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Research Article

How to Keep Doing What You Like Doing: A Qualitative Study of Active Older Adults' Insights on the Facilitators and Barriers to Maintenance of Physical Activity (From the MOVEAGE-Act Project)

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Abstract

While the facilitators/barriers for the initiation of physical activity (PA) are well documented, there is less known about these facilitators/barriers for maintenance of PA in the older

population in general and not following an intervention. This study aimed to explore older adults' perspectives on the facilitators/barriers to maintaining PA. The study used descriptive qualitative design, with three focus groups, one in Ireland and two in France. Participants were community-dwelling older adults (≥60 years) 66% were female, recruited through older adult websites. Findings were analyzed thematically using a Socio-Ecological Model as a framework. Thirty-three older adults participated, and 88% met the international physical activity guidelines of 150 minutes of moderate activity per week. From intrapersonal and interpersonal perspectives, enjoyment, social engagement, adapting physical activity for their age, establishing routines/habits, and combining PA with other activities and interests were all key facilitators in PA maintenance. From the policy, environmental and organizational perspectives, limited policies or their implementation, activity-related factors (insufficient information on activities, age appropriateness and availability of suitable activities, accessibility, inadequate support), and social connectedness were identified. Multiple interrelationships across the different social-ecological perspectives emerged. It was evident for PA maintenance that a balance is needed between having activities that are enjoyable and yet challenging and being able to adapt them to age-related changes such as loss of function and confidence. In addition, it was apparent that older adults were more likely to engage in PA if it had a social element and if they had access to relevant information and safe, age-appropriate activities and support. These factors should be further incorporated into PA promotion, activities, and policies to maximize PA maintenance. Barriers may lead to non-maintenance of healthy aging targets, with implications for health service economies and older adults' health.

Keywords
Physical activity; older adults; maintenance; community dwelling; facilitators; barriers; influences

1. Introduction

Engagement in regular physical activity enhances physical and mental health in people of all ages [1, 2]. In older adults, regular physical activity reduces the risk of many non-communicable illnesses, such as cardiovascular disease, osteoporosis, and cancer, as well as falls and cognitive decline [3]. International and national recommendations advise that older adults should engage in 150 minutes of moderate-intensity physical activity per week [4]. The percentage of the older population meeting these guidelines ranges from 2.4% to 83%, with a tendency for decreased activity with age [5]. Safe, effective, inclusive, and sustainable interventions to promote physical activity and support long-term participation in physical activity as people age are therefore necessary to reduce the morbidity associated with insufficient physical activity and facilitate both living longer and living well. To achieve widespread impact, these interventions need to consider the facilitators and barriers associated with physical activity initiation or participation and, more importantly, its maintenance in older adults.

The literature abounds with quantitative studies on the individual characteristics associated with physical activity in community-dwelling older people. Other factors that impact the maintenance of physical activity can be categorized using the Socio-Ecological Model [6, 7]. The model has five domains, intrapersonal, interpersonal, organizational, environmental, and public policy, which provide a framework for the many factors influencing physical activity in older adults [7-11]. While maintenance is not well defined even in quantitative studies, it is often inferred through measured outcomes related to goals or following an intervention [12, 13]. Maintenance is not usually well defined in qualitative studies. Much is known of the factors and motivations that influence initiation and participation in physical activity, particularly following either short- or long-term interventions, the literature offers fewer insights into the factors that older adults perceive as assisting in maintaining engagement in physical activity in the older population generally [14-19]. Some of these factors are intrapersonal and may be grounded in an orientation for positive health and wellbeing. They may also relate to a desire to improve or maintain physical function [14-16, 19, 20], promote mental and physical health and/or enjoyment, or may be influenced by the older adults' previous engagement and enjoyment in exercise or physical activity [8, 14, 16, 17, 19]. Some risks, such as the potential for physical injury and worsening of illness, have been identified as barriers to the maintenance of physical activity. Lack of time may similarly be a barrier [14, 17-19, 21-23]. Other barriers include the lack of support and negative attitudes of others or feeling obliged to suit others [18, 24].

Interpersonal factors identified as important and facilitatory include the experience of meeting others and having social support around physical activity [15, 17-19].

Other motivators for physical activity maintenance are organizational and environmental. These include exercise programs designed for older adults, accessible information promoting these programs [17], access to and engagement in meaningful and appropriate physical activity [15, 17, 23], encouragement from doctors [17], and the ability to address individual preferences [21, 25].

