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To cite this article: Jiyoung Hwang, Lisa Wang, Jodi Siever, Talia Del Medico & Charlotte A. Jones (2019) Loneliness and social isolation among older adults in a community exercise program: a qualitative study, *Aging & Mental Health*, 23:6, 736-742, DOI: [10.1080/13607863.2018.1450835](https://doi.org/10.1080/13607863.2018.1450835)

To link to this article: <https://doi.org/10.1080/13607863.2018.1450835>



Published online: 15 Mar 2018.



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## Loneliness and social isolation among older adults in a community exercise program: a qualitative study

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### ABSTRACT

**Objectives:** Loneliness and social isolation (L&SI) are associated with physical and cognitive decline in older adults. Walk 'n' Talk for your Life (WTL) is a community-based program of socialization, health education, falls prevention exercise and walking for community-dwelling older adults. This qualitative study was done to gain further insight into the experience and impacts of the WTL on seniors' L&SI.

**Methods:** One-on-one semi-structured interviews were conducted with sixteen participants who had completed the WTL. Interview questions focused on eliciting a better understanding of how the WTL impacted participants' feelings of L&SI. Content analysis was used to classify the qualitative data.

**Results:** This qualitative evaluation helped to obtain a richer understanding of WTL participants' reasons for loneliness and the benefits of the program on participants' experience of L&SI. Participants felt WTL helped motivate them to socialize and reduced their feelings of loneliness by providing a sense of 'belonging' which appeared to be mediated by the group exercise/walking component of the program.

**Discussion/Conclusions:** This study provides insight into participants' experiences of L&SI. Further research in a broader population of older adults is mandated to determine the efficacy of community exercise programs in reducing L&SI.

### ARTICLE HISTORY

Received 11 August 2017  
Accepted 4 March 2018

### KEYWORDS

Loneliness; social isolation; community exercise program; qualitative methods

### Introduction

Loneliness and social isolation (L&SI) play a significant role in the health and wellbeing of older adults. Loneliness is defined as the subjective measure of negative feelings associated with the perceived lack of a meaningful social network, and social isolation is defined as the quantifiable measure of a reduced social network (Valtorta & Hanratty, 2012). The lonely and socially isolated are at higher risk for a multitude of psychosocial and physical disorders including dementia, depression, physical decline, falls, hospitalization and premature mortality (Cacioppo, Grippo, London, Goossens, & Cacioppo, 2015; Nicholson, 2012). As the number of older adults living alone and at risk for L&SI is rapidly growing, interest in determining the most efficacious interventions to alleviate L&SI in older community dwelling adults has escalated over the past decade. Numerous systematic reviews have endeavoured to assess the effectiveness of such interventions in older adults (Cattan, White, Bond, & Learmouth, 2005; Cohen-Mansfield & Perach, 2015; Dickens, Richards, Greaves, & Campbell, 2011; Gardiner, Geldenhuys, & Gott, 2016; Hagan, Manktelow, Taylor, & Mallett, 2014; Windle, Francis, & Coomber, 2011).

Shared or group physical activity interventions that are participatory in nature and focus on social interaction may alleviate L&SI by promoting and supporting social networking and development and/or strengthening of friendships among participants (Chan, Yu, & Choi, 2017; Cohen-Mansfield & Perach, 2015; Dickens et al., 2011). These interventions may also counteract some of the functional physical decline, morbidity and mortality associated with L&SI (Stenholm et al., 2016). Few published studies or programs targeting L&SI among

older adults incorporate group physical activity and/or walking. Inclusion of group activities has been shown to be a motivator that helped participants overcome some of the barriers to social participation, such as avoidance of social interactions (Goll, Charlesworth, Scior, & Stott, 2015).

In a recent Finnish group-based psychosocial intervention (Routasalo, Tilvis, Kautiainen, & Pitkala, 2009), participants selected one of the three activities (art and inspiring activities, group exercise and discussions, and therapeutic writing and group therapy) for six hours once a week for 12-weeks. Using methodological triangulation which included review of group leaders' diaries, researcher observation and participant questionnaires, researchers sought input on how the program impacted participants' feelings of loneliness. It was determined that participants benefited from taking part in shared activities, felt a sense of 'togetherness' and increased social activation and almost universally (95%) felt that their feelings of loneliness had lessened.

