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ORIGINAL RESEARCH

Recruiting Older Adults Into a Community-Based Research Study in Northern Ireland: Strategies, Rates, and Timescales

Conor Cunningham,[1] Michael Adams,[2] Maeve O'Doherty,[2] Heather Spence,[2] Ruth D. Neill,[1,3] Malcolm Brown,[2,4] Chris Callaghan,[3] Ellen Elizabeth A. Simpson,[5] Margaret E. Cupples,[6] Suzanne M. McDonough,[7] Roger O'Sullivan,[3] Wendy Hardeman,[8] Marie H. Murphy,[4,9] Mark A. Tully,[2] and On Behalf of the Walk With Me Study Team

[1]School of Health Science, Ulster University, Belfast, United Kingdom; [2]School of Medicine, Ulster University, Belfast, United Kingdom; [3]Institute of Public Health, Belfast, United Kingdom; [4]School of Sport and Exercise Science, Ulster University, Belfast, United Kingdom; [5]Psychology Research Institute, School of Psychology, Ulster University, Belfast, United Kingdom; [6]Centre for Public Health Queen's University, Belfast, United Kingdom; [7]School of Physiotherapy, RCSI University of Medicine and Health Sciences, Dublin, Ireland; [8]School of Health Sciences, University of East Anglia, Norwich, United Kingdom; [9]Physical Activity for Health Research Centre (PHARC), Institute for Sport, Physical Education and Health Sciences, University of Edinburgh, Edinburgh, United Kingdom

Background: Recruiting older adults to public health interventions is challenging, and underrepresentation can have important consequences for research outcomes and scalability. This paper reports the process of recruiting participants and the effectiveness of strategies employed in the "Walk with Me" study, a physical activity intervention targeting older adults in areas of socioeconomic disadvantage in Northern Ireland. ***Methods:*** Thirty-eight community organizations and 10 general practices located in areas of socioeconomic disadvantage were involved in recruiting activity over an 18-month period. Recruitment methods included letters from general practices and the distribution of study information through local community organizations. Demographic information about participants and how they heard about the study were collected as part of baseline data collection for the trial. ***Results:*** Of the 364 participants recruited, information on recruitment source was available from 355 (124 males, 230 females, and 1 who did not identify as either male or female). Of these, 328 (92.4%) self-reported that they were recruited via a letter from their general practitioner, and 27 (7.6%) reported being recruited from other sources. Postintervention focus groups with 30 participants identified their reasons for participating included a perception that their general practitioner had selected them personally, it provided an opportunity for a health check as access to a general practitioner can be difficult, and they were encouraged to participate by family members. ***Conclusions:*** Recruitment to community-based interventions requires partnerships with general practices to ensure successful completion. Findings provide insight into the recruitment of older adults in a community-based physical activity intervention.

Q2 Q1

Keywords: XXX

Globally, populations are aging, and the proportion of the population aged 65 years or older is rapidly increasing.[1] For many older adults, aging is defined by rapid declines in levels of physical activity, loss of mobility and functional independence, and premature morbidity.[2] This stage of life, therefore, represents an important period to promote physical activity to improve functions of daily living and slow progression of disease and disability.

International guidelines recommend that older adults should engage in at least 150 minutes of moderate-intensity physical activity per week, with strength, balance, and coordination activities incorporated on at least 2 days of the week.[3] For those older adults meeting international physical activity recommendations, there is a significant reduction in risk of all-cause mortality, Alzheimer's disease, and incident depression.[3,4] This is why promoting active and healthy aging is a major public health priority.[5] This is especially true for people living in socioeconomically disadvantaged communities, where older adults' levels of habitual physical activity are the lowest,[6] demonstrating a need for effective interventions in this population.

