diet and physical activity interventions and policies: An umbrella review. *BMC Public Health*, 15, 19. doi:10.1186/s12889-015-1354-9
- Knechel, N. A. (2013). The challenges of enrolling older adults into intervention studies. *The Yale Journal of Biology and Medicine*, 86, 41.
- Littlecott, H. J., Fox, K. R., Stathi, A., & Thompson, J. L. (2015). Perceptions of success of a local UK public health collaborative. *Health Promotion International*. doi:10.1093/heapro/dav088
- Marquet, O., & Miralles-Guasch, C. (2015). Neighborhood vitality and physical activity among the elderly: The role of walkable environments on active aging in Barcelona, Spain. *Social Science & Medicine*, 135, 24–30. doi:10.1016/j.socscimed.2015.04.016
- McDonnall, M. C. (2011). The effect of productive activities on depressive symptoms among older adults with dual sensory loss. *Research on Aging*, 33, 234–255. doi:10.1177/0164027511399106
- McHenry, J. C., Insel, K. C., Einstein, G. O., Vidrine, A. N., Koerner, K. M., & Morrow, D. G. (2015). Recruitment of older adults: Success may be in the details. *The Gerontologist*, 55, 845–853.
- McMunn, A., Nazroo, J., Wahrendorf, M., Breeze, E., & Zaninotto, P. (2009). Participation in socially-productive activities, reciprocity and wellbeing in later life: Baseline results in England. *Aging & Society*, 29, 765–782. doi:10.1017/s0144686x08008350

- McMurdo, M. E., Witham, M. D., & Gillespie, N. D. (2005). Including older people in clinical research: Benefits shown in trials in younger people may not apply to older people. *BMJ: British Medical Journal*, *331*, 1036. doi:10.1136/bmj.331.7524.1036
- Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. New York: Guilford Press.
- Morrow-Howell, N. (2010). Volunteering in later life: Research frontiers. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *65*, 461–469. doi:10.1093/geronb/gbq024
- Moschny, A., Platen, P., Klaaßen-Mielke, R., Trampisch, U., & Hinrichs, T. (2011). Barriers to physical activity in older adults in Germany: A cross-sectional study. *International Journal of Behavioural Nutrition and Physical Activity*, *8*, 121–131. doi:10.1186/1479-5868-8-121
- Okun, M. A., Yeung, E. W., & Brown, S. (2013). Volunteering by older adults and risk of mortality: A meta-analysis. *Psychology and Aging*, *28*, 564. doi:10.1037/a0031519
- Parkinson, L., Warburton, J., Sibbritt, D., & Byles, J. (2010). Volunteering and older women: Psychosocial and health predictors of participation. *Aging and Mental Health*, *14*, 917–927. doi:10.1080/13607861003801045
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Los Angeles: Sage.
- Popay, J., Rogers, A., & Williams, G. (1998). Rationale and standards for the systematic review of qualitative literature in health services research. *Qualitative Health Research*, *8*, 341–351. doi:10.1177/104973239800800305
- Pope, C., & Mays, N. (1995). Qualitative research: Reaching the parts other methods cannot reach: An introduction to qualitative methods in health and health services research. *British Medical Journal*, *311*, 42–45. doi:10.1136/bmj.311.6996.42
- Richard, L., Gauvin, L., Gosselin, C., & Laforest, S. (2009). Staying connected: Neighborhood correlates of social participation among older adults living in an urban environment in Montreal, Quebec. *Health Promotion International*, *24*, 46–57. doi:10.1093/heapro/dan039
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.
- Robertson, L., Hale, B., Waters, D., Hale, L., & Andrew, A. (2014). Community peer-led exercise groups: Reasons for success. *The Internet Journal of Allied Health Sciences and Practice*, *12*, Article 9.