With current evidence in mind and grounded in the activity theory of aging (Havighurst, 1961), the Walk 'n' Talk for Your Life (WTL) program was created collaboratively with over 200 older adults residing in low income housing. The aim of the program was to provide active (productive) community-driven shared activities to reduce L&SI and improve physical functioning among older adults (Akyurekli & Wilson, 2015). The distinguishing features of the WTL program are that it is free of charge to participants and that it has an emphasis on socialization in addition to maintaining or improving functional fitness among participants. Facilitated by a program coordinator and interdisciplinary groups of

University of British Columbia Okanagan campus (UBCO) and Okanagan College undergraduate students, this 12-week program took place in local community centres and seniors' residence buildings in Kelowna, BC. Sessions occurred twice a week and consisted of a 45-minute fitness program, a 30-minute pedometer-based group walk, followed by a 60-minute interactive health education session and 20-minute open socialization (Akyurekli & Wilson, 2015). The fitness program was based on the validated Otago program developed at Otago medical school, and consisted of weight and strength training designed to reduce falls and fall-related injuries (Robertson, Devlin, Gardner, & Campbell, 2001). Participants were coached to 'go at their own speed' and ability. Topics for the interactive health education sessions were chosen by participants. Speakers ranged from community professionals to volunteers from UBCO. The pedometer-based group walk took place in the community streets around the respective venues after the group exercise. Participants walked in groups with volunteers and were given opportunities to socialize during the walks. The 20-minute open and unstructured socialization sessions allowed participants to have free open discussions with each other. The program was evaluated using validated paper-based questionnaires assessing measures of L&SI filled out by participants at the start and end of the program. These included: the six-item Lubben Social Network Scale measuring self-reported 'structure and function of social relationships', the revised 20-item UCLA Loneliness Scale (version three) (Russell, 1996) measuring subjective loneliness including 'perceived availability, adequacy, feelings and emotions regarding social relationships', and the de Jong Gierveld Loneliness Scale (de Jong-Gierveld, 1985), which supplements the UCLA measures, assessing overall (subjective) emotional, and social loneliness on an 11-item scale.

Program evaluations from the 57 WTL participants for whom complete data was available, indicated that the vast majority of participants were satisfied with the program. They found that the program helped them to meet new people, to socialize more and that it improved their emotional and mental wellbeing. Measures of social isolation (Lubben et al., 2006) did not change significantly possibly due to the short intervention period as this has been reported in other studies with short intervention periods (Chan, Lee, Lee, Sit, & Chair, 2013). On the other hand, the revised UCLA loneliness score (version three) (Russell, 1996) showed a significant decrease in loneliness, and the de Jong-Gierveld score (de Jong-Gierveld, 1985), showed a significant decrease in emotional loneliness. Additionally, significant improvements in measures of functional fitness were observed. However, due to these inconsistencies and the following, the WTL quantitative results have not been published.

As outlined by Bartlett et al (Bartlett, Warburton, Lui, Peach, & Carroll, 2012), there are challenges associated with the evaluation of community programs such as WTL that are not randomized controlled trials (RCTs) and that are implemented by students and staff rather than highly trained research personnel. Such studies preclude drawing reliable conclusions about the effectiveness of the program. For the WTL program, the major challenges included no control group, incomplete data collection and a short intervention timeline (12 weeks). Without a control group, regression to the mean could not be ruled out as explaining changes in the validated measures of L&SI and functional fitness.

This supplementary qualitative research study was undertaken after the quantitative study to explore and develop a

richer understanding of the experience of living with L&SI from the perspective of WTL participants, their experience of participating in the WTL program, and how it impacted them.

## Methods

### Research team

This qualitative research was carried out by researchers JH, LW, and TD, and the research supervisor, CAJ. The interviews were carried out by JH and TD who had no previous involvement with any of the participants of this study. JH and LW performed the data analysis. CAJ facilitated numerous socialization, health education and physical activity sessions in the WTL program. Previous interaction with participants might bias or affect participants' responses to the interview questions; therefore, CAJ did not play a direct role in the interview or data analysis processes.

### Study design

Content analysis of semi-structured guided interviews using targeted probes was used to provide insight into participants' experiences of loneliness, social isolation and the WTL program.

### Participant selection

A purposive sampling technique was used. Interviewees were randomly selected based on their previous completion of the 12-week WTL program. Exclusion criteria included WTL participants who self-reported a hearing loss and those who were not available during scheduled interview times (June-August 2015). Consent was signed prior to the interview. Recruitment and interviews continued until no new themes or concepts arose from the interviews (saturation) (Creswell, 1994). All WTL participants that were eligible for this study agreed to be interviewed.

