CLINICAL TRIAL REPORT

# More Than Just Exercise: Older Adults' Experience of the Peer-Led Group-Based FallFitness Program

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Background: Falls threaten the health and well-being of older adults. While studies have presented effective fall prevention exercises, determining how to deliver these interventions in a way that ensures engagement and long-term sustainability is challenging. Additionally, understanding how older adults perceive and are motivated to participate in such programs is critical for broad public health promotion. This study aimed to explore older adults' experiences and perceptions regarding participation in a newly developed 8-week peer-led group-based exercise program, FallFitness.

Methods: Participants were recruited from a randomized controlled trial (RCT) exploring a newly developed 8-week peer-led groupbased exercise program. A total of 2 focus groups were conducted post intervention, comprising ten participants (8 women and 2 men) from the exercise arm of the RCT. Inductive and conventional qualitative content analysis was performed.

**Results:** From the interviews, 5 main categories and 6 subcategories capturing the study aim are presented. Main categories included: a) social interaction and community, more than just exercise, b) increased motivational drive and self-efficacy, c) group exercise as fun, safe, and inclusive activity, d) enhanced collaboration between healthcare providers and retirement organizations for fall prevention, and e) professional peer-led trainers.

**Conclusion:** Peer-led, well-designed group-based exercise programs can holistically support physical, emotional, and social wellbeing. Programs that include enjoyable, multicomponent elements, both physically and mentally stimulating, can enhance participants' motivation and adherence. Additionally, the group setting is thought to promote meaningful social interaction, which is widely recognized as important for overall well-being. From a public health perspective, collaborative models for fall prevention involving older adults as a "golden resource" should be established.

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Keywords: falls, fall prevention, group-based, self-efficacy

## Introduction

Fall accidents in older adults threaten their health and pose a challenge to society.<sup>1</sup> The economic burden is extensive, and despite attempts to address this issue, a favorable shift in statistical trends remains to be observed. In 2022, falls were the most common cause among the 95,000 injury-related hospitalizations in Sweden.<sup>2</sup> In fact, three out of four of these accidents involve falls, with most cases (76%) occurring among individuals aged 65 years or older. The causes of falls among older adults are multifaceted, but a significant risk factor is the functional decline associated with aging, including reduced strength and balance functions.<sup>1,3</sup> However, these functions can be strengthened or maintained through targeted exercise. Therefore, falls are highly preventable with appropriate interventions, such as high-challenge strength and balance exercises as well as functional training.<sup>4-6</sup>

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Participation in fall prevention exercises, whether individually or in groups, is effective, with the greatest benefits observed under the supervision of a professional trainer.<sup>7–9</sup> However, access to such evidenced programs is often limited due to prioritization challenges, lack of knowledge, and constrained resources within the healthcare system.<sup>10,11</sup> The result of these constraints is that effective fall prevention interventions are often neglected in healthcare. Engaging in fall prevention exercises is challenging; from older adults' perspective, participation in fall prevention exercises is influenced by factors, such as having a professional leader, engaging in social interaction, and finding the activities enjoyable.<sup>12</sup> Although group exercise is a particularly attractive fall prevention alternative for older adults, the limited availability of group-based fall prevention programs underscores the need to develop and explore innovative models for delivering these exercises beyond healthcare responsibilities. In light of these challenges, the use of educated peers is successful in enhancing beliefs, knowledge, the use of a comprehensive "train the trainer" approach, including in theory and in practice (progressive strength, balance, and falling techniques), has not previously been investigated.

Therefore, in 2023, a project was initiated in collaboration with retirement organizations in a small region in Sweden, including nine municipalities. The initiative included the development, testing, and evaluation of an 8-week (one session a week) group-based exercise program involving a "train the trainer" approach. The peer-led group-based exercise program included progressive strength and balance exercises and falling techniques, namely the "FallFitness" program. Results from the randomized controlled trial (RCT) were recently published, demonstrating significant improvements in physical activity levels and learning falling techniques.<sup>15</sup> This study aimed to explore older adults' experiences and perceptions of participating in a newly developed 8-week peer-led group-based exercise program.

# **Materials and Methods**

#### Methods

A qualitative descriptive design was used, and data were analyzed using inductive conventional qualitative content analysis.<sup>16</sup> The inductive method is a data-driven approach to analysis, where codes and categories emerge directly from the raw data. This method ensured that the findings were grounded in the participants' experiences and perspectives, rather than being shaped by pre-existing theories or assumptions.

