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**Guidance for research on social isolation, loneliness, and participation among older people: Lessons from a mixed methods study**

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# Guidance for Research on Social Isolation, Loneliness, and Participation Among Older People: Lessons From a Mixed Methods Study

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## Abstract

This article provides methodological guidance to researchers wishing to develop collaborative research projects with local governments and other agencies, by describing the process adopted in a mixed methods study conducted in the City of Wanneroo (the City), a local government area in Perth, Western Australia. The study explored factors related to older people's (60+ years) participation in community-based activities and links between their participation and levels of social isolation, loneliness, and social connectedness. The research incorporated four interrelated stages: (1) an audit of existing programs in the City and program participant characteristics; (2) focus groups with program participants and interviews with nonparticipants; (3) a cross-sectional survey to assess factors associated with participation and links to social isolation, loneliness, and social connectedness; (4) face-to-face interviews with survey respondents screened at risk for loneliness. Methodological recommendations are provided to guide future collaborative research with local authorities, program developers, and administrators, aimed at minimizing social isolation and loneliness among older people. These include the need for clear communication and documentation of mutually agreed research objectives and responsibilities from project initiation to completion, identifying and working with local agencies to maximize recruitment among "hard to reach" groups, understanding the dimensions of loneliness addressed in the selected instrument used to screen for loneliness, and integrating innovative data collection techniques when working with vulnerable groups such as socially isolated older people.

## Keywords

focus groups, mixed methods, interpretive description, community-based research, methods in qualitative inquiry

## Introduction

Community participation is important to enhance older people's (60+ years) health and well-being (Ong, Uchino, & Wethington, 2016; Papageorgiou, Marquis, & Dare, 2016) and to minimize the risk of social isolation and loneliness (Courtin & Knapp, 2015). In recognition, local government bodies across the globe are investing in initiatives that align with the World Health Organization (WHO)-accredited Healthy Cities model (Jolley & Barton, 2015; Provencher, Keating, Warburton, & Roos, 2014), integrating the principles of Age Friendly cities (Buffel & Phillipson, 2016) and Age Friendly communities (Kendig, Elias, Matwijiw, & Anstey, 2014) to promote participation for older people. While important, such investments represent a challenge for local governments who have competing demands and pressures to contain costs.

Subsequently, for local governments and other agencies wishing to support the implementation of Age Friendly initiatives by community-based organizations, it is imperative they draw on evidence to ensure such programs are relevant,

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accessible, and appropriate to older residents and subsequently represent value for money.

Although much research documents the efficacy of interventions to reduce social isolation and loneliness by promoting participation among older people, most studies have adopted a quantitative methodology (see, e.g., Cattan, White, Bond, & Learmouth, 2005; Dickens, Richards, Greaves, & Campbell, 2011). These studies provide important information but offer limited insights into how older people experience participation. Other research has considered the value of older people's participation in community-based programs by sampling active participants (see, e.g., Mackenzie et al., 2017), while few studies have considered determinants from the perspective of those who do not participate.

Our study addressed this knowledge gap by using an integrated sequential mixed methods approach to (i) identify associations between program characteristics and participation status (regular, irregular, nonparticipant) among a sample of older residents (60+ years) in the City of Wanneroo (the City), a local government area in Perth, Western Australia and (ii) explore barriers and enablers to participation among those with different participation status and levels of social isolation and loneliness.

The City provided the setting for this research. The City encompasses a large and socioeconomically diverse population in a region of Perth, Western Australia. They are a partner in Mentally Healthy WA's Act-Belong-Commit (ABC) program that provides advice to individuals on practical strategies they can adopt to foster positive mental health (Donovan & Anwar-McHenry, 2016). This program also works with local governments to encourage greater participation among their community in mentally healthy activities (Donovan & Anwar-McHenry, 2016). In our study, the City was concerned that barriers to participation in age-relevant activities might increase the risk of social isolation and loneliness among some older residents, and sought a better understanding of these issues to inform more targeted programming.

This article documents the research approach adopted in this study, considers decisions underpinning our methodological choices, and highlights the strengths, limitations, and implications of the research design. We also make recommendations to guide researchers wishing to work in partnership with local agencies when investigating similar issues. Empirical results relating to this study are reported separately (Dare, Wilkinson, Marquis, & Donovan, 2018).