### Study participants

Twenty-five participants were picked at random from our database of 79 participants (87% female) who completed the WTL program. A total of 16 underwent interviews. Nine participants were not available during the two-month interview period. Participant characteristics are detailed in Table 1. Fifteen of the sixteen interviewees were female, which is representative of the predominance of female in the WTL program. The average age was 76.6 (range: 65–88). Eleven lived alone and of those that did not, two (participants 7 and 8) were caregivers for their ill husbands.

### Setting

One-on-one interviews took place in a quiet room located at or near the WTL venues.

### Data collection

Data was collected over a two month period (July-August) using semi-structured interviews consisting of three main questions. A sample interview guide was formulated in consultation with a qualitative researcher (SdeL). Open-ended

**Table 1.** Participant demographics, Lubben, UCLA and de Jong-Gierveld scores.

Participant #	Age Years	Live alone Y/N	Annual income \$	Lubben score		UCLA score		de Jong-Gierveld score			
				Initial	Final	Initial	Final	Emotional		Social	
								Initial	Final	Initial	Final
1	67	Y	<25,000	5	-	53	-	5	-	3	-
2	68	Y	<25,000	6	6	64	55	6	-	6	-
3	65	Y	<25,000	5	10	63	32	4	0	4	1
4	77	Y	<25,000	14	16	43	45	3	2	3	2
5	80	N**	<25,000	16	19	53	47	5	3	4	4
6	81	Y	<25,000	13	13	46	49	3	3	2	3
7	85	N*	-	15	20	24	35	0	0	3	4
8	79	N*	<25,000	14	5	46	-	6	6	2	4
9	88	Y	<25,000	14	21	30	-	2	2	3	0
10	75	Y	-	11	12	45	36	4	1	2	3
11	85	N	26–50,000	11	17	25	27	1	1	1	0
12	74	Y	26–50,000	15	15	36	45	2	1	3	2
13	76	Y	26–50,000	-	27	-	48	-	3	-	1
14	82	Y	-	14	-	50	-	-	4	-	5
15	65	Y	-	20	-	45	-	0	-	2	0
16	76	N	-	20	15	33	26	0	0	2	3

\* Caregiver to ill husband

\*\* Husband has hearing loss

and guided questions were designed in order to encourage participants' open communication of their experiences relating to the WTL program. Based on the participants' answers, targeted probing questions were asked to further clarify or explain participants' experiences in detail.

The three main questions were:

'Could you tell me your story on your experiences with the Walk 'n' Talk program?'

'Can you tell me about how the program may have affected a friend or one (or more) of the other participants?'

'The program may have decreased feelings of loneliness in some. Can you comment on this?'

Interviews lasted approximately thirty-minutes each. Interviews were audio recorded and then transcribed verbatim manually.

## Analysis

Transcript analysis was conducted manually by two researchers (JH, LW) using content analysis (Miles & Huberman, 1994) methodology. The researchers independently read through the transcripts twice, then coded relevant quotes into major categories or clusters based on their relevance to the interview questions and then arranged the quotes into recurring themes (or sub-categories of each cluster). Transcripts were reviewed again together to assure data saturation (no new information beyond the five main clusters and themes) had been reached. Together the two researchers came to consensus on the final clusters, themes and sub-themes (Table 1). Participants were not involved in the feedback on the findings, as the program had been completed prior to this study and many had dispersed for the summer holidays.

## Results

### Qualitative evaluation

Content analysis of the interview transcripts revealed five main clusters: Reasons for Loneliness, Perceptions of Loneliness, Benefits of the WTL program, Interest in Continuation of a WTL-like program, and Strengths of the WTL program (Table 2).

**Table 2.** Clusters, themes and sub-themes.

Cluster	Themes
1. Reason for Loneliness	1.1 Significant life changes A. Move to a new community B. Separation from family C. Retirement 1.2 No similar age group at home 1.3 Habit 1.4 Difficulty making social connections A. Lack of opportunity to make social connections B. Difficulty making strong connections
2. Perception of loneliness	
3. Benefits of the WTL program	3.1 Improved physical and mental wellbeing A. Interviewee's impression of self-improvement B. Interviewee's impression of others' improvement 3.2 Decreased loneliness or social isolation 3.3 Increase in Motivation
4. Strengths of program	5.1 Student volunteers 5.2 Socialization and education 5.3 Exercise regime
5. Interest in continuation of a WTL-like program	

Numbers following the quotes refer to participant numbers in Ta

### Cluster 1: Reason for loneliness

Participants described a variety of reasons for loneliness. The participant's descriptions of loneliness exemplified life changes common in members of the senior population, such as retirement, a geographic move, lack of opportunity to socialize or loss of a close one.