Some important environmental factors include structural issues, neighborhood density, pathway accessibility, environmental facilities (benches, ramps), and safety/security [17, 18, 21]. In several studies worldwide, it has been suggested that the intersection of the physical environment and the social context can be just as crucial as intrapersonal and interpersonal factors with respect to engagement in physical activity [18].

However, a richer qualitative exploration of the main physical activity maintenance facilitators and barriers is needed. This would help improve the conceptual understanding of physical activity in older adults and inform physical activity interventions, thus motivating this cohort to remain engaged in physical activity.

The aim of this study was, therefore, to explore community-dwelling older adults' perceptions of the facilitators and barriers to maintaining physical activity. This study hypothesizes that community-dwelling older adults have specific facilitators and barriers to physical activity that can be described and interpreted using the Socio-Ecological Model, with its personal, interpersonal, organizational, environmental, and public policy perspectives.

2. Materials and Methods

2.1 Introduction

This study was the foundational part of a larger Move Age-Act project, which sought to engage older adults across Ireland and France in a series of health-oriented, community-based events and activities to promote active and healthy aging. A descriptive qualitative design was employed with three focus groups, the narratives of which were analyzed thematically using a template analysis that incorporated the Socio-Ecological Model as a framework [7, 26].

2.2 Participants and Recruitment

Focus groups were conducted in Ireland (Dublin) and France (Paris and Grenoble). A convenience sample of community-living adults aged 60+ was recruited via older adult-related websites and newsletters. Due to the convenience nature of the sampling, the population size was not available. Interested prospective participants were then asked to contact a named member of the research team for further information, after which a letter, a consent form, and a participant information leaflet were sent, and focus group times were arranged thereafter. Participants were asked to exclude themselves if they suffered from a long-term physical incapacity, pain that prohibited physical activity, or severe mental health. The research team did not exclude any participants who volunteered. To facilitate data saturation, each focus group planned to recruit 8-12 participants, summarized the main points at the end of the focus group session, and invited further comments after that. Initial analysis took place within a month to check that data saturation was achieved, and as this was confirmed, no further focus groups were deemed necessary [27].

2.3 Researcher Descriptions

The research team comprised 10 members, ranging from 2-6 at each data collection site. Members' organizations of origin included academic institutes, an age-related health institute, and two older adult national non-governmental organizations (NGOs). The team members from the NGOs and the age-related health institute (n = 5) had vast and varied experience in older adult-related education, interventions, and evaluation relative to physical activity in older adults. In all sites, these members acted as the initial contact points for recruitment, and in two sites, they also facilitated the interviewers. The remaining team members were based in academic institutes, bringing extensive experience to the study of qualitative research in older adult health and wellbeing and physical activity research. The study's objectives and the content of the structured interview emerged from the literature and were further developed by the team based on their varying experiences and expertise in the area.

2.4 Data Collection

Focus groups were held in central locations in each city, and data was collected in 2019. The focus groups' durations varied from 1.5 to 4 hours and were recorded digitally, with the permission of those present. A moderator and an assistant moderator facilitated the focus groups. Participants in the Irish focus group chose to have themselves anonymized from the outset, using pseudonyms throughout the focus group interview. Participants in the French focus groups decided to use their

names, and data was subsequently pseudonymized following transcription. Upon commencement of focus group interviews, all participants were asked to complete the Rapid Assessment of Physical Activity [28] to assess their physical activity profile. No additional profile information was recorded. The data recorded and analyzed from each focus group was otherwise verbal only.

A semi-structured focus group outline was employed for data collection, and special attention was paid to translation, so an approach that was more semantic than purely lexical was adopted. A detailed instruction leaflet, incorporating prompts and examples in line with the framework, was provided to enhance consistency and trustworthiness across the focus groups. Questions posed related mainly to the core research question that explored the influences - facilitators, and barriers to physical activity maintenance. Maintenance was not defined for the participants in this study but was left open for their interpretation. Participants were encouraged to draw from their own experiences (or others) of maintenance/non-maintenance in physical activity. Discussion within the focus group's themes continued until no new findings emerged. In addition, at the end of the focus groups, the facilitator outlined the main items that emerged for the participants to ensure these represented the reflections they presented.

