

Challenges to Engaging Older Adults in a Group-Based Walking Intervention: Lessons From the Residents in Action Trial

Jenny L. Olson,^{1,2,3} Anthony Papathomas,⁴ Marlene Kritz,³ Nikos Ntoumanis,^{3,5,6}
Eleanor Quested,³ and Cecilie Thøgersen-Ntoumani^{3,5}

¹College of Medicine and College of Health and Human Development, Pennsylvania State University, State College, PA, USA; ²Diabetes Australia Western Australia, Subiaco, WA, Australia; ³Physical Activity and Well-Being Research Group, School of Psychology, Curtin University, Perth, WA, Australia; ⁴School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, United Kingdom; ⁵Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark; ⁶School of Health and Welfare, Halmstad University, Halmstad, Sweden

This qualitative research explored older adults' perceptions of participating in group-based walking programs set in independent-living retirement village contexts. Semistructured interviews were conducted with a subset of participants from the Residents in Action Trial. Data were analyzed through a combination of deductive and inductive thematic analysis. Findings were interpreted from a social identity perspective. Five themes were identified: (a) varying levels of social cohesion in retirement villages; (b) degree of shared identity between residents; (c) health, mobility, and preferred pace; (d) devotion to spouse; and (e) busy lives. When designing group-based walking interventions in retirement villages, it is important to consider community-level social cohesion and degree of relatedness between village residents. When attempting to build a sense of shared identity and relatedness between group members, researchers and policy makers should consider differing backgrounds, capabilities, schedules, and interests of participants.

Keywords: self-determination theory, social identity, retirement villages

Physical inactivity among older adults represents a highly prevalent public health problem within a growing proportion of the global population (Hallal et al., 2012; United Nations, 2019). It is critical to develop and improve strategies to increase physical activity participation within this population that have the potential to contribute to improved health, well-being, and quality of life among older adults. Group-based physical activity interventions set in retirement villages offer a promising approach to increasing physical activity in this population, though engaging older adults in group-based interventions can be challenging (Jancey et al., 2017; Thøgersen-Ntoumani et al., 2019). In an attempt to identify potential strategies to bolster engagement in this type of program, we sought to explore older adults' perceptions of a group-based walking intervention in a retirement village setting.

Small and Heterogeneous Effects of Physical Activity Interventions Among Older Adults

The Copenhagen Consensus statement (Bangsbo et al., 2019) on physical activity and aging acknowledges that the longer-term effectiveness of physical activity interventions has not yet been

established (Bangsbo et al., 2019). Research has indicated preliminary support for the feasibility, acceptability, and effectiveness of group-based physical activity interventions among older adults (e.g., Beauchamp et al., 2018; Thøgersen-Ntoumani et al., 2019). However, consistent with the broader physical activity intervention literature, the effectiveness of group-based interventions has been found to vary considerably between studies (Burke et al., 2006). Thus, it is important to build understanding of the factors that might influence the receptiveness of older adults to interventions aiming to foster initiation and maintenance of physical activity.

Application of the Social Identity Approach to Understand Physical Activity Participation

The social identity approach to physical activity participation (Stevens et al., 2017) provides some insight into the varying effectiveness of group-based physical activity programs. This approach incorporates social identity theory, which explains how individuals derive a sense of personal identity from the social groups to which they belong (Tajfel, 1974), and self-categorization theory, which describes how individuals behave in a manner that is consistent with the common values of others in their group(s) (Tajfel et al., 1971). When combining these theories, it is posited that individuals internalize a sense of self through membership to social groups, with meaning derived from behavior through group membership, as individuals are motivated to distinguish in-group behavior favorably compared with that of out-groups. Individuals strive to discover the meaning of the identity of the groups to which they belong and align their attitudes and behaviors with others who share that identity. Within exercise groups, social cohesion facilitates a sense

Olson  <https://orcid.org/0000-0003-2777-3794>
Papathomas  <https://orcid.org/0000-0002-1031-9256>
Kritz  <https://orcid.org/0000-0002-4706-4891>
Ntoumanis  <https://orcid.org/0000-0001-7122-3795>
Quested  <https://orcid.org/0000-0001-8955-8809>
Thøgersen-Ntoumani (cthogersen@health.sdu.dk) is corresponding author,
 <https://orcid.org/0000-0003-0255-1263>

of distinction between members of the group and those who do not belong to the group. Such distinctions strengthen group identity, and greater identification with exercise groups is associated with greater physical activity participation (e.g., Grant et al., 2015; Stevens et al., 2019), as group members align their attitudes and behaviors with others who share that identity. Thus, in the context of physical activity participation, stronger identification with an exercise group would be expected to be associated with greater intentions to exercise, and greater cohesiveness within the exercise group would be beneficial for sustained physical activity participation.

Consistent with social identity approaches, group-based physical activity interventions incorporating strategies to build social cohesion between group members are more effective than interventions that do not incorporate such strategies (Burke et al., 2006). Fun, enjoyment of social interaction, the opportunity to form new social networks, and a desire to become more integrated in the local community can motivate group-based intervention participation among older adults (Devereux-Fitzgerald et al., 2016; Farrance et al., 2016). Moreover, social connectedness (i.e., a sense of belonging to an exercise group consisting of peers of a similar age, with similar interests) has been found to facilitate adherence to long-term group-based interventions of at least 6-months duration among adults aged 60 years and over (Farrance et al., 2016). Furthermore, the desire to retain social bonds built through intervention participation can motivate maintenance of physical activity beyond the duration of interventions (Devereux-Fitzgerald et al., 2016).