#### 1.1 Significant life changes

##### A. Move to a new community

Movement to a new geographic area occurred in some seniors due to limited number of spots in subsidized senior housing near their old neighbourhood. Because of this move, and consequent lack of supports, some of these individuals became lonely.

'I didn't know anybody and I moved in September and Walk 'n' Talk started that spring.' (2)

### B. Separation from Family

Some participants found it distressing to be away from relatives for an extended period of time. This separation, despite lasting for long periods of time, still caused the participants to isolate themselves in their home and prevented them from seeking new social supports. Instead of seeking new supports, some participants felt that they needed to physically leave this new isolating environment and reconnect with previous supports.

'8 months and I don't know anybody. I don't have any relative here. So I have to think about how to get out.' (1)

### C. Retirement

Retirement was also a common theme that arose from the interviews and was another factor that brought about change and loneliness. Despite having more time to socialize in retirement, participants were having difficulty forming meaningful relationships. Retirement was described as a change in their lives that they needed to adjust to.

'I was new to the building and new to the retirement. So, basically no social networking yet.' (3)

#### 1.2 No similar age group at home

For some that were living with their family and not in a senior group home, they found it isolating if there was no one of similar age around them. Despite family being at home, participants felt they needed to build additional relationships with people of a similar age group to feel less lonely.

'There is no elderly or the same age of people in the home.' (11)

#### 1.3 Habit

While the majority of participants felt loneliness as a negative aspect of their life that was associated with being a senior, one participant felt she was used to being alone her entire life and chose to be alone.

'I tend to be a loner, you know. It's not that I don't like socializing. It's just that I don't know what it is, but I quite enjoy my own company.' (4)

#### 1.4 Difficulty making social connections

##### A. Lack of opportunity to make social connections

Participants described their environments as a contributing factor to their loneliness. Because those around them often spent time alone, they felt that it was difficult to make social connections in this environment where most people seemed to comfortable keeping to themselves.

'Everybody is quiet, in their own little world. Because we are all seniors and of course most of us live by ourselves.' (2)

##### B. Difficulty making strong connections

The quality of conversations between social connections was important in influencing their feelings of loneliness. This was particularly apparent in those who were living in senior group homes. Even though there were a lot of seniors in the same building, they felt it was still difficult to continue conversations that led to meaningful relationships.

'Making new friends is not easy, you know. Hello, goodbye is ok but not deep, close together.' (1)

## Cluster 2: Perception of Loneliness

The interviews demonstrated the depth and characteristics of loneliness and social isolation in the participants. Feelings of

loneliness and social isolation impacted participants' mental health and wellbeing.

'It's depressing to sit home alone.' (5)

'Because I've got nobody here. That's why it's really helped me. Otherwise, I'm going, I know myself, going crazy. I would commit suicide because I'm so lonely. It kill me.' (1)

## Cluster 3: Benefits of the WTL program

A wide spectrum of perceived benefits was noted from the interview results, including improvements in physical, mental, and social factors. Responses also illustrated individual personal development and increases in intrinsic and extrinsic motivation as a result of the program.

### 3.1 Improved physical and mental wellbeing

#### A. Interviewee's perception of self-improvement

Participants noticed improvements in themselves, such as becoming more outgoing, learning new things about their neighbourhood, and improving their physical wellbeing.

'It got me out of my shell. I've continued with the walking. And I've learned all sorts of good things about my neighbourhood, which I hadn't realized that they were even there ... Community gardens, bike walk, a bike path that I didn't realize you didn't have to walk on the road.' (2)

'I think within two weeks I started sleeping better and my posture was really bad I kind of slumped and I know that's really helped me. And I've never done weights before so I find doing the weights has helped me because I can pick up things easier now. And the biggest thing for me with this problem was I sleep better... My sleeping and more confidence.' (16)

'I felt my basic wellbeing and strength just multiply. I'm beginning to reap the benefits. This is a year later, I'm beginning to really reap the benefits of physical activity, fitness, mentally I'm in a really really good space. Very comfortable with myself and my retirement.' (3)

#### B. Interviewee's perception of others' improvement

Participants also noticed improvements in others around them and perceived others to be happier and more cohesive as a group.