2.5 Ethics Statement

The Faculty of Health Sciences Research Ethics Committee Trinity College Dublin, Ireland, provided ethical approval for both countries (Ref: 1811030). Participants completed consent forms for their discussions to be included in publications.

2.6 Data Analysis

In the Rapid Assessment of Physical Activity [28], physical activity was recorded in three categories: light, moderate, and vigorous; these were converted to metabolic equivalents (METs) so that the physical activity could be then expressed as moderate physical activity minutes to enable comparison with international guidelines [29].

The focus group recordings were transcribed, anonymized, translated at each site, and returned to the analysis subgroup. In line with the experiential and exploratory nature of the research question, Braun and Clarke's [26] six-phase approach to thematic analysis was selected as the analytic approach. This facilitated not only analyzing the data systematically but also allowed it to be linked to the broader theoretical framework of the Socio-Ecological Model, with its intrapersonal, interpersonal, organizational, environmental, and public policy perspectives. Its flexibility allowed the application of a deductive approach to the analysis, yet flexible enough to facilitate new concepts and themes to be identified. The analysis subgroup was made up of two academic members with previous experience in qualitative data analysis and the analysis was conducted manually. The initial three phases of analysis were conducted independently by both members of the analysis subgroup to 'furnish alternative interpretations', thus increasing thoroughness and confirming that data saturation had occurred [30]. At this stage, it was surmised that data saturation has happened, and no further focus groups were organized. Following Phase I of the analysis, the familiarization with the data from all three focus groups, the two researchers independently generated initial codes (Phase 2) and tentatively named subthemes and categories (Phase 3) in order to maximize the credibility and fittingness of the study [27]. In Phase 4 (reviewing potential subthemes/categories) and Phase 5 (defining and naming subthemes/categories), the two

researchers came together to discuss areas of agreement and disagreement, and the subthemes and categories were agreed upon. To enhance methodological integrity, manage reflexivity, and increase transparency, the rest of the research team reviewed and triangulated the subthemes and categories, as well as their interpretation and the development of the argument to answer the research question. This was conducted through several cycles of auditing, revising the analysis, re-examining, redefining, and developing the findings, agreeing on key participant quotations, and ensuring coherence and linkage with the theoretical Socio-Ecological framework in the final phase of report development. To further enhance methodological integrity, participants were offered the possibility of reviewing the transcript of their focus group, although none took up this offer. In addition, an interim report was also made available to participants.

3. Findings

3.1. Participant Profile

A total of 33 older adults participated, 11 males and 22 females and 9-12 participants attended each focus group. Overall, the average weekly moderate physical activity was 642 ± 428 minutes, with 88% (n = 29) meeting the physical activity recommendation of 150 minutes of moderate physical activity or equivalent per week [31].

3.2 Thematic Analysis Introduction

Three hundred and thirty-two codable items were identified relating to the maintenance of physical activity. In line with thematic analysis, themes were both inductive and deductive. The deductive themes were based on the Socio-Ecological framework (intrapersonal, interpersonal, environmental, organizational and policy). Within these themes, several inductive cross-cutting sub-themes were evident and included reasons/purposes/benefits/barriers, methods, social interaction, and infrastructure, of which social interaction was by far the most dominant (Table 1).

Table 1 Facilitators of and barriers to the maintenance of physical activity using the Socio-Ecological Framework of the 332 codable items that arose from the analysis.

Intrapersonal ***61%*** ***(204 codable items)***		**Interpersonal** **14%** **(47 codable items)**	**Environmental** **10%** **(32 codable items)**	**Organizational** **12%** **(40 codable items)**	**Policy** **3%** **(9 codable items)**
Reasons/purposes/benefits ***32%*** ***(109 codable items)***	***Methods*** ***29%*** ***(95 codable items)***				
Enjoyment (of activity, discovery, nature, and company)	Adapt (activities, scheduling, health, spread out activities, transition)	Social context	Cycling infrastructure	Age-appropriate activities/facilities	Reduced transport cost for older adults
Physical health	Habit (continued to, restarted, forming new ones, scheduling, reminiscence)	Social support	Walking infrastructure	Expert age-appropriate support	Supplementing bicycles costs as per working adults
Mental health	PA combined with other activity/interest	Organized activities/events	Access to green space	Cost of activities	Good signage
Feelgood, getting out	Targets, goal setting, competitions and rewards, commitment (membership)	Physical activity as part of socialization	Signage	Information on activities	More about physical activity in retirement courses
Motivation	Variety	Socialization as part of physical activity	Safety concerns	Membership of clubs/associations/gyms	

3.3 Intrapersonal Theme

This was the most dominant theme, containing 61% (204) of the codable items and this theme was further subdivided into two subthemes: reasons/purposes/benefits/barriers, and methods.