Despite the potential utility of social identity approaches to support physical activity participation among older adults (Stevens et al., 2017), and evidence suggesting that many older adults may prefer doing physical activity with peers (Samra et al., 2019), engaging older adults in group-based interventions can still be challenging. For example, a recent evaluation of a group-based walking intervention for older adults identified that the acceptability of the group-based format varied widely between participants (Thøgersen-Ntoumani et al., 2019).

Retirement Villages as a Potential Setting for Physical Activity Interventions With Older Adults

Retirement villages provide opportunities to facilitate group-based physical activity interventions targeted to independently living older adults. Increasing numbers of older adults are choosing to live in retirement villages which facilitate the opportunity for independent living within a built environment with communal facilities and institutionalized governance (Hu et al., 2017). It is anticipated that demand for retirement village living will continue to rise globally, in line with the increasingly aging population and trends of “downsizing” to smaller residences among older adults (Stimson & Shyy, 2018). Key drivers for relocating to a retirement village include the desire for a lifestyle change, difficulty maintaining the home or garden, retirement, death of spouse or relationship breakdown, the onset of poor health, and (for a small number of people) financial reasons (Stimson & Shyy, 2018). On average, residents enter Australian retirement villages at 74 years of age and stay for 7 years; two thirds of residents are females, and two thirds are single (Stimson & Shyy, 2018).

Research has demonstrated promising effects of physical activity interventions in retirement village settings (e.g., Jancey et al., 2017). However, as with group-based interventions more

generally, challenges, such as poor health and lack of time, have been observed in recruiting and retaining residents of retirement village settings in physical activity interventions (e.g., Duckham et al., 2018; Jancey et al., 2018).

The Residents in Action Trial

The Residents in Action Trial (RiAT; Thøgersen-Ntoumani et al., 2019) tested the effects of a 16-week theory-based peer-led group walking intervention targeting a range of physical activity, health, and well-being outcomes in residents ($N = 116$; age ≥ 60 years) of 14 independent-living retirement villages across Western Australia (for a detailed description of the trial, see Thøgersen-Ntoumani, Wright, et al., 2017). This complex, theory-based intervention included motivational training of peer leaders and walkers using contemporary theoretical approaches to behavior change. The RiAT training equipped participants with motivational skills to optimize behavior change, both as means to increase walking and reduce prolonged bouts of sitting. The primary motivational theory applied to facilitate behavior change was self-determination theory (SDT; Ryan & Deci, 2017). According to SDT, behavior that is regulated by autonomous motives (e.g., enjoyment or alignment with personal values) is more likely to be sustained than behavior that is regulated by more controlled motives (e.g., pressure from others or guilt). Self-determined motivation is facilitated through the fulfillment of three basic psychological needs: autonomy, competence, and relatedness. RiAT was designed to promote participants' need satisfaction and autonomous motivation for walking. Social identity theory (Stevens et al., 2017) has been conceptualized as complementary to SDT, whereby perceptions of need fulfillment may be influenced by perceptions of the social groups to which we belong (Kachanoff et al., 2019).

The evaluation of the feasibility, acceptability, and implementation of RiAT revealed that some participants enjoyed and benefited from the program (Thøgersen-Ntoumani et al., 2019). Consistent with social identity approaches to physical activity (Stevens et al., 2017), some participants identified social interaction and connection to be personally important. However, despite the theory-based intervention design and the incorporation of motivational, cognitive, and behavioral strategies, participant recruitment was challenging, and the group-based format suited some, but not all, participants. Varying physical capabilities between walkers within groups, difficulty coordinating mutually suitable times for group walks due to busy schedules, competing demands, and personal preferences for walking alone were barriers to participating in group-based walks. These findings challenge the assumption that group-based interventions will improve physical activity participation among all older adults through the automatic facilitation of social connectedness and provision of opportunities for social interaction. Given the broader aim of the process evaluation of RiAT (i.e., to conduct a comprehensive evaluation of trial feasibility, acceptability, and implementation), a more detailed exploration of why the group-based format did not appeal to some participants, despite the reported importance of social interaction and connectivity, was not carried out by Thøgersen-Ntoumani et al. (2019).

Aim

In light of the varying effectiveness of group-based physical activity interventions (Burke et al., 2006) and the limited effectiveness of physical activity interventions among older adults more

broadly (Bangsbo et al., 2019; Chase, 2015), there is a need to build understanding of the factors that may thwart older adults' receptiveness to and participation in group-based physical activity programs. Such knowledge may be particularly useful in view of the potential utility of social interaction and connectedness to foster physical activity initiation and maintenance (Devereux-Fitzgerald et al., 2016; Farrance et al., 2016). Identifying sources of diversity in participants' experiences of trials can improve the design of future trials that aim to use peer-led formats to promote physical activity participation among older adults. This knowledge is missing from the existing literature which tends to narrowly portray group-based physical activity as suitable and beneficial for all older adults (Kassavou et al., 2013).

Therefore, the aim of the present research was to build understanding of the factors that affect the receptiveness of older adults to group-based walking programs in retirement village settings through an in-depth examination of participant perceptions of RiAT (Thøgersen-Ntoumani, Wright, et al., 2017). A qualitative approach was adopted to facilitate an in-depth understanding of factors that were personally relevant and meaningful among participants. Results were considered through the lens of social identity approaches to physical activity (Stevens et al., 2017).