## Procedure

A semi-structured interview guide consisting of 5 open-ended questions was used to collect the data. Each question was followed by prompts regarding perceived advantages and disadvantages. The questions included: a) How has your participation in the training program worked out for you? b) What made you interested in this type of training? c) If you were to describe your experience of the training itself, how would you describe it? d) How have the different exercises worked for you to carry out? e) How do you feel about continuing with this type of training?

The interviews were recorded and transcribed verbatim, totalling 30 pages. The interviews were conducted by the first author of this manuscript, who was not involved in the intervention and had no prior contact with the participants. This study was reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ).<sup>17</sup> The RCT, including the interview study, was approved by the Swedish Ethical Review Authority (approval no. 2023–04577-01). This study was conducted in accordance with the principles embodied in the 2024 update of the 1964 Declaration of Helsinki.

## Participants and Setting

A consecutive sampling method was used to recruit participants for the focus group interviews. The RCT evaluating the FallFitness program involved 5 groups, each from a different municipality, with 10 participants per group. Each group was led by 2 peer leaders who were asked to invite participants from their respective exercise groups to participate in the interviews. To ensure representation across all 5 groups while maintaining manageable group sizes and promoting diversity, only the first 2 individuals from each group who expressed interest were selected. In total, 8 women and 2 men agreed to participate, with representation from all 5 groups. Two focus group sessions were conducted, each consisting of

five participants, 4 women and 1 man. The mean age of the participants was 75 years. The interviews were conducted in June 2024 at a conference facility in a small municipality in middle Sweden.

The participants were initially recruited to the RCT from four collaborating regional organizations for retired persons within a small region in middle Sweden. Details about the RCT have been published previously.<sup>15</sup> The participants were provided verbal and written information, and oral and written informed consent was obtained from the participants during the collection of baseline measurements when entering the RCT. At the time of baseline measurement collection, the participants were screened for eligibility. The inclusion criteria were age  $\geq 60$  years, ability to walk independently, and ability to understand written and oral information in Swedish. The participants were excluded if they were physically weak and unable to sit upright without support, unable to hold their neck up when lying or rolling backward, had a history of aortic aneurysm or unstable angina, or had recently undergone cataract surgery.<sup>15</sup> Measurements were performed before and after the intervention, with physical function as the primary outcome.

#### Interventions in the RCT

The FallFitness program was an 8-week exercise program comprising 60-minute sessions weekly. The RCT included 5 groups of 10 participants each. Each session included warm-up, balance and functional strength training, falling techniques, and cooldown. The exercises progressed gradually from simple to complex. The program was maintained at a moderate intensity level. The intervention was peer-led: 13 older adults participated in a three-day educational session on fall prevention exercise and how to lead the newly developed FallFitness program prior to the study's start. The same inclusion and exclusion criteria (RCT) were applied for selecting the peer leaders, with the addition of an expressed interest in exercise and leading groups. A separate manuscript focusing on the peer leaders is currently in preparation. Each group was guided by 2 peer leaders, with the remaining leaders serving as standbys during the RCT.

#### Data Analysis

Data were analysed using inductive conventional qualitative content analysis.<sup>16</sup> Initially, the first author performed a repeated review of the collected data; this step was necessary to develop a deep understanding of the data. Thereafter, a coding scheme was developed, in which meaningful units were inserted from the transcriptions and then condensed to capture the essence of the data. These condensed units were then assigned codes, which were grouped into broad categories reflecting the central themes. Within each main category, subcategories were identified to further specify the content. These steps ensured that the descriptions were obtained directly from the data provided by the participants and that the analysis remained faithful to participants shared experiences and perceptions. The first and last authors discussed the coding scheme and reviewed the initial analysis, and all authors thoroughly reviewed and discussed the findings. Finally, the results and quotations were translated from Swedish into English by the first author, reviewed for accuracy and clarity by the last author, and subsequently refined by a professional language editing service.

## Results

A total of 5 categories and 6 subcategories are presented in Table 1. Representative quotations are included to support the narrative and ensure that the findings are grounded in the participants' experiences and perspectives, as derived from the raw data.

