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The peer experience for older people encouraging other older people to engage in resistance training: A qualitative study

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1 **Title**

2 The Peer Experience: Older People's Perceptions of Encouraging Other Older People to
3 Engage in Resistance Training

4

5 **Running header**

6 Peer Encouragement for Strength Training

7

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The Peer Experience For Older People Encouraging Other Older People to Engage in
Resistance Training: A Qualitative Study

Abstract

Resistance training (RT) can maintain and improve physical and mental health in older adults, but this population has low levels of participation in RT. Linking older people already participating in RT (i.e. peers) with those who have not may promote and maintain adherence to RT participation. This qualitative study explored the experience of peers in encouraging participation in RT among older community-dwelling adults. Data were collected using focus groups, researcher observations, and semi-structured interviews. Thematic analysis was conducted. Older people (n=8) who had engaged in RT for at least two months prior to recruitment, participated as peers. They each provided peer support for between one and four RT participants for six weeks. The peer role was perceived by peers as potentially leading to a relationship which was of benefit to both parties. Peers reported that helping and supporting others was a positive experience and raised their own self-efficacy. Difficulty initiating contact and differing expectations of peers and RT participants were viewed as challenges. Peer-mentoring could help to promote RT participation among older adults.

Keywords: Strength training, Exercise, Motivation.

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Australia has an aging population with 15.3% (3.7 million) of the current population aged over 65 years (Australian Bureau of Statistics, 2016). This is predicted to increase to 24.5% by 2061 (Australian Bureau of Statistics, 2016) and may result in an increased burden on Australia's health care system. Older people are living longer and are more likely to be living with chronic disease (such as Type 2 Diabetes) than younger people (Australian Institute of Health and Welfare, 2014a, 2014b). A decline in physical function, increased loss of lean muscle mass and a deterioration in bone density are some of the negative effects of aging that reduce functional ability, activity levels and community participation, which in turn may negatively impact an older person's quality of life (Chodzko-Zajko et al., 2009; Haff & Triplett, 2016; Stenholm et al., 2016).

Research has established that participating in exercise which meets the recommended guidelines for older community dwelling adults, which includes muscle strengthening activities at least two days a week, has positive effects on physical function and supports healthy aging (Department of Health, 2011; Haff & Triplett, 2016; World Health Organisation, 2011). Resistance training (RT) in particular has been found to be highly beneficial for older people, as it can reverse the negative effects of aging (Bampton, Johnson, & Vallance, 2016; Bennie et al., 2016). RT can be defined as "a specialized method of conditioning whereby an individual is working against a wide range of resistive loads" (Haff & Triplett, 2016, p.136). When older people engage in RT a minimum twice a week they demonstrate improvements in muscular endurance, strength, and maintenance of lean muscle mass and bone mineral density (Gorgey, Mather, Cupp, & Gater, 2012; Humphries, Duncan, & Mummery, 2012; Merom et al., 2012; Steib, Schonen, & Pfeifer, 2010; Werner, Teufel, & Brown, 2014). RT is known to maintain and improve psychological wellbeing and functional ability to perform activities of daily living (Bampton et al., 2016; Chodzko-Zajko et al., 2009; Haff & Triplett, 2016). However only 7-12% of Australia's older

1 population actively engage in RT on a regular basis (Bennie et al., 2016; Humphries et al.,
2 2012; Merom et al., 2012).

3 A recent systematic review identified multiple barriers to older people engaging in RT
4 which included: lack of social support, such as not knowing anyone at the gym or having no
5 one to go with (Burton, Farrier, Lewin, et al., 2017). A possible solution to these barriers may
6 be the use of peer support to encourage older people to engage in and sustain their
7 participation in RT programs. Peers can provide social support and they often take on the
8 role of advisor, educator and helper; peer support involves learning from others who share
9 an affinity (e.g. similar age) (Shiner, 1999). Peers have been shown to be effective in the
10 area of falls prevention (Khong et al., 2015) and physical activity promotion (Stevens et al.,
11 2015), highlighting the diversity of the role. A systematic review (Burton et al., 2017) showed
12 peers can promote and maintain older peoples' adherence to exercise programs. This study
13 found peer led programs consistently maintained retention rates of at least 75% with some
14 above 90%, although it was unclear whether the peers had a positive effect on improving
15 older people's function (Burton, Farrier, Hill, et al., 2017). However, none of the 18 studies
16 included in the review explored the experience of the peers; they only examined the
17 outcomes for the exercise participants. It is important to gain insight into the peer experience
18 to determine if this is feasible and beneficial for older people to taking on a peer role in
19 exercise programs. No studies have investigated the peer experience in encouraging the
20 promotion of RT for older people. The aim of this study was to explore the experience of
21 peers in encouraging participation in RT among older community dwelling adults.

22 **Methods**

23 **Design**

24 An exploratory qualitative study design was used to explore the experiences of peers
25 in promoting RT to older community dwelling adults, who were participating in a six-week RT
26 program. The study was part of a larger project which was undertaken in 2017 and

1 examined the effect of peer training on improving adherence to RT. The experiences of the
2 RT participants were explored separately as another part of the project.