Method

Settings and Participants

Participants ($N=9$) were a subsample of those who took part in the original RiAT ($N=116$). Detailed information about the trial design and findings have been reported elsewhere (Thøgersen-Ntoumani et al., 2019; Thøgersen-Ntoumani, Wright, et al., 2017). In summary, RiAT was conducted with permanent residents of independent-living retirement village facilities located in metropolitan Perth and nearby towns in Western Australia. English-speaking adults aged 60 years or older, who self-reported insufficient levels of physical activity (based on the Australian Government recommendations for physical activity; Australian Government Department of Health, 2014), who were able to walk continuously on a flat surface at a light/moderate pace for at least 15 min, were eligible to take part in the trial. As the trial specifically aimed to increase physical activity among independently living older adults, people diagnosed with a terminal illness, dementia, or suffering health problems that would preclude walking, and those reporting two or more falls in the past 3 months were not eligible to take part in RiAT. Otherwise healthy individuals who used walking aides (e.g., walking stick or frame)

were not excluded. Data about where participants lived prior to moving into the retirement village communities were not systematically collected.

A convenience sample of participants who had previously agreed to be contacted in relation to potential follow-up research and who were able to be reached by telephone were invited to take part in the present study. Participation was voluntary, and all those invited to participate agreed to take part. Characteristics of the participants and the villages in which they resided are presented in Table 1. In summary, participants were aged between 75 and 85 years old ($M=80.31$, $SD=4.19$; one participant did not provide a date of birth), and most were female (66%). The researchers planned on including participants demonstrating varied levels of intervention adherence; however, only one participant who failed to complete the intervention was contactable and agreed to take part. Of the remaining eight participants, four reported successfully completing the walking program without difficulty, and four completed despite reporting notable difficulties.

The participants were from five retirement villages, and most (70%) lived outside of the Perth metropolitan area. Five participants lived in villages that can be described as less affluent (i.e., small units leased by residents and only accessible to those with total assets <AUD\$300,000) with limited communal amenities (e.g., a community hall). Four participants lived in more affluent villages (i.e., larger houses and units privately owned by residents) with a wide range of services and communal amenities (e.g., swimming pool, bar, restaurant, bus service, in-house Health and Well-being Coordinator). Some villages provided residents with opportunities for group-based physical activities, such as fitness classes (e.g., water aerobics) or community sports (e.g., lawn bowls). These types of opportunities were more readily available in more affluent villages. Formally organized physical activities for individuals were not typically available in any of the villages, though the presence of facilities (e.g., swimming pools, bowling greens) and walkable destinations provided residents with some opportunities for participation in non-group-based physical activity in some villages.

Prior to the collection of data, the study was verbally described to the participants by the researcher who facilitated the interviews. The aims of the study were explicitly stated to the participants. A written participant information sheet was provided, and written consent was obtained. Participants were given a \$20 store gift card as an expression of appreciation for their contribution to the research. Ethical approval was obtained from Curtin University's Human Research Ethics Committee.

Table 1 Participant Characteristics

Pseudonym	Age	Successfully completed RiAT?	Village characteristics
Amanda	83	Yes, but experienced challenges	Less affluent/limited amenities
Bill	85	Yes, but experienced challenges	Less affluent/limited amenities
Joan	82	Yes, but experienced challenges	More affluent/private ownership/full range of amenities
Sian	85	Yes, but experienced challenges	More affluent/private ownership/full range of amenities
Daniel	81	Yes	More affluent/private ownership/full range of amenities
Angie	77	Yes	More affluent/private ownership/full range of amenities
Rita	Unknown	No	Less affluent/limited amenities
Mark	75	Yes	Less affluent/limited amenities
Mary	73	Yes	Less affluent/limited amenities

Note. RiAT = Residents in Action Trial.

Data Collection and Analysis

The first author (PhD) with qualitative data collection and analysis experience conducted face-to-face semistructured interviews. The facilitator did not have any prior involvement in the original trial. With one exception, all interviews involved one participant and the interviewer. One interview involved a married couple who both took part in RiAT and preferred to be interviewed together. All interviews took place in the retirement villages where participants resided. An interview guide was developed to elicit participants' perceptions of participating in the trial; a summary of which is provided in Table 2. While the guide was detailed, the facilitation style was flexible and conversational, encouraging digressions, and responding with interest (see Riessman, 2008). The guide was used by the facilitator as a loose checklist and reminder of topics of potential interest; however, the direction of the interviews was largely led by the participants. Topics were not necessarily addressed in numerical order, and if a specific topic had been covered when discussing other points, the item was omitted. Although participants' reflections did not always align directly with the research questions, the added insight provided wider context of their lives, thereby adding depth to the data.