'People are a lot happier. When I started, there wasn't much talking between the group and socializing but now definitely. Everybody says hi to everybody and we feel more like a group, you know.' (16)

'There is a lot of ladies that come here and that's all they do. They don't have any other activities that they co-operate in and I think this is one way of getting them out to do something outside their home.' (9)

'They've told me that they got to know other people, that they got more comfortable with them, just getting to know a bit more personal rather than just seeing them in the elevator or something and just saying hi. They actually know who they are.' (2)

Not all participants felt the same degree of benefit. Some participants described that the feelings of loneliness persist in some.

'I think they still have loneliness. I think I'm not quite their age so my observation and that I think it's they need, just like I do to, I need companion, and friendship with women. I think that has helped them to look forward to something.' (15)

### 3.2 Decreased loneliness or social isolation

Participants talked about improvements in their social network and sense of belonging.

'I made a lot of new acquaintances in the building that I live ... I feel more comfortable in my situation. I'm not just sitting there

looking at four walls.... When somebody says let's go for a walk, I'm willing to drop anything and go for a walk. Of course, before nobody ever said that because I didn't know anybody and I moved in September and Walk 'n' Talk started that spring.' (2)

'...gradually I'm very confident to come every Monday and Thursday and make me more easy to cope with that new environment, because very quiet here. It's totally different from Vancouver.... This is like a small community. So I come here to make me happy.... and give me more 'I'm here' 'I belong here.'" (1)

Some described improved social connections and social supports.

'There were maybe 11–14 people that I would call regulars in our program. And I feel that they would support me if I, I know that if I got into some sort of trouble I could go to those people and they wouldn't turn their back on me or you know what I'm saying. I have a connection with them.... So they are not strangers anymore in other words.' (3)

'I think because they were alone so they needed company like that but we are sort of bonded now, the group of us, you know.' (16)

### 3.3 Motivation

Some also noticed an improvement in motivation, such as increased determination to reach physical goals, or to get out of the house. For some, increased motivation was associated with concrete goal setting using pedometers or formation of groups that motivated one another to walk outside.

'I find it very motivating because of the pedometers. Like I'm setting myself goals with it.' (15)

'It has given me a little bit more ambition to get out. Before, I was just sitting there and trying to cope [with husband's illness]' (8)

## Cluster 4: Strengths of the WTL program

### 4.1 Student volunteers

Volunteer students were a positive part of WTL. Participants enjoyed how the volunteer students were friendly and promoted conversation in the groups.

'You got to know the people that you were walking with and also the volunteer students were just absolutely fantastic they got everybody talking. They asked certainly not personal questions but just questions to make you kind of loosen up a little bit.' (2)

### 4.2 Socialization and education

Another aspect the participants enjoyed was the educational sessions.

'It's a wonderful program for seniors to get them out and get them interested in other things and you know, learning, you are never too old to learn I think, you know.' (7)

'It's very educational first of all and improving in social activities and so this is very important to have that for the elderly people.' (11)

### 4.3 Exercise regime

Some described their enjoyment of the Otago fitness exercise regime which allowed some participants to engage in exercise at their own time even after the program ended.

'We sort of encourage and mentor each other since. I myself have gone on to a fairly rigorous exercise program on which I have incorporated the Otago fitness program, plus the Otago exercises plus a fitness room routine and I complete five miles of walking in a day.' (3)

'[My favorite part is] probably the exercises, because I don't do enough of them on my own.' (13)

## Cluster 5: Interest in continuation of a WTL-like program

Participants showed interest in continuing the program or they stated that they are trying to find a program similar to WTL, as they found this program unique due to the socialization aspect.

'I'm really sorry it's over with now because I want to continue on with some other program and I'm gonna look into that and see if I can find something.' (11)

'I sort of heard comments from people around me and you know they are all sorry that's it's over with now so I think it's just, it's helped them too.... And I'm gonna miss them. But it's been super positive. Yeah, I want more.' (16)

## Discussion

Participants in this qualitative study provided their insight into their experiences of living with L&SI, participating in the WTL program and how it impacted them. Participants voiced their perceptions of how the WTL program had a positive impact upon their own and other participants' feelings of loneliness, psychosocial and physical well-being. Interaction with student volunteers and 'productive' group activities (socialization/education and exercise/walking) provided a sense of belonging and were identified as the key components participants appreciated the most. Addition of this qualitative evaluation of the WTL program complemented the previous quantitative findings and provided deeper insight into the psychosocial and health benefits of the program for community-dwelling older adults who are at risk of or experiencing loneliness and/or social isolation.