3.3.1 Reasons/Purposes/Benefits/Barriers

This sub-theme made up 32% (109 codable items). Within this subtheme, the most important reason, purpose, or benefit cited was enjoyment. The source of the enjoyment varied, and while many enjoyed the activity itself, the feeling of enjoyment often had a secondary reason associated with it:

IR09: I do a dance class, which is an exercise class to music. And you exercise from head to toe because you have fun.

Many enjoyed physical activity because it led to being outdoors or discovering new places. A large proportion enjoyed physical activity because it facilitated engaging with others. Another intrapersonal reason was health, which was dominated by codes around physically and mentally feeling good:

FF09: So in the day [I go to the gym] I do more [other] things better… even intellectual activities.

Some codes did comment on the effect of physical activity on medical/physical health and age-related decline:

FF11: I do physical activity because I know very well that it [my body] will slow down, unfortunately, and there will be a depletion of muscle capacity.

3.3.2 Methods

Many quotations (29% (95 codable items)) indicated participants had personal methods that assisted them in maintaining physical activity. Many saw the importance of being able to adapt as a key component in the maintenance of physical activity. This included adapting activities, optimizing scheduling, membership of clubs, adapting because of health issues, and adapting following transitions in life such as retirement or partner loss:

FF09: We shouldn't block ourselves by saying I have this [health issue], so I can't do it anymore.

Physical changes were considered a barrier, and adapting was not always easy:

FF05: … it's not the same level, and I don't want to finally realize that I've aged. And that hurts me a lot. So finally, I say no, I don't do anything…

However, most did find ways of adapting, and some suggested that taking time to get to know one's physical capabilities and limits helped. Adaption often meant maintaining activities that participants enjoyed, some of which they remembered from childhood. Examples included changing the length of walks, walking in flatter areas, and switching to electric bikes.

Emerging from many quotations as a method of maintaining physical activity was finding ways of making it a habit, making time for physical activity, integrating physical activity into the daily schedule, and combining it with other activities and interests:

FR08: we combine the useful with the pleasant.

FR09: well, I'm going to walk there rather than take the tram.

FF04: … I ride my bike every day, I go to buy bread, I go to meetings, that's all. Now, it has become a habit.

Some participants, although a minority, mentioned that having targets or setting goals or rewards helped them maintain their activity. Some mentioned that they liked competition, but most preferred targets and competing against themselves. Others found that having a variety of activities assisted them in physical activity maintenance:

IR09: … I do something, I think, different every day.

3.4 Interpersonal Theme

While only 14% (47) of the codable items were directly attributed to the interpersonal theme, this was a significant cross-cutting theme, cited in the intrapersonal theme as being associated with the enjoyment of physical activity. Important motivators for older adults in maintaining physical activity were social context, social support, and being able to partake in organized group activities or events:

IR08: My motivation to keep me [physically active] is that if I didn't go out, I'd miss the company.

FF02: pleasure includes the pleasure of being with others.

FF08: Keep doing things together [with grandchildren]. Continue to stay in the loop, even if you don't want to be at their [physical activity] level…

It is not only the company of the other person/people that is important, but also the support received:

FF07: I still believe very much in the motivation of another person.

IR07: A neighbor and very good friend of mine got me started again.

It was very evident that both physical activity as a part of socialization and socialization as a part of physical activity were important motivators in the maintenance of physical activity:

FR01: … and in the gym, I go to, *it* is meeting people of another age… to be able to share, to be able to discuss, to talk about life…

IR07: I'm doing line dancing. That is social, which I think is a very big part of all of it. It's a cup of tea and a social and a chat.

3.5 Environmental Theme

In this theme, which represents 10% (32 codable items), the facilitators and barriers ranged around infrastructure that made it easier/safer or more challenging for older adults to engage in physical activity, including the availability of good paths and bicycle lanes:

FF09: [bike paths] This is very important infrastructure for both urban cycling and urban travel… On foot, it's the same: sidewalks wide enough to make it pleasant to walk.