Categories	Subcategories
I. Social interaction and community – more than just exercise	Building community through exercise in a friendly atmosphere
2. Increased motivational drive and self-efficacy	Empowerment by learning new skills Quality of exercise and increased awareness
3. Group exercise is fun, safe, and inclusive	Multicomponent and flexible exercises inspire participation
4. Enhancing collaboration between healthcare providers and retirement organizations for fall prevention	Promoting available fall prevention programs for older adults
5. Professional peer-led trainers in fall prevention	Importance of the qualities of the leaders

Table I Categories and Subcategories

Abbreviations: RCT, randomized controlled trial; COREQ, Consolidated Criteria for Reporting Qualitative Research.

# Social Interaction and Community – More Than Just Exercise

#### Building Community Through Exercise in a Friendly Atmosphere

The participants described the exercise groups as very social and enjoyable, with a strong sense of community and lots of laughter. The participants expressed that they encouraged each other and that a friendly atmosphere was created where they really got to know each other.

It has been nice and social, very social, and lots of laughter. Woman 3, group 2

As you said, if someone managed to do something, we'd say, 'Oh, congratulations, it went like this.' So it was really nice, and it was fun to go on Wednesdays. Woman 2, group 2

We became a group, we motivated each other, happy when someone succeeded. Woman 2, group 1

The friendly atmosphere was further strengthened through social activities such as having coffee and talking to each other after the exercise sessions. However, the participants expressed that the focus after the sessions was not only on the exercise session but also on conversations about other topics, which was appreciated.

And then we always stayed afterwards to have coffee, so we would sit for about fifteen to thirty minutes and talk to each other, so we got to know each other really well Woman 4, group 2

Then, we didn't talk much about exercise. We talked about other things. Man 1, group 1

The group became so closely connected that they planned to continue meeting after the study ended, as they felt it would be sad for the group connection to an end. The social interactions and support were appreciated and considered the central aspects of the group sessions.

We became very familiar and good friends with each other. Woman 4, group 2

I miss it a bit now, I have to say, now that there's nothing. Woman 2, group 2

We're going to have a meeting this summer and try to get together again because we said it's so sad that this group is going to split up. Woman 4, group 2

# Increased Motivational Drive and Self-Efficacy

#### Empowerment by Learning New Skills

The participants expressed that the exercise gave them the opportunity to develop and learn something new, even though there were some physical limitations for some of the participants.

Yes, I had difficulty with some things because I have such a bad back, I'm so stiff, so some things, like the meatball exercise, I couldn't do at all, but I still tried. Woman 2, group 2

Yes, you can feel that you can manage it, even though you're quite worn out. Woman 2, group 1

The participants found the practice of balance and falling techniques useful and motivational. They felt they were able to cope with something despite difficulties; this strengthened their self-confidence and enhanced their psychological well-being.

I think the purpose comes up all the time as well, like what is this good for? Well, balance. Man 1, group 1

But I believe that if you practice (balance), I think it will come more. Woman 1, group 1

It also has an effect on the mind. You feel better. Man 1, group 1

I feel like it's something I really want to learn, something I couldn't do before. It's kind of like learning to swim, or something like that, wanting to learn how to fall. Man 1, group 1

#### Quality of Exercise and Increased Awareness

The exercise format of performing simple exercises for 1 hour a week was considered appropriate and created a desire for more. The participants experienced the exercise as very rewarding and significant, especially highlighting the importance of such exercises for older persons.

I think it's been good that it hasn't been more than an hour a week, because then it would have become too much. Now, you were left wanting more. Woman 1, group 1

I think this is really useful as you get older. Especially if you're a bit clumsy like me, and think you can do things, it's really important. Woman 1, group 1

You don't need to train five hours every day for it to make a difference; you can train quite a little and it still makes a difference, which is pretty cool, that's how I think. Woman 2, group 2

The exercises led to increased awareness of the increased risk of falling with aging. Other expressions from participants were on bodily functions, such as the importance of holding the head up, and their ability, based on lived experiences, to automatically handle unexpected falls without injuries.

The older you get, the more you realize how dangerous it is to fall. When I was 40, I never thought that falling could be dangerous. I wouldn't have been interested in learning the basics either. Man 1, group 1

And then I fell at the swimming pool, but I didn't hurt myself and kept my head up...it just happens automatically. Woman 3, group 1

You know when you train, you get it in you, I think. Man 1, group 1

The program was also mentally challenging and felt like a brain workout, experienced as stimulating and educational. The exercise has provided a push in the right direction and led to improvements, physically and mentally, which was stated to be something that should be available to more older adults. The participants also expressed high motivation for continuing with the exercise.