Interviews were audio recorded, and ranged in duration from 31 to 79 min, with a total of 6 hr and 52 min of data collected and transcribed verbatim. Data analysis was guided by the principles of thematic analysis (Braun et al., 2016). In line with the overarching aim of this research (i.e., to identify factors that may influence receptivity to intervention participation), an essentialist/realist epistemological approach was adopted, focusing on the experiences and realities described by the participants. Data were coded independently by two of the authors, using NVivo software (version 12; QSR International, Burlington, MA). The remaining authors had access to the interview transcripts but did not actively participate in coding the data. The initial approach to the analysis was inductive, to allow for identification of novel factors of potential influence that were related to the research question. Preliminary patterns observed in the data were identified and organized into meaningful groups (codes). Due to the unique

insights into the dynamics of group-based physical activity participation by social identity theory (Stevens et al., 2017) and because the intervention design was grounded in SDT (Ryan & Deci, 2017), a deductive approach, guided by these complementary theories (Kachanoff et al., 2019), was adopted to support the organizing of codes into themes. The group of authors met to discuss the preliminary themes in the context of the overarching theoretical framework. The themes were adjusted based on the generation of a revised thematic map. Consensus was reached by all authors on the final organization of themes.

Pseudonyms have been applied throughout the manuscript to ensure participant anonymity. The age of the participant (e.g., 74), whether they completed the intervention successfully (completed successfully [CS], completed with some difficulty [CD], and did not complete [DNC]) and the affordability of the village where the participant resided (less affluent village [LAV] and more affluent village [MAV]) are listed in parentheses when introducing participant quotes to allow the reader to make contextual inferences.

Findings and Discussion

Through a thematic analysis of interview data, we produced five broad themes representing factors that may influence uptake and sustained engagement with group-based walking programs among older adults living in independent-living retirement village facilities. The themes included (a) varying levels of social cohesion in retirement villages; (b) degree of shared identity between residents; (c) health, mobility, and preferred pace; (d) devotion to spouse; and (e) busy lives. These themes are described and evidenced by participants' quotes presented next.

Theme One: Varying Levels of Social Cohesion in Retirement Villages

Participants held contrasting views about the levels of social cohesion within their retirement villages. Daniel (81, CS, MAV) described an active social environment within his village:

Table 2 Interview Guide

Questions	Prompts
1. Can you tell me about the time you decided to join the RiAT program	What were your reasons for volunteering to take part? What else was going on in your life at the time that made you want to sign up?
2. What was it like for you when you started to take part?	How did you feel? What was it like to be a participant in the program?
3. Did those experiences change over time?	Why? How?
4. What, if anything, made it challenging for you to take part?	
5. How did you deal with those challenges?	Tell me a story about when you found it challenging Can you describe a time you overcome a challenge? Did anything help you deal with those challenges? If so, what?
6. How do you feel about the program now?	
7. What does it mean for you to complete the program?	
8. What are your plans about walking or doing some other exercise in the future?	
9. Is there anything that I didn't ask, that you think might be relevant for us to know?	

Note. RiAT = Residents in Action Trial.

It's good here. When you go to meals, we all mingle with all the different crowds and the ones that are on their own, we end up pulling onto the end of the table with another chair or whatever. And there's always something going on. There's bridge and table tennis, indoor bowls, croquet on the lawn here and bowling . . . , it's a good place to be.

For Daniel, the culture at the retirement village was cohesive and supportive, and the setting was facilitative of numerous group-based activities, including physical activities. Daniel's neighbor Angie also described an active and supportive social environment (77, CS, MAV):

Yeah, but it's great being in this village, because you can be as busy as you want to be or as quiet as you want to be, and then if you suddenly decide that you want to get back into it, "Hello! Good to see you back!" . . . It's great. And I mean you've only had a headache and a dozen people know about it in the next hours sometimes before you do, "Anything we can do to help, just give us a call. If you need to go somewhere, you need something at the shops, or you just want to cuppa." It's brilliant.

Similarly, Joan (82, CD, MAV), who lived in a different village said:

I mean I do something most days. Monday morning, they have craft in this room here . . . quite a lot of the ladies go and really, it's just a chat fest, but it keeps you up with what's going on . . . I sort of try and get out somewhere every day to do some—to talk to people You can do just about anything.

Collectively, Daniel, Angie, and Joan portrayed a picture of supportive, active, and cohesive social environments where residents shared strong social bonds and experienced low levels of conflict. In these villages, access to shared amenities and activities appeared to be associated with higher levels of social cohesion among residents.

In contrast, other participants portrayed fragmented social settings. Mark (74, CS, LAV) said:

It just doesn't work as a community. I tried all sorts of things to try and get people to come together, be together, get along; [it] just doesn't work . . . people got their lives, older people don't leave the units . . . people aren't interested in the community. When I first came here, we got together a really fantastic musical group from the outside, jazz musicians in the band, we had them here on the stage, and we had them about every two or three months. The most we ever got from the village was 12

From Mark's perspective, it appeared that disinterest in group activities was not exclusive to physical activity sessions but extended to other types of social events. Mark's neighbor Rita (age unknown, DNC, LAV) offered insight as to the underlying processes that made group activities difficult:

We don't have a huge community spirit here, I think because there are so many of us living here, there are 91 units and 94 residents here, so they're very small units . . . and we're living on top of one another So, I think, well I personally prefer to get out and about as much as I can. It's a strange thing but if you're continually meeting with the same people, it's almost

like familiarity breeds contempt to some extent, and people grate on one another.

Rita's comment suggests she experienced low levels of social cohesion among her fellow residents and an unwillingness among some to socialize with others. For Rita, living in close proximity to other residents influenced her preference to engage socially outside of the retirement village setting.