Systematic reviews of physical activity interventions for community-dwelling older adults have demonstrated that small- to medium-sized increases in physical activity in the medium term (up to 1 year) are achievable with interventions that encourage older adults to perform some type of aerobic activity, of which walking is the predominant form.[7,8] However, many previous studies have not included the types of individuals who would benefit the most, such as low active groups and those living in socioeconomically disadvantaged communities.[9] These underserved groups have their own unique needs that should be considered when designing an intervention.[9]

The underrepresentation of older adults from socioeconomically disadvantaged communities may be related to challenges in recruiting and retaining these individuals into research studies. This is especially true in research projects with limited timelines for recruitment and delivery.[10] Older adults from socioeconomically disadvantaged communities can have their own specific barriers to recruitment as individuals within these populations may experience deteriorating health, lack of transport, difficulty accessing services, and sometimes a poor understanding of written recruitment materials.[11] These obstacles to recruitment require additional time and resources to overcome. For example, in a randomized controlled trial of a cancer awareness intervention in participants from

Neill https://orcid.org/0000-0001-6387-4213
Tully (m.tully@ulster.ac.uk) is corresponding author, https://orcid.org/0000-0001-9710-4014

Q4 Q3

socioeconomically disadvantaged communities, lay advisors were used to approach local community settings to engage potential participants.[10] It can also mean that participants recruited into research studies may not accurately reflect the populations to which the research is most relevant.[11] This could also potentially widen health inequalities in health outcomes, if interventions that lack adequate representation from underserved communities are scaled up for the public.[10,12]

It has been reported that only approximately half of research studies funded by the United Kingdom government achieve their recruitment goal.[13] The consequences of failure to recruit to trials are considerable, including wasted resources, increased likelihood of type 2 errors, and a widening of health inequalities.[14] Challenges in recruiting older adults to walking interventions have been recognized,[15] but research in this area is lacking. Withall et al[16] reported on the challenges encountered recruiting older adults with mobility disability to a group-based exercise program in the United Kingdom. They identified that successful strategies, including written invitations from general practitioners (GPs), alongside targeted approaches such as recruiting through community groups, are required to achieve more representative cohorts.[16] They concluded that all trials should provide recruitment data to enable evidence-based planning of future trials.

The aim of this study therefore is to report the process of recruiting participants to the "Walk with Me" (WWM) study and the effectiveness of the strategies employed. The WWM study is a randomized controlled trial of a peer-led walking intervention for older adults aged 60 years and over, living in socioeconomically disadvantaged communities.[17]

Methods

The WWM intervention design and development has previously been described in detail.[17] The study was conducted in areas of socioeconomic disadvantage, defined as the most disadvantaged quartile of electoral wards in XXXXX, based on the XXXXX Multiple Deprivation Measure.[18] Briefly, this was a 12-week community-based walking program led by volunteer peer mentors. During the initial period (weeks 1–4), each intervention group participant wore a pedometer and set weekly step goals, with the support of a trained peer mentor. During weeks 5 to 8, participants and mentors met regularly to walk and discuss step goals and barriers to increasing physical activity. In the final phase (weeks 9–12), participants and mentors continued to set step goals and planned activities to maintain their activity levels beyond the intervention period. Participants signed a consent form before commencing the study. The WWM Study was approved by the North of Scotland NHS Research Ethics Committee (ref: XXXXX).

Methods of Recruitment

The target sample size was 348.[17] As recommended in previous research,[19] we employed a range of recruitment strategies to recruit participants aged 60 years and over to the study. Throughout the trial, recruitment rates and approaches were reviewed with the public involvement group and Trial Steering Committee. The materials were not changed throughout the study. One of the main changes was moving from targeted mailing from general practices to mass mailing after 3 months of recruitment.

General Practice Recruitment

Based on our pilot study, we anticipated recruiting 300 participants (86% of the sample) from general practice. Nineteen general practices, located in the target areas of socioeconomic disadvantage, were approached through the XXXXX Clinical Research Network (Northen Ireland Clinical Research Network), which facilitates clinical trials in health and social care settings in XXXXX. These practices represent most of those available in the target areas. The process to select practices was as follows: (1) the most disadvantaged electoral wards in Northern Ireland were identified; (2) the Northen Ireland Clinical Research Network reviewed this list, suggesting areas they had existing relationship with practices through which they have recruited previously; and (3) wards that were close or next to those shortlisted were also selected, and GPs were contacted to invite participation. In Northern Ireland, 100% of residents are registered with their GP.