3 **Participants and Setting**

4 A purposive sample was recruited from the university wellness center and a nearby
5 retirement village in close proximity to the university. Recruitment methods included word of
6 mouth, posters, flyers and snowball recruitment. Older people were eligible to become a
7 peer if they were aged 60 years or over, living in the community, participating in RT for
8 longer than two months, able to understand English and being physically able to participate
9 in the six-week intervention. Exclusion criteria were: a diagnosis of cognitive impairment, or
10 not being available to contact the RT participant on a regular basis.

11 **Ethical Considerations**

12 All participants provided written informed consent. The study was part of a larger
13 project being conducted by two universities and received ethics approval through the Human
14 Research Ethics Committee (HREC) from both universities (blinded for review).

15 **Peer Training**

16 The peers attended a three hour peer training course by an experienced researcher,
17 where they were provided with information about what a peer is and their role in the present
18 study. They were given a training pack which included: a resource folder on appropriate
19 methods of communication, how to be a role model (e.g. traits of a role model), how to share
20 experiences and how to motivate others. The peer role was explained to participants during
21 the training as being an educator (e.g. ability to discuss motivators and barriers to older
22 people participating in RT and benefits of RT), a role model (e.g. experience in participating
23 in RT, being able to communicate, interact and where required be empathetic) and a team
24 member. The information summarized current research findings to assist in developing
25 social and communication skills so that the older adults could undertake the role of a 'peer'
26 as confidently as possible. At the completion of the training the peers had an understanding

1 of what they were required to do as a peer, however limited information was given on 'what
2 to say specifically as a peer.' This was intentional in order to stimulate the organic flow of
3 ideas and prompt the participants to use their initiative. They were asked to complete a
4 weekly diary, which recorded their interactions with their RT participants. Each peer was
5 subsequently assigned to provide support to a number of RT participants who were part of
6 the larger study on RT that was being conducted. The eight peers were allocated between 1-
7 4 RT participants each who were completing either a home RT program or a gym program
8 (Figure 1). Peers were asked how many participants they were willing to assist and were
9 then randomly allocated to participants. Randomization was conducted using a random
10 number generator in Excel.

11 *Figure 1 - Peer assignment to resistance training participants*

12 **Data Collection and Procedure**

13 Data were collected through three main separate sources (focus groups, researcher
14 observations and semi-structured interviews) to increase the trustworthiness of the data
15 through method triangulation (Creswell, 2014). A timeline of the data collection is presented
16 in Figure 2.

17 *Figure 2 – Data collection time line*

18 **Focus groups.**

19 Two focus groups were conducted by an experienced researcher (EB); the first was
20 held during the peer training sessions prior to the six-week program. The focus group
21 schedule included questions relating to: why the older person chose to become a peer;
22 expectations prior to becoming a peer and concerns about taking on the peer role. The
23 second focus group was held as part of a social meet up half way through the program,
24 where the peers could also discuss any issues that may have arisen or if they required
25 support. The focus group schedule included questions relating to: the peer's views on their
26 experience to date including; how they (peers) were experiencing communication, the peer-

1 to-RT participant relationship and what could be improved for future studies. The focus
2 groups were audio recorded and transcribed verbatim.

3 **Observations.**

4 Observations were conducted by the secondary researcher (xx blinded) in the
5 wellness center while the peers and RT participants were interacting and were recorded in
6 the form of a reflective journal. The researcher also visited RT participants who were
7 completing the home program alongside the physiotherapist, to observe and glean any
8 comments that were made about the peer support they were receiving. Reflective journaling
9 aimed to enhance trustworthiness, specifically confirmability of data to allow for replication
10 and detailed context (Creswell, 2014; Garran, 2007). The peers also kept a peer diary of
11 their interactions with the RT participants, which was also utilized as part of the analysis.

12 **Semi-structured interviews.**

13 Semi-structured interviews were the primary source of data collected from the peers
14 and were conducted after the intervention was completed. The interviews were designed to
15 explore the meaning of the peer experience. The interviews were conducted by an
16 experienced researcher (xx blinded), audio recorded and transcribed verbatim; interview
17 questions were based on a semi-structured interview guide (see Appendix A). One interview
18 script was used across all semi-structured interviews to allow for comparable data. However,
19 additional questions were asked where the interviewer perceived more information was
20 required based on the peer answers during each interview. All interviews were conducted in
21 a quiet and private setting by one interviewer, either in the peer's home or a consulting room
22 at the university wellness center.

23 **Analysis**

24 Descriptive statistics were analyzed using IBM SPSS version 24 (IBM Corp. 2017).
25 All textual qualitative data were managed in NVivo Software version 10 (QSR International,
26 2012). Focus group and interview data were analyzed through thematic analysis using an

1 years] with half living alone and the other half with their spouse or family. One peer was still
2 working part-time and the other seven were retired. One peer had a hearing impairment, but
3 in general the peers reported few health conditions. The peers had participated in RT on
4 average for 15.75 (Standard Deviation: 13.7, range: 4-48 months) months prior to
5 commencing the peer training. None of the peers had participated in a structured peer-
6 participant role previously.

7 **The Peer Experience: Conceptual Framework**

8 The final conceptual framework assisted in explaining the experience of the peers, as
9 they initiated and developed their (peer) relationship with the RT participants. Some aspects
10 of the peer role and the cognitive and affective responses of the peers themselves
11 contributed to the peer role being perceived by these older adults as a largely positive
12 experience (Figure 3).