Differences in cohesiveness and community integration within the individual retirement villages appeared to be an important determining factor as to whether residents chose to participate in group walks. A socially supportive and cohesive community culture in some villages appeared to facilitate willingness to take part in group walks, while in other villages low levels of social cohesion among residents acted as a barrier to engaging with group-based activities. Previous research has also found that supportive social environments facilitate greater levels of physical activity participation (e.g., Brennan et al., 2003; Kaczynski & Glover, 2012; Stevens et al., 2019). We extend this knowledge by demonstrating that retirement village settings may vary in the degree to which they provide socially supportive environments and that this variation may impact older adults' receptivity to group-based physical activity interventions delivered within the village environment.

These findings provide support for the application of social identity approaches to physical activity interventions in retirement villages (Stevens et al., 2017), whereby high levels of social cohesion foster physical activity participation, as group members align attitudes and intentions to be consistent with the exercise group. It also appeared that participants of the present study who perceived socially cohesive settings also experienced a high degree of relatedness to other residents, which in turn may have supported engagement in the group-based walking program by facilitating more intrinsically regulated motives for participation, as would be expected from a SDT perspective (Ryan & Deci, 2017).

There are a multitude of factors that might have influenced the levels of social cohesion within the retirement villages included in this study, such as racial or cultural differences, or characteristics of the villages, themselves, such as staffing, programming, environmental design, or resources. However, the presence of these issues, or the extent to which they may have influenced social cohesion in this instance, was not clear.

Participants who lived in more affluent villages ($n = 4$) tended to describe villages as socially cohesive and supportive, in contrast to those who lived in less affluent villages ($n = 5$). None of the participants living in less affluent villages described strong social bonds with fellow residents.

The drivers of differing levels of perceived social cohesion between more and less affluent villages and whether these findings might generalize to other retirement villages requires further investigation. Physical activity participation among older adults is influenced by structural and social inequalities (Bangsbo et al., 2019). The more affluent villages included in RiAT provided residents with a wide array of opportunities to participate in group-based activities (e.g., crafts, games, exercise, and sports) and access to a range of purpose-built communal amenities within the villages (e.g., bowling greens, swimming pools). In general, these features can be described as conducive to physical activity participation. It is also possible that greater access to facilities and activities within retirement village settings facilitates greater social cohesion at the community level, as residents have more opportunities and greater willingness to interact with one another.

Individuals in such settings might be more agreeable to taking part in group-based physical activity programs, as they already know and relate well to other group members and thereby develop shared interests. Communal amenities and formal group-based activities conducive to physical activity were less readily available in less affluent villages. Moreover, there was some suggestion that proximal living in less affluent villages reduced residents' willingness to socialize with their neighbors.

Future research is also needed to understand if and how the appeal of group-based physical activity interventions might be enhanced in retirement village settings where preexisting levels of social cohesion are low. Strategies to promote feelings of belonging among walking group members were included in the RiAT walk leader training. However, it is possible that the wider motivational climate in villages with low social cohesion hindered attempts to create need-supportive walking groups, and thus the strategies designed to foster belonging were less effective in these settings. Additional strategies to promote wider community-level social cohesion may be beneficial in retirement villages with low pre-existing levels of social cohesion, in addition to the inclusion of strategies to foster belonging among walking group members.

Theme Two: Degree of Shared Identity Between Residents

In addition to describing overall community-level social cohesion within villages, participants also expressed the degree to which they felt meaningfully related to other walking group members and village residents on an interpersonal level.

Angie (77, CS, MAV) described age differences as a factor that influenced her perceptions of relatedness to other walking group members:

I enjoyed RiAT more when we first started because there was more mixed people in it . . . I know people say there're no "them and us" in here but, come on, get real. There's all the newbies, younger ones, we're the old group now, and when I'm with mostly just the newbies, lovely as I may be, there's just a different feel.

From this comment, it appeared that Angie did not have a strong sense of relatedness with younger members of the walking group, and this negatively affected her enjoyment of group walks, particularly as other older members withdrew from the group. This is consistent with other research that has found that adherence to group-based exercise interventions among older adults is better when group members are of similar age, compared with when groups are comprised of members of mixed age (Beauchamp et al., 2018).

Angie went on to say:

. . . I've noticed with a lot of the new people that have come in into the bigger homes, they all seemed to be in their 60s, and they're all very out there and wanting to do things, and they interacted immediately. They got into our social club and bowling green, and the bus trips, and the movie theatre, and all sorts of things. They just seem to "boom," they were out there straightaway, whereas others that have been here as long as us or some not quite as long, are still in their house.

From this perspective, it appeared that Angie perceived younger residents who had more recently moved to the retirement village to be more socially connected and active than she was. Although

participants of the present study were all aged in their seventies and eighties, many operators of retirement villages in Australia allow residents of 55 years and over (e.g., [Amana Living, 2017](#)). Thus, the age of village residents can vary greatly, with different social groups forming between residents of similar ages.

More generally, participants described differing backgrounds, lifestyles, and interests, and perceived that these differences affected the way they related to other residents and walking group members. Some participants were married, some divorced, some widowed, and some never married. Some participants had grown children, while others had never had children. Participants had been engaged in an array of careers or vocations during their working life (e.g., priest, naval engineer, kitchen assistant, nurse, librarian, welder, postman). Angie also described a perception that her life experiences were very different from that of other village residents:

They're all very involved and have had big lives. They're all like-minded. My life has been very, very simple . . . I grew up and got married, and had kids, and husband, and looked after them, and worked . . . whereas a lot of them have just had so many wonderful experiences, and their lives had been so involved . . . so they've got things that they talk about, and I just listen in awe and think, "My goodness me, I must be so boring."