Practices were asked to search and review their practice list and send a postal invite to potentially eligible participants. The anticipated time frame for this was 12 months (1 practice per month), and 25 participants per practice. We were expecting approximately a 5% recruitment rate from posted letters. Recruitment materials were provided in English language only. Individuals that expressed an interest in participating were invited to contact the study team if they wished to participate, using a reply slip and a stamped addressed envelope or by telephone or email. In recognition of the staff time required to search their database and prepare letters, practices received £50 per patient recruited to the study. No incentives were offered to participants.

Community-Based Recruitment

Community organizations and local council hubs, libraries, charitable organizations, faith-based groups, and older adults' charities located in target areas were approached to see if they would partner with the study. A "community saturation" approach was implemented to boost recruitment through local retail and service providers within target areas of socioeconomic disadvantage, which involved poster placement and leaflet drops in convenience stores, coffee shops, food banks, and local libraries.

To identify relevant groups, we first contacted individuals with a remit for older adults or physical activity, working in the local authorities, charitable groups, or Health and Social Care Trusts in the target area. We asked them to nominate relevant "older adults" groups in local communities. To supplement this, we also searched online for local community facilities (libraries, community centers, etc) to identify places to advertize the project.

We then contacted the scheme co-ordinator (individual responsible for organizing local community schemes or programs for older adults)/center manager of the nominated organizations by phone/email to arrange a face-to-face meeting. At this face-to-face meeting, the broad study aims were discussed, and potential avenues for recruitment identified. Following the meeting, information about the opportunity to participate in the study was supplied to the community organizations for onward distribution to potential participants through identified avenues. Examples of this included distribution of a study flyer through email databases, posting information on social media, and displaying posters in their facility. In addition, opportunities for a member of the research team to attend groups for in-person recruitment were offered. To boost the recruitment of men, we specifically targeted existing groups with high numbers of males, such as sporting organizations. Individuals who wished to participate were asked to contact the

study team by telephone, in writing by returning a reply slip, or by email.

To boost the recruitment of peer mentors in the study, the U3A (University of the Third Age) was recruited in target areas. Information about the study was distributed to potential peer mentors through the same process described above. One-off events (eg, community and charity codelivered tea dances, and community partnership meetings) were also used to increase awareness of the study and as vehicles for recruitment. An event to promote active aging, delivered through the XXXXX Science Festival, was used to increase awareness of the study.

Data Collection

Demographic information (age and sex) on participants recruited to the study was collected as part of baseline data collection for the trial, by questionnaire, prior to their allocation to intervention or control groups. Participants were also asked how they learned of the study as part of this baseline survey. Information on the characteristics of each general practice was taken from the Business Services Organization Open access dataset for GP practices in XXXXX.[20] Data for recruitment from GP practices was not normally distributed and therefore reported as median and interquartile range (IQR).

As part of the analysis of recruitment, a purposeful sample of 30 participants in the intervention group were invited to 1 of 6 focus groups after the intervention (at 12 wk) as part of the process evaluation. A mixture of males and females across different age groups and study locations were invited. Focus groups contained a mix of participants recruited via GP and community organizations, but this variable was not used in the purposeful sampling. The focus groups were run by a PhD researcher not involved in delivering the intervention. Within these groups, participants were asked to reflect on their motivation for taking part in the program as part of a broader discussion of their experience(s) of the intervention. Audio recordings of focus groups were transcribed verbatim and uploaded into QSR NVivo version 15 along with field notes. Data were analyzed using reflexive thematic analysis.[21] Although discussion in focus groups mainly focused on experiences within the program, this paper only reports on aspects of the discussion relating to their experience of being invited to participate.

Results

In total, recruitment took 18 months to complete (September 2022 to March 2024), 6 months longer than originally planned. A total of 364 participants were recruited, of whom 355 (97.5%) returned information on how they were recruited.

Sources of Recruitment

Recruitment of General Practices

Nineteen general practices were approached through the Northen Ireland Clinical Research Network, which facilitates clinical trials in health and social care settings in XXXXX. Six did not respond, and 3 declined to participate. It took between 1 and 14 months (median: 2, IQR: 5) between initial contact with a practice to sending out invite letters. Delays were due to a range of reasons. It was sometimes challenging to align recruitment from practices with the availability of trained mentors; sometimes practices did not have time available to post invites in area where mentors had already been trained, and when they did post invites mentors may have no longer been available. It was also sometimes difficult to find suitable times for a practice to accommodate the process of screening practice lists and sending letters due to other health services pressures such as flu vaccination programs. The total patient list size of the 10 practices that took part was 88,134, ranging from 6613 to 11,316 patients. Patient lists were screened by study inclusion/ exclusion criteria by both NICPRN and practice staff (practice manger and/or lead GP). Most of the administration of mail outs was supported by the project team. On average, each practice posted 992 invite letters to potential participants (median: 768, IQR: 678, range: 100–2685).