IR03: You have to make sure it's bright or well-lit, the footpaths, and all that.

But barriers were also evident that detract from the pleasure of engaging in physical activity and could affect its maintenance:

FR01: There is no pleasure in cycling in [the city]

FF11: … in [city] I gave up completely [travelling] by bike… it's total madness; the municipality has done nothing, no good ground marking… so then the bike was finished.

3.6 Organizational Theme

The availability of age-appropriate activities, facilities, and support were among the main organizational-level factors that supported the maintenance of physical activity and represented 12% (40) of the codable items:

IR03: [in the] community center, there's an exercise class specifically for the older people.

IR01: If you go to a gym or any exercise class, you want to know that the person running it knows what they are doing.

Lack of age-appropriate facilities acted as a barrier:

IR06: I'll tell you I'd feel more comfortable with people my age doing it. Because I think I'd need specific exercises for, you know, when you have arthritis or osteoporosis or whatever, … a gym could offer a lot to older people, but they are not marketing [for] older people. I don't think.

While there were several comments about the availability of information about physical activity in libraries and other centers, some participants felt that it was tough finding information on what activities were available locally for older adults:

IR03: But it's finding out about it is the problem. Yes, getting the information.

IR05: I had done a pre-retirement course they tell you everything about your pension and this and that, but nothing about local activities [and physical activities].

Being a member of a club or joining a class has many advantages. Some participants said that because of the cost, club membership made them make a commitment, which motivated their continued engagement in physical activity. Others found that club membership informed them of the appropriate activities for their age group. In some cases, cost, time, and timing also came to the fore as possible barriers to attending organized sessions.

3.7 Policy Theme

The policy theme was the least mentioned theme, representing only 3% (9) codable items. At a policy level, reduced transport costs enabled some participants to more easily access interesting places to walk, which assisted older adults in maintaining their physical activity. However, subsidized transportation and an extensive transport network were not available to all communities:

FR08: [In] Paris, we are very well served by a public transport network, so I find it interesting to walk and then say good, I'm tired and going back by transport.

IR9: The free travel, you know, is fabulous… to get on a [tram] or a bus and not have to pay, that's a great motivator. Get the Dart [light rail] out to [town] and go for a walk on the pier… (IR9)

Policy supporting the development of infrastructure was lauded. Still, there was some dissatisfaction regarding the lack of financial support/tax incentives for purchasing suitable bicycles for those who are retired, when such incentives are available to those still in work. On a different note, when walking, especially in the countryside, older adults find good signage a welcome support. In addition, a lack of peer leadership in physical activity was cited as an issue:

IR03: Operation Transformation [an Irish TV health and activity program] has never had anyone over 50, not to mention 60, on it. So, if you had one of the leaders who was 60, you'd have the diet, the exercise, everything.

This practice has had a welcome change since the study was conducted.

4. Discussion

This study provides further insights into the factors that may play an essential role in assisting older adults in maintaining their physical activity. It was evident for physical activity maintenance, a balance is needed between having activities that are enjoyable and yet challenging, having a social element, and incorporating the physical activity into other activities, and adapting to the loss of function and confidence as one's age increases [22, 32, 33]. In addition, there was consensus that older adults need access to and knowledge of safe, age-appropriate activities and support. By far, the most cited reasons, purposes, or benefits/barriers cited by older adults in this study concerning the maintenance of physical activity were intrapersonal, and this was true across all groups and countries.

A common reason/purpose/benefit/barrier repeatedly mentioned in this intrapersonal range was enjoyment. Enjoyment has been identified in many previous studies [8, 14, 16, 17, 32-36]. Becket al. called for further exploration into the meaning of enjoyment of physical activity in older adults [8]. In several studies, particularly those that examined maintenance after partaking in a program or intervention, participants usually referred to the enjoyment of the activity [8, 16, 17, 33, 37, 38]. While enjoyment of activities, such as walking and cycling, was evident in this study, it was often associated with other aspects, such as being present in nature, going to places participants wanted to visit, doing activities that brought back memories, or being with people they wanted to be [15, 32]. This reveals further evidence that several components are involved in the enjoyment of physical activity, dependent not only on the activity itself but also related to other categories within the intrapersonal theme, such as physical health, and frequently related to the interpersonal theme, connection with other people.