### Causes and perceptions of loneliness and social isolation

The content analysis helped to classify the various expressed causes of L&SI in the WTL participants. Consistent with literature on loneliness in older adults (Savikko, Routasalo, Tilvis, Strandberg, & Pitkala, 2005; Smith, 2012; Victor et al., 2005), participants identified a lack of social opportunities associated with separation from or loss of loved ones, being a caregiver, living alone, geographic re-location, immigration and challenges with making new and meaningful social connections. These results imply that there are many factors associated with aging that perpetuate the experiences of L&SI. Accessible programs such as the WTL that are sensitive to and incorporate productive and shared group activities that 'socially activate' participants may help to ameliorate the downstream effects of some of the identified factors (Windle et al., 2011).

### Improvements in loneliness and social isolation

The interviews complemented and clarified the quantitative findings of the previous WTL program evaluation revealing that the program helped decrease perceived feelings of loneliness/social isolation by making new social connections, generating feelings of belonging, motivating and improving health and well-being. The majority felt that the group socialization and walking/physical activity aspects along with the student interactions were the most gratifying and beneficial components of the program. These findings are consistent with the activity theory of (successful) aging (Havighurst, 1961) and are in agreement with the those of Toepoel (2013)

and others (Cohen-Mansfield & Perach, 2015; Gardiner et al., 2016; Nicholson, 2012; Windle et al., 2011). They suggest that active or 'productive' shared activities (e.g. social/cultural, educational or physical activities), as opposed to 'consumptive' independent activities (e.g. reading or watching TV), and activities that include intergenerational connections, improve quality of life and in the case of exercise interventions, reduce the risk for many of the co-morbidities and premature mortality (McPhee et al., 2016) associated with L&SI.

### **Other unexpected benefits**

Our data imply that seniors may have chosen to participate in the WTL program not only to reduce L&SI, but for other reasons, including a desire for improved physical health, health education and to seek freedom outside the household. These benefits may be good incentives for seniors to participate in future programs as suggested by several others (Chan et al., 2017; Goll et al., 2015; Hopman-Rock & Westhoff, 2002).

### **Limitations**

This study has several limitations. The qualitative data generated from this small, female-dominated sample derived from a program of self-selected participants located in several sites within one city in British Columbia may not be generalizable to other groups of older adults in other locations. Further research including an RCT with larger numbers of participants, more male participants and in other locations is needed to determine if the benefits of the WTL program can be extended and reproduced. Additionally, while the baseline demographics and quantitative measures of L&SI of the study's participants were similar to those WTL participants that were not interviewed, it is possible that the findings of this study do not apply to all WTL participants. Further, as the participants of the WTL program are self-selected, and independently ambulatory we have no way of knowing if we selected for the 'socially-active' (Cattan et al., 2005) and have not reached those who are truly socially isolated (e.g. those with disabilities and men) and might benefit more from the program. During the interview, some probing interview questions may have had a leading nature, which may have influenced interviewees comments. While the findings of this qualitative study are consistent with the results of the validated survey questionnaires used in the original WTL program, further iterations of the WTL should use more robust recruiting methods (Bonevski et al., 2014; Saito, Kai, & Takizawa, 2012) aimed specifically at the harder to reach lonely and isolated individuals and that attract more men, who commonly are under-represented in community-based exercise programs (Gandy, Bell, McClelland, & Roe, 2016). Addition of these qualitative findings support the feasibility of initiating a RCT in a broader population assessing the effectiveness of the WTL program on loneliness, social isolation and physical health and wellbeing.

### **Conclusions and future recommendations**

The addition of a qualitative evaluation of the WTL program helped to obtain a richer understanding of the potential benefits of community programs on participants' experience of L&SI, and physical well-being and lent credence to the quantitative program evaluation data suggesting the same. This

select group of WTL participants perceived that the program improved their psychosocial and physical wellbeing. Participating in WTL appeared to help motivate them to socialize and reduced their own (and other WTL participants') feelings of loneliness by providing a sense of 'belonging' possibly mediated by the group exercise/walking component of the program. Further research in a broader population of older adults, such as a longitudinal cluster RCT, is mandated in order to determine the efficacy of the WTL program to reduce L&SI and the downstream negative impact on morbidity and mortality.

The importance of sustained participation in community programs has been demonstrated by McAuley (McAuley et al., 2000) who showed that satisfaction with life may decrease after the conclusion of a program without the social support from the exercise group. This, along with the conclusion that several WTL participants described interest in continuing the program, supports the need for sustained programming in order to decrease L&SI and its downstream negative influence on psychosocial and physical wellbeing and mortality.