What I can feel in my mind is that it's been good because I've learned how to think about what to do. I feel like I've learned a lot... so you understand how much the brain helps us and the importance of stimulating it, not just your body, I think. Woman 1, group 1

I think it would be really fun to continue. Man 1, group 1

### Group Exercise is Fun, Safe, and Inclusive

#### Multicomponent and Flexible Exercise Inspires Participation

The participants expressed that the exercise concept was educational, fun, and flexible. The exercises were also considered simple, and the adapted exercises led to physical and mental stimulation. The focus was on balance, strength, and fall prevention, which was stated to be particularly relevant with increasing age. The exercises inspired engagement with activities and strengthened the group connection through working in pairs; the participants also appreciated the sufficient amount of play and intimacy, which was neither too little nor too much.

It feels very positive, very positive, overall, with joy and movement and a bit of thinking in the head, it's not just the body...you have to think a little to make it all come together. That's training too. Crawling back and forth on the floor. (Everyone laughs). Woman 3, group 2

I'm not so fond of when we have to play around and do things like that, but I understand the point, the purpose of it all, and it helps the group come together, and you laugh. Man 1, group 1

The participants expressed that they felt safe to perform the exercises at their own pace and on their own conditions, which created an inclusive atmosphere. For some, the program served as a push to engage in other exercise activities, with perceived health benefits.

You are not required to do this, if it doesn't feel comfortable, you don't have to. However, you might, from your own perspective, feel that maybe you can learn to do it. Woman 2, group 1

# Enhancing Collaboration Between Healthcare Providers and Retirement Organizations for Fall Prevention

#### Promoting Available Fall Prevention Programs for Older Adults

The participants expressed that there was potential for exercise to be integrated into healthcare and offered as a preventive measure, for example, via prescriptions from healthcare professionals. They emphasized that municipalities and healthcare providers should take greater responsibility for promoting fall prevention, as this can lead to major economic savings by reducing falls and the need for social and healthcare services in the long run. Collaboration among municipal meeting places, healthcare providers, and retirement organizations is needed to make fall prevention programs accessible.

Actually, one would wish that it would be prescribed by the healthcare system, because the healthcare system must, or should, see that there are so many who would need it. Woman 2, group 1

I think it should be in the municipality's interest to have activities like this, I believe. Woman 1, group 1

The initiative of the project to train older adults as exercise leaders was highlighted as a sustainable model to continue spreading the concept, especially since many participants expressed that they were ambassadors for the exercise, given their positive experiences. The exercise was found to be cost-effective and to have improved their quality of life; the participants called for a more structured focus on preventive efforts.

You feel like when you talk about it, you're like an ambassador for this. Yes, because you yourself have found it so fun and enjoyable. Maybe eventually, you can start selecting some of the participants from the course as leaders, so to speak. Woman 3, group 1

## Professional Peer-Led Leaders in Fall Prevention

#### Importance of the Qualities of the Leaders

The presence of educated peers as exercise leaders was highlighted as crucial to the group's positive experience. The leaders were very professional, well-prepared, responsive, and committed, which created a safe and pleasant atmosphere. The leaders considered all the participants' individual conditions and levels, offered adaptations when necessary, and set up the exercise sessions with a balanced progression. Their ability to support the participants with difficulties was highlighted as particularly valuable.

We had good instructors, which is essential for it to be successful. They took great consideration of individual levels, so that everyone could perform the exercises in a good way...they always found some form of adjustment, like 'maybe you can do it this way instead,' and that was great. Man 1, group 2

The participants also appreciated that the leaders took the time to get feedback and involved the whole group in the process. The fact that the leaders were older themselves and could relate to the participants' situation contributed to a sense of recognition. Overall, the leaders' knowledge and attitude were found to play a crucial role in the group's progression.