## Background

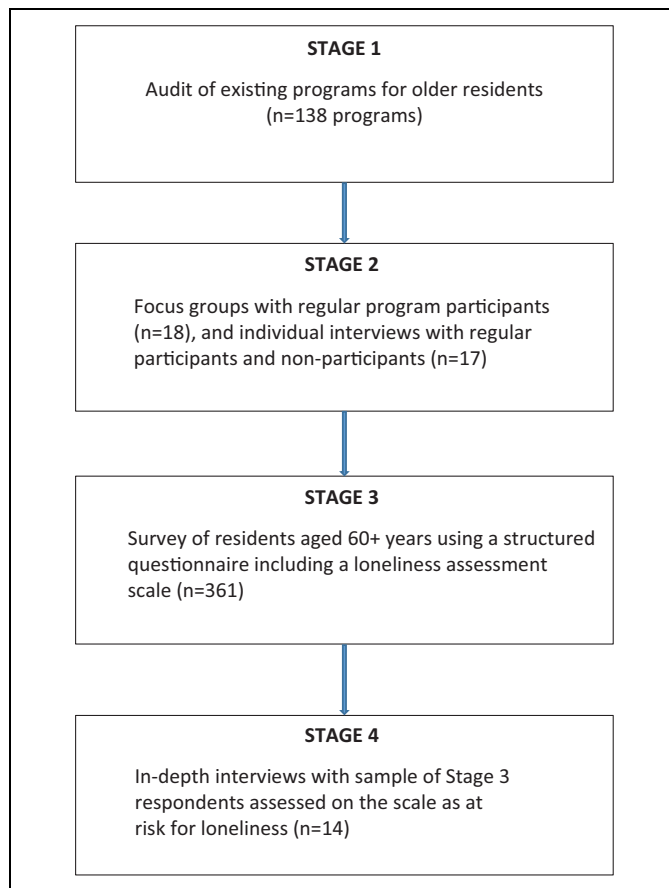
Social isolation, defined as "an objective measure of the number of contacts with family and friends," and loneliness, which describes the "undesirable subjective experience" associated with limited social connections, can have significant detrimental consequences for older people's health and well-being (Courtin & Knapp, 2015, p. 802). Conversely, positive associations between social connectedness and participation, and higher levels of psychosocial and physical health among older

people are well established (S. A. Haslam, 2018; Holt-Lunstad, Smith, & Layton, 2010). For example, a critical review of quantitative nonintervention studies related to social and leisure activity among older people in 11 countries across Europe, Asia, the Middle East, and North America reported positive outcomes for a range of different measures, such as well-being, morale, activities of daily living, increased longevity, and life satisfaction (Adams, Leibbrandt, & Moon, 2011). Other systematic reviews have drawn together evidence on the efficacy of interventions to promote participation and reduce the risk of social isolation. These reviews, which included randomized controlled trials, quasi-experimental interventions (Cattan et al., 2005; Dickens et al., 2011), and secondary analysis of longitudinal data (C. Haslam, Cruwys, & Haslam, 2014), highlight the importance of group-based participatory activities.

An integrative review revealed a more complex picture, with both group-based and one-to-one or solitary activities associated with reductions in social isolation and loneliness (Gardiner, Geldenhuys, & Gott, 2016). Of the 30 studies reviewed, 27 employed a quantitative methodology, 10 used qualitative methods, and 2 were mixed methods. Gardiner and colleagues' review suggests the use of qualitative and mixed methods designs may highlight more clearly interactions between the nature of participation and older people's well-being, than can be achieved through a purely quantitative approach. For example, Aday, Kehoe, and Farney's (2006) secondary analysis of survey data collected from seniors centers across the United States revealed that women living alone valued traditional seniors centers for the opportunities they provided to develop new friendships that extended beyond the center. However, a more recent qualitative study with a small group of actively participating seniors recruited through local programs found that older people who do not identify as "old" may prefer to avoid groups that explicitly target or are exclusive to seniors (Papageorgiou et al., 2016).