13 *Figure 3* – Thematic map conceptualizing the peers' experience in promoting engagement in
14 resistance training

15 Each peer reported different responses and actions, which suggests that the peer
16 role is diverse and may differ depending on the individual (peer) and the characteristics and
17 responses of the RT participant.

18 **Overarching theme: Potential for a two-way relationship**

19 The overarching theme identified that the peer experience could potentially result in a
20 relationship of mutual benefit to both the peer and the RT participant.

21 It's not only just one side and me keeping her going. It's her keeping me going as
22 well... which was good. We then found if we had common problems or common good
23 bits or successes or whatever. Yeah, you reinforce each other (Peer no. 5).

24 Themes underlying this overarching theme were the: (1) personal qualities of a peer
25 that influenced their experience; (2) type of communication that evolved between the peer

1 and the RT participant; and, (3) response that the peers perceived they received from the RT
2 participant. These themes overlapped to some extent, but each theme contained specific
3 sub-themes which identified that the older adults reported both positive and negative
4 experiences when undertaking the peer role.

5 **Self-efficacy.**

6 Self-efficacy was identified as a key component of the peer experience. Peers
7 recognized the physical benefit of participating in RT, but they also experienced positive
8 feelings which they ascribed to helping other older people in their community. Peers
9 expressed a feeling of 'satisfaction' when their RT participants improved their strength and
10 talked about feeling better physically or mentally. One peer commented that "every time we
11 see each other we do a high five" (Peer no. 3) referring to their RT participant stating that
12 they no longer required a walking stick. Peers also identified positive feelings which they
13 reported resulted from purposefully contributing to the broader community, "It just builds a
14 small, mini community within a community" (Peer no. 5).

15 The act of helping others appeared to improve the peer's own motivation and self-
16 efficacy. As peers felt they had more influence over their community's wellbeing they could
17 assert more control over their own health practices. This allowed the peers to advocate the
18 RT message to their community more effectively.

19 **Helping others.**

20 Helping others was identified as a key motivator for older people to take on the peer
21 role.

22 It makes me feel good to be helping someone as a person who's retired that has had a
23 job with people ... even older ones when I did teaching adults, I just enjoy doing that
24 sort of thing and it's something that I'd missed (Peer no. 5).

1 The peers reported that they provided support and encouragement to the RT
2 participants. The focus group discussion held at the half way point of the study highlighted
3 that many peers reported strong feelings of satisfaction from helping and providing
4 encouragement to other older people and stated that they identified the primary role of being
5 a peer as a provider of support. One peer stated that “Being able to offer some support,
6 assistance and encouragement, I know how important that has been for me...” (Peer no. 6).
7 Researcher observations support this perception as peers and RT participants were
8 observed to discuss their new exercises, home exercise equipment they own or use, how
9 they deal with aches and pains and the physical changes they were experiencing resulting
10 from RT. One RT participant stated to their peer that they were “enjoying the attention,
11 contact, direction and welcoming environment provided” (Peer no. 5) (researcher
12 observation).

13 Peers stated that they provided support which was categorized as; i) assisting RT
14 participants to contact health professionals where required, ii) discussing difficulties such as
15 pain or tiredness to work through together (when health professionals deemed the pain a
16 normal result of exercises), and iii) promoting social interactions in the community. The
17 peers demonstrated a desire to help others by sharing the positive health changes and
18 knowledge they had gained in their own RT training and emphasizing the importance of
19 community involvement/participation in RT. They felt that they could assist in creating a less
20 intimidating environment because “I think maybe one comforting thing is that we're most
21 likely all in the same age area” (Peer no. 3). The peers also perceived that they were helping
22 the RT participants to move comfortably into new habits and experiences while changing any
23 negative connotations the RT participants previously held about ‘the gym’: “I remember how
24 strange it was when I first came to the program ... you’re very vulnerable” (Peer no. 6).
25 Finally, the peers were highly motivated to help others participate in and adhere to RT due to
26 the benefits they had experienced resulting from engagement in RT: “any little achievement
27 they make, makes you feel good, as well as them feel good” (Peer no. 8).

1 **Peer Engagement.**

2 Peers demonstrated initiative when faced with difficulty in organizing times to engage
3 with their assigned RT participants at the wellness center or to provide peer support. Most
4 peers offered to meet their RT participant at other times or locations when they contacted
5 them through their weekly phone calls; this stimulated opportunities to engage with the RT
6 participant and provide peer support: “I met her at the Op Shop because I knew that was a
7 place where we could get to” (Peer no. 5). Another peer commented that she “Rang her up
8 and said, what are you doing? She said, just got home, nothing. I said, come up to my place
9 and have a coffee. So, we did” (Peer no. 1).

10 Being ‘busy’ was a common barrier faced by some peers when allocating time to
11 meet socially or making time to attend the same RT program at the wellness center “it was a
12 matter of catching one another” (Peer no. 1). Although mostly retired, the peers and RT
13 participants maintained a full schedule of activities (such as family life and holidays), which
14 peers perceived could limit the levels of engagement initiated by the RT participant, for
15 example one peer stated, “I know one of the people had a lot of resistance from somebody
16 else because they were just too busy.” (Peer no. 1).