Then the leaders would ask what we thought every time and so on. We got to share a bit if we felt like it. Woman 2, group 2

That it's not 20-year-olds, there's nothing wrong with 20-year-olds, but it's just that you want to be able to relate a bit. Woman 2, group 1

# Discussion

This study builds upon the FallFitness RCT to gain a deeper understanding of older adults' experiences and perceptions of participating in a newly developed 8-week peer-led, group-based exercise program. The experiences captured under the 5 main categories demonstrated coherence in the shared emphasis placed by the participants on the importance of social interaction. The importance of integrating social aspects in group-based exercise has previously been addressed,<sup>18–20</sup> highlighting the need for designing exercise programs that include other aspects than just physical exercises.

Fall prevention exercise programs for older adults living in the community are cost-effective, particularly when these programs are supervised.<sup>21</sup> Additionally, peer volunteering and volunteering delivered by professionals have been found to be effective in delivering group-based exercise for older adults.<sup>22</sup>

In this study, the exercise was peer-led by educated older adults with an interest in physical activity and exercise. They had the same characteristics as the participants they were leading in the groups. The characteristics of peer leaders<sup>23</sup> and the instructor's personality and experiences may affect attendance.<sup>24</sup> Our results suggest that having peers leading the exercise with the same characteristics as whom they were leading led to positive results, and that they were judged as being professional and sensitive to individual variances among the older adults in the groups.

Further, lack of motivation and barriers to exercise are the main challenges faced by older adults.<sup>25</sup> The results of this study indicate that the length and content of the program and the presence of peer leaders whom they could identify with were motivational drivers for them. Some of these perspectives have been identified in previous studies, quantitative and qualitative.<sup>26</sup> However, the FallFitness program stands out for including a broad range of factors important for effective fall prevention from a biopsychosocial perspective, including the novel aspects of falling techniques. Therefore, the multicomponent program addresses risk factors for falls from a multifactorial perspective.<sup>4,27</sup>

Overall, implementing fall prevention strategies is challenging. In Norway, the implementation of national guidelines is ongoing, involving healthcare providers and evidence-based work.<sup>28</sup> However, for primary prevention, collaboration is needed between healthcare providers and civil society,<sup>29</sup> highlighted by the older adults in this study. Given the anticipated challenges in healthcare arising from the demographic growth of the older population, this study addresses these issues through the proposed "train the trainer" model for early prevention.<sup>29</sup> This approach extends beyond traditional social and healthcare responsibilities and is judged to be a low-cost intervention with great possibility to easily upscale.

Peer-led physical activity programs have previously shown some promising results in reaching non-clinical populations;<sup>30</sup> however, our study is novel given its advanced multi-component design, including falling techniques and stimulating exercises for the "body and mind". Collaboration between social/healthcare service providers and users is needed to bridge the gap between theory and practice, especially from a learning perspective, and ensure the sustainability of primary prevention models.

This study elucidates older adults' experiences of participating in peer-led, group-based fall prevention exercises. Given the limited research in this field, we appraised the study's aim as being purposeful. Although the study was conducted with two relatively small groups, the overall sample size was deemed sufficient, and the interviews were rich in the descriptions of their experiences. One limitation of this study is the self-selection of participants. Although peer leaders facilitated recruitment by informing group members about the interviews, they did not select participants. Instead, individuals volunteered by expressing their interest. This process may have introduced self-selection bias, with participants who had more positive experiences or greater motivation being more likely to participate.

# Conclusion

Our peer-led, group-based FallFitness program offers a promising approach for engaging older adults in exercise. The program offered multifaceted benefits extending beyond exercise and provided participants with a strong sense of community and meaningful social interactions. Besides enhancing the participants' motivation to engage in exercise, the program provided a safe, enjoyable, and inclusive environment. The peer-led leaders further ensured that the programs were engaging and tailored to meet individual needs.

Together, insights from this study emphasize that peer-led well-designed group exercise programs can holistically support physical, emotional, and social aspects, which are important for effective program delivery. Future studies are needed on the effectiveness of the peer-led group-based FallFitness program in preventing falls and fall-related injuries.

# **Data Sharing Statement**

The qualitative data that support the findings of this study are available from the corresponding author (MA) upon reasonable request.

# **Ethics Approval and Consent to Participate**

This study was approved by the Swedish Ethical Review Authority (approval no. 2023–04577-01). The study was conducted in accordance with the principles embodied in the 2024 update of the 1964 Declaration of Helsinki. Verbal and written informed consent to participate was obtained from all of the participants in the study. The informed consent included permission for the publication of anonymized responses and direct quotations.

# Disclosure

The authors report no conflicts of interest in this work.

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