As well as barriers related to age-specific constraints, qualitative research with older people has revealed that group activities and facilities targeting older people can be perceived as class (Patterson et al., 2015) or gender-biased (Marhánková, 2014). For example, Reynolds, Mackenzie, Medved, and Roger (2013, p. 531) noted that "the vast majority of community programs for older people are either mixed-sex or female-oriented in their activities and composition." Similarly, the seniors centers studied by Marhánková (2014) in her ethnographic research were in principle open to men and women, but in practice operated as markedly feminized places appealing to few men. In this context, Men's Sheds may offer a useful alternative to traditional seniors centers for older men, by providing "meaningful masculine activities" (Cordier & Wilson, 2013, p. 489) and an opportunity to mix with other men (Ormsby, Stanley, & Jaworski, 2010).

While there has been a plethora of research investigating strategies to reduce social isolation and loneliness and promote participation among older people, this issue has rarely been examined in the context of specific programs at a local



**Figure 1.** Research stages.

community level, or utilized a mixed methods research design to capture a wide range of data. In the following section, we outline the methodological rationale for the study reported here, including a discussion on the value of incorporating quantitative and qualitative approaches, and the benefits of a collaborative partnership approach.

## Our Research Approach

Quantitative research, which as Crotty (1998) noted reflects objectivism, has provided valuable information on the prevalence of loneliness among older population groups and the efficacy of interventions. To complement this important information, qualitative research, underpinned by constructivism (Crotty, 1998), has highlighted the value older people place on community participation and provided insights into the barriers and enablers influencing the extent of their participation (Papageorgiou et al., 2016). Integrating both quantitative and qualitative approaches into the research design can promote synergy in research outcomes that extend beyond those produced through single methods studies (Nastasi, Hitchcock, & Brown, 2016). Moreover, a mixed methods approach can help to reconcile apparent “discrepancies across findings” (Nastasi et al., 2016, p. 324). Choice of research method must also take account of the difficulty in recruiting older people for health-

related research (Diug & Lowthian, 2013); this emphasizes the need for multiple strategies to reach older people, including those who are frail (Piantadosi, Chapman, Naganathan, Hunter, & Cameron, 2015).

The theoretical stance underpinning our study reflected an acknowledgment of multiple perspectives and standpoints (Johnson, Onwuegbuzie, & Turner, 2007; Victor, Scambler, & Bond, 2008) and an awareness that participation and loneliness are not static, immutable phenomena. Similarly, the research was influenced by the assumption that the meanings individuals bring to their experience of participation in community-based group activities are culturally defined (Twining, Heller, Nussbaum, & Tsai, 2017). It was therefore critical to the research partners that data were collected from the target group in a variety of ways and to foreground participants’ perspectives and voices.

To identify barriers and enablers to participation and non-participation among older residents in the City, we determined the most appropriate design would include both exploratory and explanatory sequential mixed methods (Creswell, 2014) in a four-stage process, thus enabling preliminary qualitative data to inform a quantitative survey. This in turn guided purposeful recruitment and design of follow-up interviews with a small sample of older residents, identified through a screening tool as at risk of loneliness and not currently participating in programs. The aim here was to develop deeper insights into factors limiting their participation, and how this may link to their experience of loneliness.

A high level of engagement between the research partners and a shared commitment to promoting healthy communities were critical to the project’s success. Indeed, it was the City’s aspiration to promote healthy aging as a preventative health strategy that prompted them to initiate the research partnership. In addition, ongoing close collaboration ensured that different elements were managed by the most appropriate partner. This collaboration was also critical for establishing trust with the local community and relevant stakeholders. For example, Stage 1 of the project, which entailed an audit of community-based programs available in the City, was conducted by the City’s program development officer who had access to internal databases and mailing lists, and had established connections with many of the program facilitators. It was anticipated that residents would view recruitment invitations that originated from the local government more favorably than if they came from external researchers.

## The Research Stages

The four sequential research stages are shown in Figure 1. The research began with an audit of programs available for older residents, followed by individual and focus groups interviews with program participants and nonparticipants. These data informed a quantitative survey of older residents using a structured questionnaire that included a Loneliness Assessment Scale. The final research stage consisted of semistructured individual interviews with a sample of respondents who scored

at high risk of loneliness on the Assessment Scale and had not participated in a group activity within the past 5 years.