17 The term ‘too busy’ was also used by the peers when they perceived that other
18 activities appeared to be a higher priority for RT participants, such that the participant
19 appeared to be uncommitted to the RT program: “she didn’t want to sign up to something
20 long term because she didn’t know where they’d be in the future” (Peer no. 7). In this
21 situation, peers felt they could empathize and be a real-life example of how to incorporate
22 RT into their life. Social functions and activities in the community held a high priority for the
23 peers. Dancing was a popular activity at the retirement village and was identified as clashing
24 with the activities in the wellness center, thereby creating difficulties for peer-to-RT
25 participant interactions. RT participants caring for a partner were also observed by the peer
26 to prioritize supporting their partner over attending RT classes and this also impacted on
27 interactions with their peer. This was acknowledged by multiple peers, although none of the

1 peers identified this as a barrier. Instead the peers appeared to respond empathically as
2 they were willing to be more flexible and work with the RT participant to maintain
3 engagement.

4 I just shared some of my experiences. So, I would say like I found it really helpful if I
5 can get into a routine. If it's a day when I'm not going to the gym I battled with finding
6 a time to walk and so finally I've decided on 6 o'clock in the morning and I just get up
7 and throw my shoes on (Peer no. 8).

8 **Communication**

9 Communication between peers and RT participants was an identified theme, with
10 effective communication viewed as crucial to enabling a positive peer-to-RT participant
11 relationship. Peers stated that they preferred face-to-face communication compared to
12 phone communication, because phone calls were deemed 'awkward' and peers did not feel
13 they had the same meaningful interaction over the phone.

14 ***Face-to-face communication.***

15 Peers desired face-to-face contact, with one peer stating that "I did prefer actually
16 meeting in person" (Peer no. 5) as this was perceived as allowing peers to connect
17 empathically with the RT participant. One peer suggested that "a person's face tells you a lot
18 when you're talking to them" (Peer no. 3). Where there was limited face-to-face
19 communication, the peer perceived that the relationship became "apprehensive because
20 once again not seeing her face-to-face I wouldn't know exactly what she wanted" (Peer no.
21 5).

22 By contacting each other face-to-face the peers could share detailed experiences
23 with their RT participant, empathizing and talking about issues and could also observe that
24 the RT participants responses, including noting positive changes in physical capacity, with
25 one peer stating "they seemed to be walking straighter and their legs seemed to be moving a
26 little bit better even though it was sore" (Peer no. 2). Peers reported that face to face

1 communication allowed them to gain a better understanding of what their RT participant was
2 experiencing. This was because they could observe body language, facial expressions and
3 conversational cues. RT participants were perceived to be more honest and open in face-to-
4 face meeting regarding their feelings towards RT and having a peer. Researcher
5 observations identified “peers and RT participants talking freely on arrival in the wellness
6 center and maintaining conversation throughout the visit” (researcher journal). This behavior
7 demonstrated the development of rapport and the formation of a social relationship.

8 I didn't have a problem making the phone call, but I felt awkward of the intrusion part
9 of it. But with the face to face...and a person's face tells you a lot when you're talking
10 to them. It also sometimes tells you what they're really not telling you. So, it's the
11 body language and the facial expressions from their reaction (Peer no. 3).

12 ***Phone communication.***

13 Phone communication was predominantly viewed as assisting in maintaining contact
14 where face-to-face communication was not possible. Although it was the primary form of
15 communication between peers and home RT participants, it was perceived to have some
16 negative consequences. Making contact via phone with RT participants was difficult at times
17 and would prevent communication when the RT participants did not answer the phone or did
18 not call back. To make more than one phone call a week was deemed ‘intrusive’ by most of
19 the peers and they perceived that they were ‘checking in’ on the RT participants which they
20 did not appear to enjoy. However, some peers perceived their RT participants to appreciate
21 the phone communication: “One of them said, well I sort of miss your phone calls now ...
22 and I hadn't done my exercises for a couple of days and I thought ... I'd better get onto them
23 even though you're not ringing” (Peer no. 5).

24 Many participants stated that making initial contact was difficult and awkward when
25 they did not know/had not met the person they were calling: “I found it really hard to start off
26 with, just to make that initial contact because I'm a fairly shy person” (Peer no. 1). Overall,

1 peers preferred and would have liked to have made initial contact face-to-face, “I think it
2 would have been good if we could have met all our people right from the start in the group
3 situation, just had a social thing, not necessarily knowing who our people were...” (Peer no.
4 1).

5 **Response from RT Participants.**

6 The perceived response from the RT participant to the provision of peer support, and
7 in particular the weekly communication, was viewed by the peers as substantially impacting
8 the peer experience. The peers vocalized concern that either their peer support might be
9 viewed as intrusive to the RT participants or that they themselves could be being bombarded
10 with conversations initiated by the RT participant. Although this was felt to be a substantial
11 difficulty, the peers also reported that they used initiative to overcome this barrier.