Another main reason/purpose/benefit/barrier cited by the older adults in the intrapersonal theme related to the health benefits of being physically active, although this was less evident than in studies examining physical activity initiation [22, 39]. Perhaps this is also related to the high percentage of participants in this study that met the international physical activity guidelines. It was noted that maintaining physical activity was not always easy, and changing health and physical limitations were often identified as barriers to maintenance [14-17, 33].

In this study, also within the intrapersonal subtheme methods, one obvious finding was that the community-dwelling older adults who were not engaged in a specific physical activity intervention used several methods to enhance their physical activity. While some of the specific physical activities cited were country and location-specific, i.e.mountain walking and skiing, the underlying changes and techniques used were common across all groups and countries. They adapted activities that they partook in during their earlier lives to their current health capabilities, and such adaptations included modifying effort (fewer hills), duration of physical activity, change in mode of physical activity (walking versus running, electric bikes versus manual bikes) [15-17, 22, 32]. Intrapersonal method facilitators older adults employed to assist physical activity maintenance and address barriers such as time, includes incorporating physical activity as a part of normal other daily activities, such as shopping, meeting friends, or eating out. This also facilitated the establishment of patterns and routines, thereby supporting the habit of being active while overcoming the barrier of finding sufficient time [16].

From an interpersonal perspective, this study strongly supports previous studies, particularly those with group interventions, indicating the positive relationship between social connectedness

and physical activity [16, 22, 33, 39]. The role of interpersonal facilitators is wide-ranging, from encouragement, support, and provision of patterns and cues to offering opportunities for social interaction [15-17, 19, 22, 32, 33, 39]. As cited above, a strong interaction between enjoyment and having a social component was observed [40]. These are hugely motivating factors not only underpinning many participants' desires to remain engaged in physical activity but addressing barriers such as social support and connectedness that decrease as people age. Engagement in a social aspect of physical activity not only helps maintain physical activity and confers physical and mental health benefits but also indirectly promotes physical and mental health wellbeing through reduced social isolation. If the interpersonal component, social engagement, and the intrapersonal component, enjoyment, could be embedded in personal advisories, physical activity programs, and promotional materials/information for older adults, it could synergistically promote the maintenance of physical activity.

In this study it has been shown that at environmental, organizational and policy levels, the local implementation of broad national policy was considered vital if real citizen participation and long-term engagement maintenance is to be realized.

In keeping with Van Cauwenberg et al. the many environmental factors that enhanced the maintenance of physical activity emerged in this study, these included easy access to recreational or open spaces near to or within neighborhoods [41]. Where greenspaces such as parks were not available, it was noted that having accessible and affordable modes of transport available to older adults facilitated them to travel to those greenspaces and engage in recreational facilities [22, 32, 41]. This important interaction with the environment was also a previously mentioned contributing factor to enjoyment. Another aspect not mentioned here, but evident in other studies, was the role of weather, as this can have a bearing in the positive way to enhance the experience [16, 17, 19, 42]. This information adds to the paucity of literature on the importance of context-specific issues such as access to open spaces and nature, that link to intrapersonal enjoyment to enhance physical activity maintenance [16].

Similarly, many organizational factors influencing physical activity maintenance also emerged in this study. These included the provision of facilities tailored to older adults [39]. This was borne out by participants noting that many such facilities often targeted younger people and that there was a need for more age-focused activities that required personnel with a good knowledge of older adults' needs [32, 39]. A significant issue in this study was the necessity of effectively communicating any initiatives or activities to older people. Poor communication regarding such initiatives, coupled with inadequate access or inappropriate scheduling, may lead to poor uptake of activities by older adults. In addition, older adults observed that maintenance of physical activity demanded increased conscious effort during the transition phase from work to retirement, and it was recommended that this be addressed more in pre-retirement courses [16].

It was also evident that in both France and Ireland, the organizational and environmental issues that arose were similar, and differences were more related to local matters (even within one location) than cross-country differences.

Finally, enacting a properly thought-out policy relating to the built environment could contribute to physical activity maintenance. While the physical activity guidelines for older adults in France and Ireland are the same, in both countries, policies and developments are linked to healthy living and sustainable travel that facilitate physical activity across all ages, such as more bicycle lanes and better pathways. However, the comments within this study indicate that these were not yet optimal.