### *Stage 1: Audit of Programs Available in the City*

An audit was conducted of programs available in the City over a 3-year period that either were designed specifically for older people (60+ years) or had a significant proportion of older participants. Databases, internal stakeholder lists, facilities booking information, and Internet searches were used to identify 60 organizations facilitating community-based activities in and around the catchment area.

The research team then developed a questionnaire for the identified organizations, which was refined following feedback from relevant staff employed by the City, to collect information on program and participant characteristics (e.g., aims, type of program [e.g., vocational, recreational, social, physical activity], location, scheduling, cost, gender specificity, culturally and linguistically diverse specificity, and attendance patterns).

Of the 60 identified organizations, 47 were able to be contacted and agreed to contribute to the audit. Most were contacted via telephone and opted to relay information verbally to the community development officer for manual entry into an online survey (surveymonkey.com). A link to the online survey was also sent to them for distribution through their communication networks. This provided access to a number of organizations not identified in the audit. To ensure the maximum number of potential responses, it was not mandatory to answer all the survey questions; this gave participants the flexibility to provide as much information as their knowledge of the activities allowed. By the close of the audit, 58 organizations had contributed details regarding 138 individual activities conducted across the City.

### *Stage 2: Qualitative Exploration: Focus Groups With Program Participants and Individual Telephone and Intercept Interviews*

The audit findings informed the development of a guide for the Stage 2 focus groups, in which a total of 18 people participated across three focus groups. Issues explored in this stage included characteristics of programs that were valued by participants, prompts that initiated attendance, views on ways to improve programs, and reasons for irregular and nonparticipation. The initial aim was to recruit participants from programs identified as either “active” or “irregular,” based on the proportion of participants reportedly attending on a regular basis. Program facilitators in organizations that contributed to the audit were asked to promote the research to their members and arrange a time for a research assistant (RA) to run a focus group with interested members at the conclusion of the activity. It was also anticipated that older people who had not participated in any activities in the past 5 years (classified as inactive) could be recruited through snowballing with focus group members.

Despite our plan for Stage 2 recruitment, we experienced significant difficulties in recruiting respondents across the

different categories of participation. Some program facilitators reported their members were not interested or did not have the time to participate in a focus group. It quickly became evident that our strategy of using program facilitators to promote the research relied upon their willingness and ability to encourage their members, and was unduly optimistic.

These recruitment difficulties, particularly with respect to locating irregular and nonparticipants, led to a decision to revise the recruitment strategy. A notice placed in a local newspaper called for older people to contact the first author if they would like to participate in a telephone interview about community-based group programs, and intercept interviews were conducted with older people in several shopping centers in the City. The latter involved the first two authors approaching people who were judged to be at least 60 years old. After explaining the purpose of the research and checking age eligibility, potential participants were asked whether they had time to complete a short “on-the-spot” interview. Questions from the focus group guide were adapted for the telephone and intercept interviews and were conducted by the first and second authors.

While recruitment for Stage 2 proved difficult, we believe the revised recruitment strategy resulted in a stronger research outcome, particularly in relation to understanding the experience of irregular and nonparticipation. This recruiting process yielded 17 interviews, with the intercept interviews eliciting the highest proportion of irregular and nonparticipants (50%), suggesting that the revised recruitment strategy was justified. The Stage 2 empirical findings are discussed separately (Dare et al., 2018).

### *Stage 3: Quantitative Survey of 60+ Years Residents*

Stage 3 involved the development and administration of a questionnaire informed by the findings from Stages 1 and 2. The overall aim of the questionnaire was to quantify potential links between participation, social connectedness, self-reported health, and degree of loneliness, as well as residents’ views on current and potential programs.

Participants’ health status was collected using a single-item question previously used in the Australian National Health Survey 2011–2013 (Australian Bureau of Statistics, 2013). Social connectedness was measured using behavioral indicators from the ABC campaign, developed by Mentally Healthy WA (Robinson, Donovan, & Anwar McHenry, 2013). Connectedness was also measured through questions that explored participants’ social networks, such as how many children, grandchildren, and close friends lived in Perth.

Participation in group activities was measured by asking participants whether they (a) regularly participated in group activities, (b) have participated in a group activity over the past 5 years but no longer attend, (c) have participated in a group activity over the past 5 years but do not attend regularly, or (d) have not participated in a group activity over the past 5 years. Participants were then aggregated into three participation status groups: regular (a), irregular (b) and (c), and nonparticipant (d).