12 ***Perceived resistance to peer engagement.***

13 Some RT participants did not appear to require or seek peer support and the
14 intervention, home or gymnasium, made no difference to this response. Peers continued to
15 provide peer support to these RT participants throughout the project, but some peers
16 reported that this was difficult: “I really didn’t feel that I was of any benefit to them really
17 because they were such motivated people” (Peer no. 1). However, these peers were able to
18 positively rationalize their involvement the peer program more broadly, as maintaining and
19 strengthening the ‘community’ of older people undertaking RT in the wellness center, for
20 example “having the group there to do it they’ve kept me going and motivated, which is what
21 this all about” (Peer no. 5). Peers frequently referred to ‘the community’ that they perceived
22 was developing between the whole group of older people attending the wellness center,
23 despite mentioning that some RT participants had low engagement with them as peers.

24 Peers suggested that when conducting a future peer program, it would be advisable
25 to adapt the program to counter the problem detailed above. One peer suggested that it
26 would be important to “be sure that you’ve got people who need to be followed up and not

1 themselves. Peers indicated that helping other older people led them to feel more motivated,
2 satisfied and socially connected. Peers felt satisfaction when contributing to their RT
3 participants' wellbeing and RT engagement, by encouraging, supporting and empathizing
4 with them through the sharing of similar experiences that had a great deal of meaning in
5 their own lives. These findings concur with previous research in falls prevention and physical
6 activity promotion, where 'helping others' is found to be a primary motivator for taking on the
7 peer role, along with meeting new people and increasing social connectedness (Ahmad,
8 Ferrari, Moravac, Lofters, & Dunn, 2017; Khong, Farrington, Hill, & Hill, 2015; Stevens,
9 Barlow, & Iliffe, 2015). Also being of similar age was reported as important by the peers.
10 Older people were targeted specifically as peers because it has been shown having similar
11 interests assists in building rapport between peers and the participants they are assisting.
12 Being of similar age often creates similar interests such as having grandchildren or no longer
13 working.

14 A systematic review (Burton et al., 2017) found that most frequently identified
15 motivators for older people to participate in RT were social support and engagement with
16 older peers. These motivators, combined with the provision of guidance, emotional and
17 social support through the sharing of similar experiences, appeared to facilitate peer
18 engagement with the RT participants, which was consistent with other findings (Ahmad et
19 al., 2017). The engagement also positively influenced the peers' sense of wellbeing, through
20 increased social interactions and observing improvement made by RT participants (Stevens
21 et al., 2015; Waters, Hale, Robertson, Hale, & Herbison, 2011). Supporting others potentially
22 improved the peer's overall confidence, wellbeing and ability to engage with others
23 (Burmeister, Bernoth, Dietsch, & Cleary, 2016; Werner et al., 2014). Peers perceived
24 improvements in their own and their RT participants motivation, consistent with findings from
25 Khong et al. (2015) who suggested that 'peer motivation' was crucial for peers to optimally
26 connect and engage with other older people. Sharing experiences also appeared to nourish

1 the peers' confidence and self-awareness, fostering a sense of 'empowerment' in the peers'
2 through their improved self-efficacy (Ahmad et al., 2017; Khong et al., 2015).

3 Effective communication methods were important in achieving a positive peer
4 experience. Phone communication assisted in maintaining contact where face-to-face
5 communication was not possible, but phone calls were perceived as intrusive and unhelpful
6 and making initial contact via phone was perceived as difficult and awkward. Peers desired a
7 full understanding of the RT participant's experiences and attempted to meet face-to-face
8 when possible, enabling the development of rapport. These findings are supported by other
9 peer experiences in promoting physical activity (Stevens et al., 2015). Peers perceived their
10 RT participants were more open, honest and appreciative of peer support when engaging in
11 face-to-face social interactions, improving the peers perceived level of social connectedness
12 and self-efficacy. Other qualitative research has also suggested that peers are empowered
13 through improved social connectedness and self-efficacy (Ahmad et al., 2017) and that a
14 genuine peer connection is essential in the creation of a comfortable sharing and learning
15 space for peers (Khong et al., 2015). Peers experienced improvements in social wellbeing
16 and shared these experiences with the RT participants, as they had the desire to help others
17 engage socially whilst they were doing RT. These findings are consistent with current
18 literature which has reported older people are motivated to engage in RT to increase their
19 social activity and develop a sense of belonging (Burton, Farrier, Lewin, et al., 2017; Burton
20 et al., 2016).

21 Each peer reported a variety of responses and actions from their RT participants,
22 suggesting that the peer role is diverse and may differ depending on the individual peer, their
23 characteristics and the response from the RT participant. Challenges to peer engagement
24 included, feeling they were not required when supporting 'motivated' RT participants, and
25 disliking a lack of face-to-face communication, consistent with findings from other research
26 (Stevens et al., 2015). Given this, responses from RT participants were predominantly
27 positive and demonstrated the RT participants appreciation for peer support. By acting as a

1 real life example and demonstrating a highly motivated mind set towards RT, the peers had
2 the potential to influence their RT participants perceptions of RT participation (Khong et al.,
3 2015; Stevens et al., 2015).

4 Study strengths included all peers continuing their participation through the six weeks
5 and engaging in all interviews. A strong audit trail allowed for confirmability of the data
6 collected (e.g. peer diaries). The researchers also developed a comfortable relationship with
7 the peers as they appeared to be open to sharing their experiences, both positive and
8 negative. Obtaining data from four separate sources (method triangulation) and having
9 multiple researchers reduce and analyze data independently (researcher triangulation)
10 aimed to increase the trustworthiness of the data (Creswell, 2014).