Recruitment From Community Organizations

Thirty-eight community networks and organizations were engaged in recruitment activity over the course of the recruitment period. These included local health authorities (eg, "Caring communities" networks, befriending programs, and social prescribing services/ community navigators; n = 8); local government services (eg, sport services, age-friendly coordinators, leisure service providers, and physical activity referral scheme coordinators; n = 7); and community services/private enterprises (n = 23). Of these, 6 were predominately men's groups. These included Men's Sheds and sports clubs (football and Gaelic association clubs). Ten community groups requested a member of the research team attend and speak to attendees about the study in person. The others distributed information about the study to their members.

Number of Participants Recruited by Source

Of the 355 (97.5% of overall recruited sample) participants who answered the question regarding how they heard about the study, 328 were recruited via a letter from their GP and 27 from other sources (Table 1). The median recruitment rate for participants from general practices (number recruited as a proportion of letters sent from GP) was 3.3% (IQR: 2, range: 1%–11%). Therefore, for every 100 participants recruited, a total practice list size of 26,870 patients was required, and 3046 invitation letters were sent.

Recruiting 328 participants from the general practices cost £16,400 in direct costs to the practices. Cost of posting letters to patients, which included an information sheet, reply slip, and reply-paid envelope, cost £13,786.80. Therefore, the cost of recruiting 1 participant was £92.03. We do not have an accurate estimate of researchers' time and travel expenses, so they are not included in this costing.

A further 47 older adults were recruited as peer mentors to assist in delivering the intervention. These were individuals who expressed an interest in participating but were deemed ineligible as they were already active, having met or exceeded current physical activity guidelines. Of these, 32 were recruited through the GP recruitment process described. The remainder of mentors (n = 15) were recruited through the community avenues described above.

Participant Views on Recruitment

A total of 30 participants (19 females and 11 males; mean age 70.7 years) agreed to participate in the focus groups, each comprising of between 4 and 9 people (see Table 2). Participants gave 3 main reasons for participating: (1) selection by their GP, (2) lack of access to general practice, and (3) encouragement from family members.

Table 1 Demographic Characteristics of Participants Recruited to the Walk With Me Study According to the Source of Recruitment

	Overall		Sex							Age		
			Male		Female		Other			<70 y		≥70 y
	n	%	n	%	n	%	n	%	n	%	n	%
General practice	328	92.4	118	95.2	209	90.9	1	100.0	190	92.7	138	92.0
Friend or relative	11	3.1	3	2.4	8	3.5	0	0.0	7	3.4	4	2.7
Email/social media of a charity for older people	2	0.6	1	0.8	1	0.4	0	0.0	2	1.0	0	0.0
Poster or flyer at community organization	14	3.9	2	1.6	12	5.2	0	0.0	6	2.9	8	5.3
Total	355	—	124	34.9	230	64.80	1	0.3	205	58.0	150	42.0

Table 2 Demographic Characteristics of Focus Group Participants

Participant characteristics (n = 30)	
Age, mean (SD)	70.7 (7.1)
Females, n (%)	19 (63.3%)
Living alone, n (%)	11 (36.7%)
Number chronic health conditions, mean (SD)	1.6 (1.1)
>Secondary school education, n (%)	12 (40.0%)

Selection by Their GP

One of the main reasons participants responded to the invitation letter was that they perceived that their GP had selected them personally on the basis that the study would be beneficial, which motivated them to engage.

> (My doctor) recommended this to me. Just because she thought obviously, I needed it. (P21)

One participant noted that they would not have signed up if they had received the invitation from somewhere else, like the university. This reinforces the respected and trusted role of GPs in health promotion and their valuable contribution to recruitment to studies.