Both countries in this study cite failures in the physical environment (non-connectivity of bike lanes, safety concerns, or absence of public transport), disincentivizing older adults from utilizing these facilities, and acting as barriers to long-term engagement in physical activity [16, 17]. Within this study across both countries, there were multiple examples of how financially supported transport facilitated more physical activity. In Ireland and Paris, there is free travel on all public transport for older adults; in other locations in France, there is only a 30% reduction in fares. In this study, participants from both countries cited how these schemes facilitated them doing part of their journey using transport, enabling physical activity in new areas, with friends, etc. Coupling these developments with intrapersonal and interpersonal motivators would enhance new initiatives and personal health promotion advice.

However, while participants from both countries cited good positive motivators across environmental, organizational, and policy themes, barriers identified systematic deficits in both countries.

All studies have some limitations. In qualitative studies, rigorous processes and methodologies must be in place to ensure the research's trustworthiness, offset the small sample size limitations, support the generalizability of the findings, and address specific research questions. As cited in the methodology, this study involved many processes to address these: tight research question, specific sample population, use of a theoretical framework, team expertise, detailed interview template, use of a tried and tested analytic approach that included several cycles of auditing, revision, and triangulation. Selection bias can also be an issue in qualitative studies. Here, the study targeted community-dwelling older adults, and the recruitment method was through older adult websites and was self-selection. This led to the selection of a sample where the participants' physical activity levels were relatively high compared to older people on average; while addressing a research gap, this may be seen as limiting the generalizability of the findings. This leaves a gap in the research for studies utilizing different recruitment methods to recruit individuals with a broader range of physical activity. However, the work's exploratory nature provides insights that work for those who are physically active and, therefore, could inform other close cohorts. A definition of maintenance was not defined or presented to the participants. This could be cited as a limitation. However, as most participants were currently relatively physically active, this could be seen as representing maintenance. In addition, it was evident from the discussions that the lack of definition provided the opportunity to answer this question with great breath, allowing them to recollect and examine factors from the near and distant time and across the broad spectrum of themes, not limiting them to just immediate intervention factors as may be the case in some studies.

In line with the study hypothesis, this study identified perceptions and facilitators of physical activity in community-dwelling older adults. It confirmed that these insights could be classified within the Socio-Ecological framework. While this was a useful and applicable way to analyze and collate the breadth and depth of the findings, the identification of multiple associations both within themes and across themes within the framework adds further depth, highlighting the complexity of motivations for physical activity maintenance in this active community living older adult cohort. This finding should inform the aims of further exploratory research.

5. Conclusion

Many countries have now produced physical activity recommendations. This is a positive step in informing and increasing awareness among older adults and their professional and non-professional support networks. There is a need to develop implementation strategies at all levels - personal, interpersonal, organizational, community, environmental, and public policy - to assist individuals in maintaining these targets. These should be informed by the individual characteristics identified in quantitative studies and factors from qualitative studies. This study further develops the literature to specific factors within these levels that are meaningful in relatively active community-dwelling older adults not involved in a specific program(s)/intervention(s) in maintaining physical activity. This study has provided a more in-depth examination of how these factors are often multidimensional, working across different socio-ecological levels, acting both in isolation and synergistically to impact physical activity maintenance. It identifies the critical role of enjoyment, context, and social involvement as key factors. It demonstrates how building on pleasurable activities enjoyed earlier in life, adapting them to current capabilities, making them part of daily activities and responsibilities, and fitting them into a daily routine would all assist in making physical activity a habit rather than a chore. Incorporating these in one-to-one discussions and physical activity planning with older adults as well as in interventions, programs, and activities will help optimize physical activity maintenance in older adults by assisting them to achieve their physical activity targets through doing what they enjoy.

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Author Contributions

All authors have participated in the study conception and design. FS and AL completed the first three phases (familiarization, generation of initial codes and themes) of analysis independently and came together for Phase 4&5 to discuss and agree final themes. For Phase 6 of the analysis, the themes, subthemes and codes, and later their interpretation and the development of the argument to answer the research question, were reviewed and triangulated by the rest of the research team. FS, AL and GMcK were responsible for the initial drafts of the article and all team members reviewed and approved of the final manuscript.

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Competing Interests

The authors have declared that no competing interests exist.

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