This comment suggests that Angie felt that the diversity of life experiences influenced how she related to other group members. It is possible that the perception of differing life experiences could impede the development of a shared sense of identity and relatedness between walking group members.

Overall, these findings highlight that differences in age and life experience can affect perceptions of relatedness among retirement village residents, even when specific efforts are made to foster a sense of belonging among intervention participants, as was the case with the RiAT. Alongside autonomy and competence, relatedness is key to fostering internalized behavioral regulation, and in turn, ongoing physical activity participation (Ryan & Deci, 2017). Moreover, perceptions of low levels of relatedness to other exercise group members may have the potential to hinder the development of a shared sense of identity among exercise group members, typically facilitated when group members share characteristics in a particular social category (e.g., age and gender; [Stevens et al., 2017](#)). Interventionists planning group-based physical activity programs in retirement villages should be aware that common residential circumstances and shared membership within the broad age group of people eligible to live in a retirement village will not necessarily lead to a strong sense of relatedness among residents. Lower levels of relatedness may be challenging to overcome within intervention groups, and novel strategies to improve relatedness between participants may be needed.

Theme Three: Health, Mobility, and Preferred Pace

Participants described issues surrounding health, mobility, and preferred walking pace that influenced their receptiveness to walk in a group. Mark (75, CS, LAV) described a preference to walk at his own pace.

I see the value in RiAT and I'd like it to work, but I don't like walking in groups; maybe bush walking, I wouldn't mind, but walking around here I preferred to be solo . . . Because I walk with my own pace, I just do it when I want to, that sort of stuff.

For Mark, this meant he preferred to walk alone, rather than as part of a group. Similarly, Rita (age unknown, DNC, LAV) said:

I have to walk my own pace. I have to admit that now I do most of my walking pushing a three-wheel pet stroller, I'd mainly use it for shopping . . . So, I guess I think if I was walking, I can't really easily walk at somebody else's pace . . . I've got my own pace.

Rita indicated that she had limited capability to adjust her pace for others.

Joan (82, CD, MAV) described negative physical and emotional effects of having to walk at a slower pace to accommodate other group members; "Well, it's—if I'm walking slowly, then my back—that starts to ache, and I get grumpy." For Mary (73, CS, LAV), her tendency to walk at a faster pace appeared to be a source of contention among walking group members, as evidenced by her comment: "apparently, I walk very fast which annoys people."

The SDT may be useful to understand why preferred pace can present a barrier to participating in group walks for some older adults (Ryan & Deci, 2017). Specifically, it is posited that the fulfillment of needs for autonomy, relatedness, and competence will foster the development of internalized forms of behavioral regulation, which in turn support uptake and maintenance of physical activity. It is possible that feeling one must restrict one's pace to accommodate the needs of others could stifle feelings of autonomy. Furthermore, feelings of competence may be stymied by a sense that one does not have the ability to adjust to the walking pace of others. Finally, if differing pace among group members causes contention among group members, this will not be conducive to fostering relatedness among group members. Not only will these issues limit the development of autonomous motivation for physical activity, but also they may also negatively impact group cohesion and a sense of shared identity among group members, theorized to foster physical activity according to social identity approaches (Stevens et al., 2017).

Despite the fact that retirement villages cater to older adults who are generally capable of living independently, the overall health and mobility levels between residents varied greatly. Rita (age unknown, DNC, LAV) described vast differences in the physical capabilities of residents within her village:

So . . . some people here have got quite serious physical problems, although we're called independent, many people here, in fact, cannot manage on their own. They've got carers going in . . . so, yes, tremendous difference between us . . . we've got other people who are 55 [who are] very active . . . then you've got people who virtually are house bound . . .

Pain and poor health has been identified as a common barrier to performing physical activity among older adults (e.g., Samra et al., 2019). Therefore, it is, perhaps unsurprising that health and limited mobility presented a barrier to some older adults participating in the RiAT group-based walking program, despite the settings in which the intervention was conducted being designed to support independent living. Moreover, such barriers led to substantial differences in ability levels, which should be considered when planning group-based physical activity programs among older adults. It is also possible that poor health and restricted mobility impedes feelings of competence for physical activity among older adults, which is necessary to foster self-determined motivation, as posited by SDT (Ryan & Deci, 2017).

Even in retirement village settings catering to independently living older adults, it is critical to consider the variability in health

and mobility among potential intervention participants and adopt strategies accordingly to cater to varying levels of ability. The RiAT program design included providing participants from each village with three suggested walking routes of increasing difficulty to accommodate differing ability levels among older adults. Despite this attempt to account for varying ability levels, this issue still presented a substantial barrier to participation in group walks for some participants. The precise reason for this is unclear. It is possible that group composition was primarily driven by factors other than participant ability (e.g., mutually convenient timing of group walks, preexisting social groups), and therefore, the walking route selected may have suited the ability of some, but not all, participants. Future research could consider how to further refine strategies aiming to deal with differing ability levels among independently living older adults.

Theme Four: Devotion to Spouse

Married and widowed female participants described tension between spending time with their spouses and participating in group-based activities. Sian's (85, CD, MAV) found the demands of caring for her ill spouse to be a barrier to participating in group walks:

Well, it got difficult, yes, because I really didn't feel happy leaving [my husband]. He couldn't do anything very much for himself. He couldn't get in and out of bed or in and out of a chair on his own . . . So, I faded away, and I haven't got back into it.