> Well (the GP) was really the reason I looked into it too. I would have been afraid of anybody in the university, you know. I thought, you know, that getting it from the GP to do it, that really encouraged me very much. (P13)

This trusted and valued relationship has been built up over time and through a range of personal experiences. The personal connection between a GP and patient was seen as the reason why this participant was keen to respond to the invitation:

> I was one of (name of doctor) patients as well. And she was here attending to my husband before he died, so she knew how close we were. And whenever he did pass on, ten years ago, um, she was very supportive and would call in. She's just a lovely, lovely lady and would call in and know, just knew how much I missed him because we were always together. So, she has helped me really. (P18)

Although, it should be noted that another participant did not know why they had been selected but signed up anyway:

> It was through the surgery that, um, I got onto the programme. I'm not sure why (my doctor) put my name forward. (P20)

Lack of Access to General Practice

A novel motivation identified by 1 participant was the opportunity to engage with a health professional. Delivery of primary care has changed since the COVID-19 pandemic, which has made it challenging to get an appointment for a health check.

> I think the GP's are actually . . . . Well they're saying there's so few of them now, the whole health service thing is probably affecting everybody because there's no input for us. You know, we're just here. I don't see a GP, I see nobody. I haven't seen a health person, a health professional for . . . couple of years maybe. (P11)

Encouragement From Family and Friends

Finally, it was noted that friends and family members sharing information about the study was a motivator. For example, 1 participant received information about the study through a family member who had received an invite letter from their GP, demonstrating the potential for invite letters to reach beyond the actual patients invited.

> I wasn't invited on the programme, but my husband got the letter from the GP and he said no, he wasn't doing it. And I said, "well, I think I would like to do it." And, um, I got accepted. (P02)

Discussion

Recruiting older adults to trials is complex and time consuming, and the challenges should not be underestimated.[22] As in previous research, engaging with primary care was a vital part of addressing the complexities of recruiting participants to this study. The value that patients place on the trusted relationship with their GP has been recognized for some time.[23] Although there is some evidence of an erosion in the trust of physicians since the COVID-19 pandemic,[24] it remains clear that older adults maintain trust and respect in their GP. This is seen through the qualitative insights into why participants decided to take part. In our previous feasibility study,[25] we explored motivation to participate in a peer-led walking program in more detail. This study indicated that participants responded to the GP invite as it suggested that their GP thought they would benefit but also minimized any concerns that they may have had about the legitimacy of this study.[25]

Most participants recruited to the WWM Study came through general practice, highlighting the importance of this sector in acting as "gatekeepers" to community-based interventions. Previous National Institute for Health and Care Research funded research

in older adults has demonstrated similar experiences in recruiting older adults, both with respect to the percentage recruited via primary care versus other routes and the enrollment rates in primary care. In the REACT study, 87.8% of participants were recruited through invite letters posted from a participant's GP.[16] Similar to our study, REACT subsequently enrolled 3% of those contacted via primary care. Furthermore, we calculated the cost of enrollment rates in primary care.

Limited information of the cost of recruitment has been included in previous studies. A systematic review of recruiting older adults to clinical research reported the incentives paid to participants, but that is only part of the costs incurred.[11] A review of recruitment strategies of older men to trials identified that the direct cost of recruitment ranged from $59 to $259 (approximately £44–£194).[14] Whithall et al[16] provided more detailed information on recruitment costs. In their study, mean recruitment cost per participant was £78.47, with an extra £26.54 per recruit paid to GPs to cover research costs. While these studies have included differing costs (eg, cost of health care staff), the cost of participant recruitment in the WWM study is similar to previous studies.

The incentive offered to GPs of £50 per recruited participant appeared to be a key enabler for practices to engage with the study. By contrast, despite considerable effort, response from community avenues were less effective. A systematic review of recruitment strategies in primary care identified similar factors associated with successful recruitment that were identified in the current study.[26] These included mail outs and incentives, minimizing research responsibilities on individual practitioners. Although they could not identify the relative success of each strategy identified, they also suggested other potential strategies that could be used in future research, including engaging assistance from professional bodies, writing newspaper articles, and enlisting opinion leaders.[26] Offering a payment to community organizations, in a similar fashion to the payment to GPs, may help incentivize staff in community organizations to assist further with recruitment and may boost recruitment rates. Although we did not seek to collect any data to support this, it would appear logical and is worth further investigation.