Considerations for participant recruitment in future programs might include using the successful incentives such as student volunteers, socialization/educational presentations, and the 'go at your own pace' walking/exercise regime. Providing a choice of physical activity (such as swimming, cycling etc.), tailoring activities to participants' abilities, as well as providing activities at a low cost can also be considered as possible incentives.

For future questionnaire development, future programs should focus on a particular social relationship dimension (such as 'loneliness'). Valtorta described that different tools for measuring L&SI have different degrees of subjectivity in its questions. Use of Valtorta's classification in future projects will allow researchers to decide upon the appropriate tool and for research to be focused on that particular dimension of social relationships (Valtorta, Kanaan, Gilbody, & Hanratty, 2016).

Future studies investigating the effects of community walking programs on senior health should consider the use of control groups or an alternate (Saito et al., 2012; Yancy et al., 2011) design such as a wait list control group; this may increase the quality and confidence in the evidence generated from such programs.

### **Statement of ethical approval**

This study was approved by the Behavioural Research Ethics Board Okanagan and the Interior Health Authority (UBC BREC number: H13-03500). This research is reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines (Tong, Sainsbury, & Craig, 2007).

### **Acknowledgements**

The authors would like to acknowledge the inspiring help from Dr. Sara de Leeuw in help with design of the study interview script. The authors would also like to acknowledge the help of Tim Fong in performing an in-depth interview.

### **Disclosure statement**

The authors declare that they have no competing interests.

## Funding

This research project received no specific grant from any public, commercial or non-profit funding agency.