11 This novel study provided the perspectives of the peers and the RT participants and
12 the providers of the RT program (health professionals) were not interviewed. This will be
13 completed in the next phase of the research, which will add credibility by augmenting these
14 findings. It will assist to gain a broader perspective and understanding about the role peers
15 may play in promoting RT. The study's findings are from one RT program and may not be
16 transferable to other health areas which are not focused on exercise, although we are
17 confident that we have obtained a comprehensive and rich data set from the sample. These
18 findings may be useful more broadly to inform the promotion of exercise programs to older
19 people to improve engagement in recommended health behaviors. However, it must be
20 noted that co-factors such as previous exercise participation that may influence peer
21 responses to their experience were not been utilized in this study. Further research would
22 benefit from exploring these co-factors and type of interactions and ideal peer training
23 processes that are most practical to promote an effective peer-to-RT participant relationship
24 that could enhance participation in RT. A future study could assess motivators and barriers
25 to the development of effective peer-to-RT participant relationships.

26 **Conclusion**

1 The findings of this study indicate that older people felt that providing peer support for
2 promoting participation in RT was largely a positive experience, despite them identifying
3 some difficulties when undertaking the peer role. Providing peer support was viewed as
4 potentially creating a mutually positive two-way relationship between the peer and the RT
5 participant. Peers preferred face-to-face communication where possible, as they enjoyed
6 these type of peer interactions and felt the RT participants were more open and honest in
7 their communication during this time. Research is required to gain further understanding of
8 the role older people can play as a peer to promote RT, and to identify ideal peer training
9 methods. Such programs can then be further evaluated for their benefit in promoting older
10 people's participation in RT.

11

12

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15

16

Conflict of Interest

17 None of the authors of the above manuscript have any conflicts of interest to declare.

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References

- 1
- 2 Ahmad, F., Ferrari, M., Moravac, C., Lofters, A., & Dunn, S. (2017). Expanding the meaning
3 of 'being a peer leader': Qualitative findings from a Canadian community-based
4 cervical and breast cancer screening programme. *Health & Social Care in the
5 Community, 25(2)*, 630-640. doi:10.1111/hsc.12352s
- 6 Australian Bureau of Statistics. (2016). Australian demographic statistics, Jun 2016.
7 Retrieved from
8 [http://www.abs.gov.au/ausstats/abs@.nsf/0/1CD2B1952AFC5E7ACA257298000F2E
9 76?OpenDocument](http://www.abs.gov.au/ausstats/abs@.nsf/0/1CD2B1952AFC5E7ACA257298000F2E76?OpenDocument)
- 10 Australian Institute of Health and Welfare. (2014a). *Ageing and the health system:
11 Challenges, opportunities and adaptations*. Retrieved from
12 <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129547764>
- 13 Australian Institute of Health and Welfare. (2014b). *Are we getting healthier?* Retrieved from
14 <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129547598>
- 15 Bampton, E. A., Johnson, S. T., & Vallance, J. K. (2016). Correlates and preferences of
16 resistance training among older adults in Alberta, Canada. *Canadian Journal of
17 Public Health, 107(3)*, 272-277. doi:10.17269/CJPH.107.5365
- 18 Bennie, J. A., Pedisic, Z., Van Uffelen, J. G. Z., Charity, M. J., Harvey, J. T., Banting, L. K., .
19 . . Eime, R. M. (2016). Pumping iron in Australia: Prevalence, trends and
20 sociodemographic correlates of muscle strengthening activity participation from a
21 national sample of 195,926 adults. *PLoS ONE, 11(4)*, 1-15.
22 doi:10.1371/journal.pone.0153225
- 23 Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research
24 in Psychology, 3(2)*, 77-101.

- 1 Burmeister, O. K., Bernoth, M., Dietsch, E., & Cleary, M. (2016). Enhancing connectedness
2 through peer training for community-dwelling older people: A person centred
3 approach. *Issues in Mental Health Nursing*, 37(6), 406-411.
4 doi:10.3109/01612840.2016.1142623
- 5 Burton, E., Farrier, K., Hill, K. D., Codde, J., Airey, P., & Hill, A.-M. (2017). Effectiveness of
6 peers in delivering programs or motivating older people to increase their participation
7 in physical activity: Systematic review and meta-analysis. *Journal of Sports Sciences*,
8 36(6), 666-678. doi:10.1080/02640414.2017.1329549
- 9 Burton, E., Farrier, K., Lewin, G., Pettigrew, S., Hill, A.-M., Airey, P., . . . Hill, K. D. (2017).
10 Motivators and barriers for older people participating in resistance training: A
11 systematic review. *Journal of Aging and Physical Activity*, 25(2), 311-324.
12 doi:10.1123/japa.2015-0289
- 13 Burton, E., Lewin, G., Pettigrew, S., Hill, A.-M., Bainbridge, L., Farrier, K., . . . Hill, K. D.
14 (2016). Identifying motivators and barriers to older community-dwelling people
15 participating in resistance training: A cross-sectional study. *Journal of Sports*
16 *Sciences*, 35(15), 1523-1532. doi:10.1080/02640414.2016.1223334
- 17 Chodzko-Zajko, W. J., Proctor, D. N., Fiatarone Singh, M. A., Minson, C. T., Nigg, C. R.,
18 Salem, G. J., & Skinner, J. S. (2009). American college of sports medicine position
19 stand. Exercise and physical activity for older adults. *Medicine and Science in Sport*
20 *and Exercise*, 41(7), 1510-1530. doi:10.1249/MSS.0b013e3181a0c95c
- 21 Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, & Mixed Methods*
22 *Approaches* (4 ed.): Thousand Oaks, Calif: SAGE Publications
- 23 Department of Health. (2011). *National physical activity recommendations for older*
24 *Australians: Discussion document*. Australian Government: Department of Health.
25 Retrieved from