In this project, we set out to engage older men as a particularly underrepresented cohort in research. We proposed that a targeted community approach of networking through governing bodies of sporting associations may help. However, further analysis of our general practice recruitment suggested that a greater proportion of the men in the study were recruited via general practice compared with community organizations. Previous research has suggested that inactive older adults prefer interventions that are adapted to their needs, accessible, and available in their local neighborhood.[16] For these reasons, we adopted a "community saturation" approach, approaching local shops and service providers within target areas. This strategy is supported by previous research on recruiting older adults to interventions.[27] However, in this study, despite considerable time, effort, and resources invested, less than 10% of participants reported that they were recruited directly through the community approaches described.

This research began recruitment in the second half of 2022, a period characterized by a gradual return to "normal" society post-COVID. It appears that engaging older adults in research through community organizations at this time was particularly challenging because of the impacts of the COVID-19 pandemic on older adults.[28] Older adults were disproportionately impacted by the public health and social measures introduced to reduce older adults' risk of infection, which disrupted usual routines, restricted movement, and forced separation from work, family, and friends. Networks and habits established to maintain activity levels changed abruptly. Indeed, during the recruitment period, community organizations noted that engagement in their groups had significantly declined following the COVID-19 pandemic. They suggested that this was likely due to increased anxiety among the older adult population in "getting out and about," which may explain the low recruitment from community avenues. Some scheme coordinators also attributed this to the impact of COVID-19 lockdowns on the physical functioning of older adults, believing that many older adults have less functional ability because of prolonged lockdowns and are not as capable of getting to community centers as they were before the lockdowns. This reiterates the importance of physical activity research in this population. The community organizations also identified a widespread and generalized anxiety in older adults, which is making them less likely to engage in programs. Finally, the postpandemic austerity measures have led to significant budget cuts for community organizations, so their capacity for discretionary activities, such as helping with research, has been further diminished.

One limitation to note is that recruitment materials were only made available in English. This has the potential to exclude individuals who cannot speak English, thus widening health inequalities. However, according to the 2021 census,[29] 99.2% of the Northern Ireland population aged 55 years and over speak English as their main language or can speak it well or very well. In the target areas, 99.3% of adults aged 55 years and over speak English as their main language or can speak it well or very well. Therefore, the total number of potential participants excluded on this basis would be relatively small.

A key strength of this study was the unique rollout of an in-person walking program immediately postpandemic. Therefore, these findings provide valuable insight to future researchers planning interventions in a community-based setting, principally by highlighting the need to adequately consider possible broader social and contextual factors that may impact on recruitment, in addition to the resources and time required for complete recruitment. However, as recruitment via community organizations often did not target individuals directly, it is not possible to determine differences in the efficacy of various methods used such as posters and presentations to groups. Walk with Me response rates were lower than initially projected through the community; as a result, the recruitment period was extended, and the recruitment strategy was adapted to boost recruitment in general practice by sending more letters out from each practice than originally intended. Reflexivity is critical for researchers when designing recruitment strategies.

Previous research has identified the need for researchers to be flexible, creative, and adaptable when trying to find the right strategy to recruit "underserved populations."[30] Reflecting on the changed landscape of community recruitment post-COVID, researchers may find it prudent to explore the potential of recruiting through a combination of approaches, for example, through traditional methods such as information flyers and referral by organizations but also through emerging nontraditional approaches such as mass media campaigns through local and social media outlets and websites.

Conclusion

Recruitment to community-based interventions is complex and can be more time consuming than expected. The findings provide

information on the feasibility of recruiting older adults to a community-based physical activity intervention. It was feasible to recruit participants from general practices, but this requires good partnerships to ensure successful completion, including remuneration to account for the additional activity for practice staff.

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Queries

Q1. Please provide 2–3 key points in sentence format and should be no more than 30 words each.

Q2. As per journal style, repeats in the article title are not allowed in keywords. Hence, the keywords "older adults, physical activity" have been deleted. Please check.

Q3. Please ensure that author information at the time of the manuscript submission is listed correctly in the author byline. Any new affiliations after manuscript submission should be added as an author footnote.

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