Joan (82, CD, MAV), described some of the specific daily tasks involved with caring for her ill husband that interfered with her ability to take part in group-based walks:

Well, to prepare the breakfast, to make sure there's water in the kettle for a cup of tea, make sure that he's got orange juice on the table, make sure that the porridge has got some water in it. So, he'd put the gas on, but he's getting worse at leaving it on, so we've had a couple of burnt pots lately . . . so, I try and get it to that stage that it's cooked . . . sometimes he gets distressed because he can't find something like he's got a hearing aid or he wants a particular piece of clothing that he can't find, but I don't have to dress him up.

None of the male participants in the present study described caring for a spouse as a notable barrier to intervention uptake or ongoing participation. This is consistent with previous research suggesting that female carers may experience higher subjective burden of caring for a spouse than males (Barusch & Spaid, 1989). Similarly, female caregivers to family members with cancer appear to experience greater burden than males (Xiong et al., 2020), and wives caring for a spouse with dementia appear to experience higher levels of strain and lower levels of morale than husband carers (Collins & Jones, 1997).

More generally, these findings build on the well-established evidence base demonstrating that caring for a spouse presents a notable barrier to health behaviors, including physical activity (e.g., Connell, 1994; Zalewski & Dvorak, 2011), by demonstrating that the group-based format, and the proximity of the intervention to home were not sufficient to overcome this barrier.

Angie's (77, CS, MAV) husband was not living with an illness, though she too described feelings of guilt at leaving him in the house alone:

My husband doesn't like to go out and about. He sits in there. And all my friends would say, "Angie, just because Bill doesn't want to go out, it doesn't mean you don't have to go out," but you get that little guilt thing that I can't be out every day somewhere else when he's sitting at home.

It is possible that older adults who are more inclined to be physically active than their partners may experience feelings of guilt, even when the partner is not ill. The notion of "caring" may stretch beyond medical illness to also accommodate a sense of obligation to offer company to partners who are less able to exercise or even just less interested. Again, these sentiments were not mirrored by male participants, nor was the group-based format or proximal location of the intervention sufficient to overcome this barrier.

Although engaging in walks could offer some reprieve for those who provide care for a partner, guilt about leaving a spouse may act as a barrier to participating in walking interventions, which may challenge continued engagement, particularly among females. Previous research in the dementia field has shown that carers' guilt can serve as a barrier to the utilization of respite services (Robinson et al., 2009). We extend past findings by demonstrating the relevance of this issue in relation to physical activity participation for carers. Even if carers do choose to take part, any feelings of guilt they may experience may negate any well-being benefits; such feelings may further dampen engagement in the longer term (e.g., Cao et al., 2010). It is important as part of future research to explore ways in which carers may partake in such interventions without experiencing feelings of guilt, perhaps by affording more flexibility in the timing and length of group activity sessions. This may be particularly important to foster receptiveness to physical activity interventions among female residents of retirement villages.

Furthermore, our research demonstrates that guilt may be a factor for some intervention participants, even when spouses are healthy but disinterested in taking part in activities. This issue was not reported by male participants in the present study; however, it is currently not clear if and to what extent gender roles might affect guilt among spouses who are not currently acting as carers for a spouse. Older adults have multiple sources of social engagement and will prioritize these according to demands and personal values. Personal identity as a spouse may compete with social identities derived through membership of exercise groups, and effects may vary by gender. Understanding how both male and female older adults conceptualize responsibility to a partner and the impact this might have on physical activity engagement is important if intervention work is to support inactive adults to overcome this barrier, regardless of the mode of intervention delivery (i.e., targeting groups or individuals). Researchers interested in implementing group-based physical activity interventions should be mindful of the likelihood of encountering similar scenarios within older adult populations. Strategies designed to support older adults to take part in physical activity interventions without undermining the commitment and sense of duty toward spousal relationships may foster receptiveness toward such interventions.

Theme Five: Busy Lives

Failure to agree on mutually convenient timing for group walks was one of the most mentioned barriers to participating in group walks, with almost all participants citing this concern. When asked what the biggest barrier to running the RiAT program was, Bill (85, CD, LAV) said:

That was the biggest problem. Everybody couldn't agree on what time to go, each time. So—well, I don't know what you can do about that 'cause everybody's got different things on and—yeah.

Bill (85, CD, LAV) and his wife Amanda (83, CD, LAV) repeatedly mentioned that they walked together as a couple, rather than in a group, because it was simply too difficult to get other residents to agree on a time for group walks:

We didn't bother [trying to coordinate a group walk] because we couldn't—what's the word—get an agreement with them what time they would wanna go or when they'd wanna go. So, we just used to do it ourselves We just go off when we felt like it—might not be every day. It wasn't every day.

It appears that for Bill and Amanda, challenges around finding mutually agreeable times to walk with their fellow residents acted as a barrier to participating in group-based walks.

In addition to caring for an unwell spouse, as mentioned above, participants described a variety of competing demands, such as work and family commitments (e.g., spending time with grandchildren) and other personal interests, which contributed to difficulties in reaching agreement regarding the scheduling of group walks. When asked about what researchers could do differently in the future to attract more residents, Rita (age unknown, DNC, LAV) said:

That's a hard one isn't it because we're all so different and there are people here who have, well some people are working, they're actually working full-time. A friend of mine, she's still earning money by babysitting which includes by the way looking after elderly people so she belongs to an agency, so she's in the walking group but she may not always be able to come.