- 1 [http://www.health.gov.au/internet/publications/publishing.nsf/Content/phd-physical-
2 rec-older-disc~chapter-8~chapter-8-2](http://www.health.gov.au/internet/publications/publishing.nsf/Content/phd-physical-
2 rec-older-disc~chapter-8~chapter-8-2)
- 3 Garran, R. (2007). *National statement on ethical conduct in human research*. Canberra,
4 ACT, 2600: Australian Government: Australian Research Council. Retrieved from
5 <https://www.nhmrc.gov.au/guidelines-publications/e72>.
- 6 Gorgey, A. S., Mather, K. J., Cupp, H. R., & Gater, D. R. (2012). Effects of resistance
7 training on adiposity and metabolism after spinal cord injury. *Medicine and Science in
8 Sports and Exercise, 44*(1), 165. doi:10.1249/MSS.0b013e31822672aa
- 9 Haff, G. G., & Triplett, T. N. (2016). *Essentials of Strength Training and Conditioning* (Fourth
10 edition. ed.): Champaign, IL : Human Kinetics.
- 11 Humphries, B., Duncan, M. J., & Mummery, W. K. (2012). Prevalence and correlates of
12 resistance training in a regional Australian population. *British Journal of Sports
13 Medicine, 44*(9), 653-656.
14 doi:<http://dx.doi.org/dbgw.lis.curtin.edu.au/10.1136/bjism.2008.048975>
- 15 Khong, L., Farrington, F., Hill, K. D., & Hill, A. M. (2015). "We are all one together": Peer
16 educators' views about falls prevention education for community-dwelling older adults
17 - A qualitative study. *BMC Geriatrics, 15*(28), 1-10. doi:10.1186/s12877-015-0030-3
- 18 Merom, D., Pye, V., Macniven, R., Ploeg, H. V. D., Milat, A., Sherrington, C., . . . Bauman, A.
19 (2012). Prevalence and correlates of participation in fall prevention exercise/physical
20 activity by older adults. *Preventive Medicine, 55*(6), 613-617.
- 21 Shiner, M. (1999). Defining peer education. *Journal of Adolescence, 22*(4), 555-566.
22 doi:<http://dx.doi.org/10.1006/jado.1999.0248>
- 23 Simoni, J. M., Franks, J. C., Lehavot, K., & Yard, S. S. (2011). Peer interventions to promote
24 health: Conceptual considerations. *American Journal of Orthopsychiatry, 81*(3), 351-
25 359. doi:10.1111/j.1939-0025.2011.01103.x

- 1 Steib, S., Schonen, D., & Pfeifer, K. (2010). Dose-response relationship of resistance
2 training in older adults: A meta-analysis. *Medicine and Science in Sport and*
3 *Exercise, 42*(5), 902-914.
- 4 Stenholm, S., Koster, A., Valkeinen, H., Patel, K. V., Bandinelli, S., Guralnik, J. M., &
5 Ferrucci, L. (2016). Association of physical activity history with physical function and
6 mortality in old age. *Journal of Gerontology Series A: Biomedical Sciences and*
7 *Medical Sciences, 71*(4), 496-501. doi:10.1093/gerona/glv111
- 8 Stevens, Z., Barlow, C., & Iliffe, S. (2015). Promoting physical activity among older people in
9 primary care using peer mentors. *Primary Health Care Research & Development,*
10 *16*(2), 201-206. doi:10.1017/S1463423613000510
- 11 Waters, D. L., Hale, L. A., Robertson, L., Hale, B. A., & Herbison, P. (2011). Evaluation of a
12 peer-led falls prevention program for older adults. *Archives of Physical Medicine and*
13 *Rehabilitation, 92*(10). doi:10.1016/j.apmr.2011.05.014
- 14 Werner, D., Teufel, J., & Brown, S. L. (2014). Evaluation of peer-led, low Intensity physical
15 activity program for older adults. *American Journal of Health Education, 45*(3), 133-
16 141. doi:http://dx.doi.org/10.1080/19325037.2014.893851
- 17 World Health Organisation. (2011). Physical activity and older adults: Recommended levels
18 of physical activity for adults aged 65 and over. Retrieved from
19 http://www.who.int/dietphysicalactivity/factsheet_olderadults/en/
20
21

1 Appendix A

2

3 **Interview Probes: Peers (Home and LLLS)**

4

5 Welcome and brief introduction about the project again and why we are doing the interviews
6 (i.e. to get a better understanding of how the peers felt throughout)

7

8 1. Please tell me about your experience as a peer?

9 2. What did you enjoy most about the peer training?

10 3. What did you enjoy least about the peer training?

11 4. Could anything be added/changed to improve the peer training? If yes what?