- Stathi, A., Fox, K., Withall, J., Bentley, G., & Thompson, J. L. (2014). *Promoting physical activity in older adults: A guide for local decision makers*. Retrieved December 15, 2015, from <http://ageactionalliance.org/wordpress/wp-content/uploads/2014/03/AVONet-report-2014-March.pdf>
- Stathi, A., Gilbert, H., Fox, K. R., Coulson, J. C., Davis, M. G., & Thompson, J. L. (2012). Determinants of neighborhood activity of adults age 70 and over: A mixed-methods study. *Journal of Aging and Physical Activity*, *20*, 148–170. doi:10.1123/japa.20.2.148
- Stineman, M. G., Strumpf, N., Kurichi, J. E., Charles, J., Grisso, J. A., & Jayadevappa, R. (2011). Attempts to reach the oldest and frailest: Recruitment, adherence, and retention of urban elderly persons to a falls reduction exercise program. *The Gerontologist*, *51*(Suppl. 1), S59–S72. doi:10.1093/geront/gnr012
- Tan, E. J., Rebok, G. W., Yu, Q., Frangakis, C. E., Carlson, M. C., Wang, T., ... Fried, L. P. (2009). The long-term relationship between high-intensity volunteering and physical activity in older African American women. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *64*, 304–311. doi:10.1093/geronb/gbn023
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioural Nutrition and Physical Activity*, *9*, 78. doi:10.1186/1479-5868-9-78
- Time Bank. (2015). *Key facts*. Retrieved December 16, 2015, from <http://timebank.org.uk/key-facts>
- United Nations, Department of Economic and Social Affairs, Population Division. (2013). *World population aging*. New York: United Nations, Department of Economic and Social Affairs, Population Division
- van Groenou, M. B., & van Tilburg, T. (2012). Six-year follow-up on volunteering in later life: A cohort comparison in the Netherlands. *European Sociological Review*, *28*, 1–11. doi:10.1093/esr/jcq043
- Vermeulen, J., Neyens, J. C., van Rossum, E., Spreeuwenberg, M. D., & de Witte, L. P. (2011). Predicting ADL disability in community-dwelling elderly people using physical frailty indicators: A systematic review. *BMC Geriatrics*, *11*, 33. doi:10.1186/1471-2318-11-33
- Wahrendorf, M., & Siegrist, J. (2010). Are changes in productive activities of older people associated with changes in their well-being? Results of a longitudinal European study. *European Journal of Ageing*, *7*, 59–68. doi:10.1007/s10433-010-0154-4
- Walker, R. B., & Hiller, J. E. (2007). Places and health: A qualitative study to explore how older women living alone perceive the social and physical dimensions of their neighborhoods. *Social Science & Medicine*, *65*, 1154–1165. doi:10.1016/j.socscimed.2007.04.031
- Whelan, J., Love, P., Pettman, T., Doyle, J., Booth, S., Smith, E., & Waters, E. (2014). Cochrane update: Predicting sustainability of intervention effects in public health evidence: Identifying key elements to provide guidance. *Journal of Public Health*, *36*, 347–351. doi:10.1093/pubmed/fdu027
- Windle, G., Hughes, D., Linck, P., Russell, I., & Woods, B. (2010). Is exercise effective in promoting mental well-being in older age? A systematic review. *Aging & Mental Health*, *14*, 652–669. doi:10.1080/13607861003713232
- Withall, J., Jago, R., & Fox, K. R. (2012). The effect of a community-based social marketing campaign on recruitment and retention of low-income groups into physical activity programmes—a controlled before-and-after study. *BMC Public Health*, *12*, 836. doi:10.1186/1471-2458-12-836
- Withall, J., Stathi, A., Davis, M., Coulson, J., Thompson, J. L., & Fox, K. R. (2014). Objective indicators of physical activity and sedentary time and associations with subjective well-being in adults aged 70 and over. *International Journal of Environmental Research and Public Health*, *11*, 643–656. doi:10.3390/ijerph110100643
- World Health Organization. (2015). *World report on ageing and health*. Luxembourg, Europe: World Health Organization. Retrieved December 14, 2015, from http://apps.who.int/iris/bitstream/10665/186468/1/WHO_FWC_ALC_15.01_eng.pdf