Many younger residents continue in paid full-time or part-time work after relocating to so-called "retirement villages." Participants in the present study were older, and hence most were fully retired; however, almost half were still engaged in formal or informal volunteer work (e.g., treasurer of the resident's committee, kitchen assistant, village chaplain).

Competing demands also presented a barrier to participating in group-based walks among residents who were no longer working. Angie (77, CS, MAV) suggested that competing passions had the potential to limit her physical activity:

I seemed to be going through a period where my art has got my attention again, whereas I just didn't want to go in there for, I don't know, it must've been about 15–18 months, just didn't want to do it and that was all during the period when I was walking. So, I'm kind of it's one thing or the other with me

Joan (82, CD, MAV) challenged any misconception that retirement is characterized by increased free time and therefore, by implication, increased scope to engage with physical activity:

Interviewer: Sometimes when you've got all the time in the world, you're not as organized as when you're busy.

Interviewee: No. Well, yes, but they are very busy. Everybody's got things that they participate in. You try and talk to people and they say, "Oh, yeah, been busy every day this

week,” like I said to the beautician because she did my nails, “Get my diary out and book another appointment,” and she looked at it and she says, “Oh, it’s all full!”—because you’ve got—because your health is sort of—got problems, you’ve got people sort of to go and see.

For Joan, it was normal for retirees to maintain busy schedules, including visiting family and managing visits to health professionals. This is consistent with previous research and suggests that older adults may intentionally construct daily, weekly, or periodic routines into life post retirement, and that these routines promote a sense of stability and predictability and contribute to the sense of self (Ekerdt & Koss, 2016). Personal agency over how time is used is important, and resistance or resentment may arise when routines are externally driven (Ekerdt & Koss, 2016). Such feelings may represent a barrier to participation in group-based walks, which may be scheduled to suit the needs of others.

Lack of time is commonly cited as a barrier to physical activity (Mutrie et al., 2015), including in older-aged populations (e.g., Ball et al., 2017) and those in retirement village setting (Duckham et al., 2018; Jancey et al., 2018). It is possible this type of barrier may be compounded when arranging group-based interventions for older adults with differing schedules, well-established routines, and numerous competing demands. Such barriers may not be overcome by having the intervention set so close to home. As such, group-based interventions may not be an ideal mode of delivery for some older adults.

Conclusions

The findings of this study provide insight into older adult’s perceptions of group-based physical activity programs in retirement village settings. The application of qualitative research methods provided an opportunity to examine issues that may account for these challenges in more depth than could be afforded by alternative methods. Moreover, the use of the social identity approach to physical activity and SDT as frameworks through which to interpret common themes represents a novel approach that afforded consideration of individual-, group-, and community-level factors of influence on behavior.

Preexisting social cohesion at the community level and relatedness between residents at the individual level should be considered when planning group-based physical activity interventions in retirement villages. In more fractured settings, strategies to build a sense of shared identity and strengthen relatedness among group members may be needed. Poor social cohesion may particularly be an issue in less affluent settings where communal amenities and formal activities are limited and living quarters are near one another, though further research is required to understand how affluence might influence intervention engagement. Given the diverse characteristics, backgrounds, and lifestyles of retirement village residents, residents may initially have little in common, other than residential circumstances. Effort should be made to bridge this gap and foster shared identities between group members, which in turn may also facilitate enhanced relatedness and a sense of belonging at the individual level.

Some residents of retirement villages will prioritize time spent with their spouse over group-based activities, and this tendency may vary by gender. Some individuals may have notable caring responsibility when a spouse becomes unwell. Others may feel a sense of guilt leaving a partner who is reluctant to be involved. Moreover, residents of retirement villages may have well-

established routines for how they spend their time and may experience a variety of competing demands, leading to difficulties in scheduling group-based activities to suit all group members. Despite the clear benefits of group-based approaches to supporting physical activity participation, group-based intervention delivery will not be suitable to all older adults living in retirement villages. An alternative modality for walking interventions for these individuals could involve dyadic interventions, which can be more effective than comparable interventions targeting individuals (Carr et al., 2019). Slower or less able older adults may particularly benefit from undertaking physical activity with a “more able” partner—a supportive peer who is dependable, fun, credible, and compassionate (Kritz et al., 2020).

This research has several limitations. First, it is possible that receptiveness toward group-based programs within the retirement villages was influenced by the degree to which participants were involved in their local communities, beyond the village setting. Information about participants involvement in their local communities and where they lived prior to the retirement villages was not collected, thus we are precluded from investigating the potential influence of this factor in the current study. Second, the convenience sample included only one participant who failed to complete the intervention; thus, the breadth and depth of views from the perspective of intervention noncompleters and other participants of the original trial who were not invited or available to take part in this secondary study was limited. Another limitation was that participants were interviewed only at the end of the intervention. It would have been useful to follow participants longitudinally, as they engaged in the intervention to explore how their experiences changed over time. Finally, our findings are limited to experiences of implementing a group-based walking program in retirement village settings; the extent to which such experiences generalize to other group types of physical activity should be tested in future research. Nevertheless, our results offer some new insights into the challenges associated with group-based physical activity programs for older adults in retirement villages. These are important to consider in the design of future interventions, particularly because group-based interventions are popular among older adults (Thøgersen-Ntoumani, Ntoumanis, et al., 2017).

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