12 5. What did you enjoy most about being a peer?

13 6. What did you least enjoy?

14 7. Was being a peer what you expected? If no what were you expecting?

15 8. Were you asked to do anything that you didn't want to? If yes what was it

16 9. How important do you think the peer role is for increasing the number of people
17 participating in resistance training? Why is that?

18

19 **For home only**

20 1. Did you enjoy being a peer for those exercising at home?

21 2. Could anything have been done differently to improve the role?

22

23 **For LLLS participants**

24 1. How did you find doing the LLLS program as well as being a peer?

25 2. Did it take away from your training program?

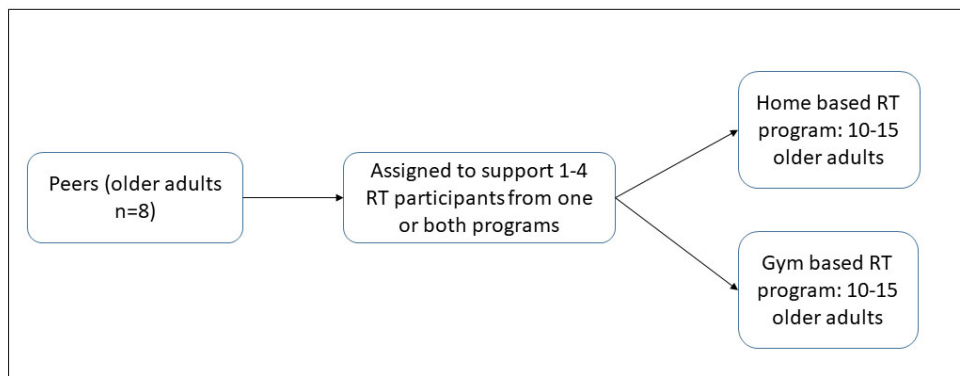
26 3. How did you feel about going to the Wellness centre?

27 4. How did you find being a peer?

28

29 *Additional questions may be added during the interviews.*

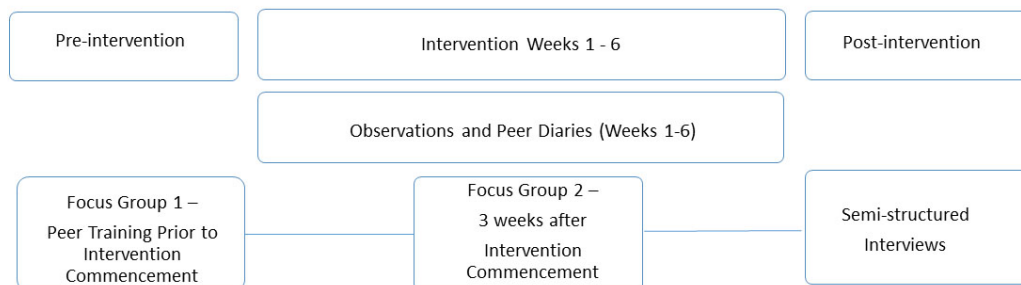
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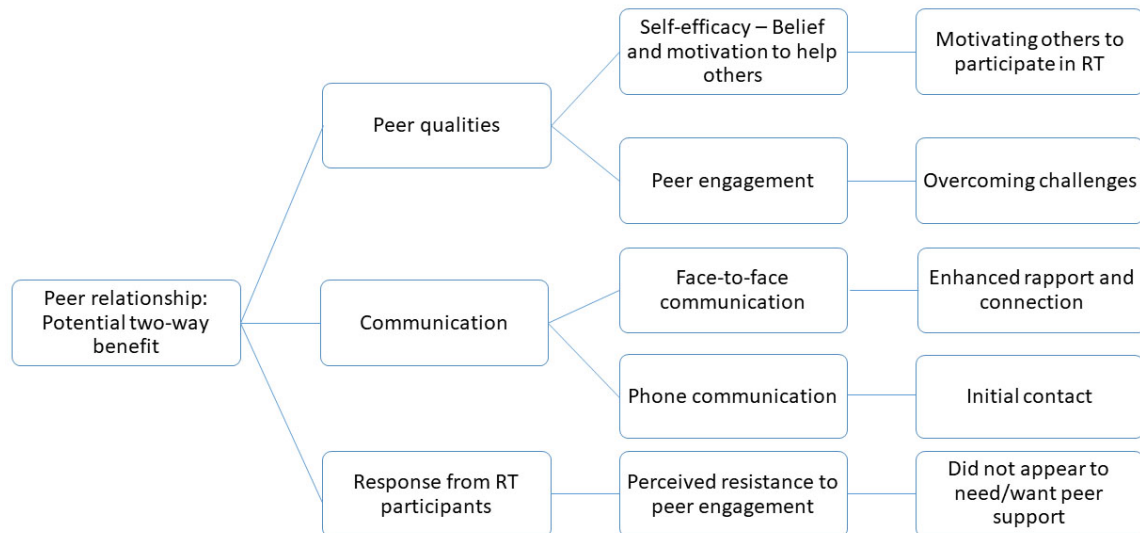
2 Figure 1 - Peer assignment to resistance training participants

3



4

5 Figure 2 - Data collection time line



1

2 Figure 3 - Thematic map conceptualizing the peers' experience in promoting engagement in
 3 resistance training

4