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## References

- Akyurekli, C., & Wilson, J. (2015). Walk n' talk for your life. *National Geriatric Interest Group Journal*, 3, 20–24.
- Bartlett, H., Warburton, J., Lui, C.-W., Peach, L., & Carroll, M. (2012). Preventing social isolation in later life: Findings and insights from a pilot Queensland intervention study. *Aging and Society*, 33(07), 1167–1189.
- Bonevski, B., Randell, M., Paul, C., Chapman, K., Twyman, L., Bryant, J., ... Hughes, C. (2014). Reaching the hard-to-reach: A systematic review of strategies for improving health and medical research with socially disadvantaged groups. *BMC Medical Research Methodology*, 14, 42–69.
- Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science*, 10(2), 238–249.
- Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: A systematic review of health promotion interventions. *Aging and Society*, 25(1), 41–67.
- Chan, A. W., Lee, A., Lee, D. T., Sit, J. W., & Chair, S. Y. (2013). Evaluation of the sustaining effects of Tai Chi Qigong in the sixth month in promoting psychosocial health in COPD patients: A single-blind, randomized controlled trial. *The Scientific World Journal*, 2013, 425082. doi: 10.1155/2013/425082
- Chan, A. W., Yu, D. S., & Choi, K. C. (2017). Effects of tai chi qigong on psychosocial well-being among hidden elderly, using elderly neighborhood volunteer approach: A pilot randomized controlled trial. *Clinical Interventions in Aging*, 12, 85–96.
- Cohen-Mansfield, J., & Perach, R. (2015). Interventions for alleviating loneliness among older persons: A critical review. *American Journal of Health Promotion*, 29(3), e109–e125. doi: 10.4278/ajhp.130418-LIT-182
- Creswell, J. W. (1994). *Research design*. Thousand Oaks, California: Sage.
- de Jong-Gierveld, J., & Kamphuis, F. (1985). The development of a rasch-type loneliness scale. *Applied Psychological Measurement*, 9, 289–299.
- Dickens, A. P., Richards, S. H., Greaves, C. J., & Campbell, J. L. (2011). Interventions targeting social isolation in older people: A systematic review. *BMC Public Health*, 11, 647–668.
- Gandy, R., Bell, A., McClelland, B., & Roe, B. (2017). Evaluating the delivery, impact, costs and benefits of an active lives programme for older people living in the community. *Primary Health Care Research & Development*, 18(2), 122–134.
- Gardiner, C., Geldenhuys, G., & Gott, M. (2016). Interventions to reduce social isolation and loneliness among older people: An integrative review. *Health & Social Care in the Community*, 26, 147–157. doi: 10.1111/hsc.12367
- Goll, J. C., Charlesworth, G., Scior, K., & Stott, J. (2015). Barriers to social participation among lonely older adults: The influence of social fears and identity. *PLoS One*, 10(2), e0116664.
- Hagan, R., Manktelow, R., Taylor, B. J., & Mallett, J. (2014). Reducing loneliness amongst older people: A systematic search and narrative review. *Aging & Mental Health*, 18(6), 683–693.
- Havighurst, R. J. (1961). The activity theory of aging. "Successful aging". *The Gerontologist*, 1, 8–13.
- Hopman-Rock, M., & Westhoff, M. H. (2002). Development and evaluation of "Aging Well and Healthily": A health-education and exercise program for community-living older adults. *Journal of Aging and Physical Activity*, 10, 364–381.
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., & Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network Scale Among Three European Community-Dwelling older adult populations. *The Gerontologist*, 47, 503–513.
- McAuley, E., Blissmer, B., Marquez, D. X., Jerome, G. J., Kramer, A. F., & Katula, J. (2000). Social relations, physical activity, and well-being in older adults. *Preventive Medicine*, 31(5), 608–617.
- McPhee, J. S., French, D. P., Jackson, D., Nazroo, J., Pendleton, N., & Degens, H. (2016). Physical activity in older age: Perspectives for healthy aging and frailty. *Biogerontology*, 17(3), 567–580.
- Miles, M. H., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks: Sage Publications Ltd.
- Nicholson, N. R. (2012). A review of social isolation: An important but underassessed condition in older adults. *The Journal of Primary Prevention*, 33(2-3), 137–152.
- Robertson, M. C., Devlin, N., Gardner, M. M., & Campbell, A. J. (2001). Effectiveness and economic evaluation of a nurse delivered home exercise program to prevent falls. 1: Randomised controlled trial. *BMJ*, 322, 697–701.
- Routasalo, P. E., Tilvis, R. S., Kautiainen, H., & Pitkala, K. H. (2009). Effects of psychosocial group rehabilitation on social functioning, loneliness and well-being of lonely, older people: Randomized controlled trial. *Journal of Advanced Nursing*, 65(2), 297–305.
- Russell, D. W. (1996). UCLA loneliness scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40.
- Saito, T., Kai, I., & Takizawa, A. (2012). Effects of a program to prevent social isolation on loneliness, depression, and subjective well-being of older adults: A randomized trial among older migrants in Japan. *Archives of Gerontology and Geriatrics*, 55, 539–547.
- Savikko, N., Routasalo, P., Tilvis, R. S., Strandberg, T. E., & Pitkala, K. H. (2005). Predictors and subjective causes of loneliness in an aged population. *Archives of Gerontology and Geriatrics*, 41(3), 223–233.
- Smith, J. M. (2012). Toward a better understanding of loneliness in community-dwelling older adults. *The Journal of Psychology*, 146(3), 293–311.
- Stenholm, S., Koster, A., Valkeinen, H., Patel, K. V., Bandinelli, S., Guralnik, J. M., & Ferrucci, L. (2016). Association of physical activity history with physical function and mortality in old age. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 71(4), 496–501.
- Toepoel, V. (2013). Aging, leisure, and social connectedness: How could leisure help reduce social isolation of older people? *Social Indicators Research*, 113(1), 355–372.
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349–357.
- Valtorta, N., & Hanratty, B. (2012). Loneliness, isolation and the health of older adults: Do we need a new research agenda? *Journal of the Royal Society of Medicine*, 105(12), 518–522.
- Valtorta, N. K., Kanaan, M., Gilbody, S., & Hanratty, B. (2016). Loneliness, social isolation and social relationships: What are we measuring? A novel framework for classifying and comparing tools. *BMJ Open*, 6(4), e010799.
- Victor, C. R., Scambler, S. J., Bowling, A. N. N., & Bond, J. (2005). The prevalence of, and risk factors for, loneliness in later life: A survey of older people in Great Britain. *Aging and Society*, 25(3), 357–375.
- Windle, K. F., Francis, J., & Coomber, C. (2011). *Preventing loneliness and social isolation: Interventions and outcomes*. London, UK: Social Care Institute for Excellence. <http://www.scie.org.uk/publications/briefings/files/briefing39.pdf>
- Yancy, C. W., Wang, T. Y., Ventura, H. O., Pina, I. L., Vijayaraghavan, K., Ferdinand, K. C., & Hall, L. L. (2011). The coalition to reduce racial and ethnic disparities in cardiovascular disease outcomes (credo): Why credo matters to cardiologists. *Journal of the American College of Cardiology*, 57(3), 245–252.