We included the 6-item De Jong Gierveld Loneliness Scale (De Jong Gierveld & Van Tilburg, 2011), which was developed to assess loneliness among older populations. Items are formulated positively (“There are enough people I feel close to”), and negatively (“I miss having a really close friend”), and possible answers are “yes!,” “yes,” “more or less,” “no,” and “no!” All six items were dichotomized as 0 or 1, with the latter categorized as “loneliness” responses and cumulated for each individual. The answer “more or less” is always categorized as indicating loneliness (De Jong Gierveld & Van Tilburg, 2010). A score of 0 indicates the absence of loneliness, a score of 1 indicates a low level of loneliness, and scores between 2 and 6 indicate moderate to high loneliness (De Jong Gierveld & Van Tilburg, 2011, p. 9).

A draft version of the survey questionnaire was piloted ( $n = 13$ ) for readability and understanding (Bryman, 2012). The length of the questionnaire became a subject of debate between the City and the research team, as the City was concerned about postage costs for the mail survey and the time imposition for older residents in completing what they perceived to be a long and potentially intrusive questionnaire. The final version of the questionnaire was confirmed following consultation among the research team and representatives from the City.

In the weeks leading up to the survey, promotional notices were placed in two local community newspapers with the aim of generating interest in the research. The initial plan was for the City to mail survey packs containing an information letter, a consent form, a copy of the questionnaire, and a return reply-paid envelope, to a randomized stratified sample of residents ( $n = 1,600$ ) aged 60 years and older from the City’s database. Based on an estimated rate of regular participation in group activities at 36% (Vozikaki, Linardakis, Michelo, & Philalithis, 2017), a sample size of 355 was deemed necessary to estimate the true proportion of regular participation to within  $\pm 5\%$  at the 95% confidence level. With a response rate of 25–33% (i.e.,  $n > 400$ ), it was anticipated that the required sample size would be achieved.

The final distribution plan was modified after discussion with representatives from the City to encompass direct mailing ( $n = 1,268$ ), as well as hard copy questionnaires distributed through libraries ( $n = 110$ ), senior citizen centers, and community centers ( $n = 220$ ) located across the City. A link to an online survey was also included in the local government library’s electronic newsletter. Following a slow uptake, repeat notices were placed in two local community newspapers, and the first author promoted the research through a local radio station. In addition, the City mailed another 450 survey packs to residents. In total, 1,718 hard copies of the questionnaire were mailed to residents on the City’s database, and 330 copies were placed in libraries and other community venues.

The research team received 323 hard copy questionnaires, a response rate of 18%. An additional 50 questionnaires were obtained through the online survey, resulting in a total of 373 respondents. Of these, 361 questionnaires were 100% complete, meaning the minimum sample size requirement of 355 was met. Due to the unavailability of and lack of access to

relevant demographics data, it was not possible to verify whether our sample was representative of older residents living in the City. Hence, in conjunction with the lower than expected response rate, the eventual estimated rates of regular participation and loneliness must be treated with caution.

#### Stage 4: Qualitative Interviews

The goal of Stage 4 was to explore in more detail the experiences of older people who were assessed at risk of loneliness, to explore barriers to their participation in group activities, and to identify strategies to assist them become more involved in their local community.

Participants who completed the Stage 3 survey were identified as suitable candidates for a follow-up interview if they (i) indicated in the survey they had not participated in a group activity in the last 5 years, or had participated, but no longer did so or only participated irregularly, and (ii) were rated at risk of loneliness according to the Loneliness Scale. Sixty-two participants met the criteria (17% of all respondents), and of these, 16 indicated their willingness to be contacted for a follow-up interview.

Subsequently, 14 participants were able to be contacted by telephone or e-mail by the first author and agreed to be interviewed. Of these, six had a loneliness score of 5, seven had a loneliness score of 3, and one had a score of 2, indicating the majority were screened at risk of severe loneliness. The interviews, which were conducted by an experienced RA in participants’ homes and local cafés, were digitally recorded and lasted between 30 and 70 min. All participants provided written informed consent prior to the interview commencing.

From a methodological perspective, the integrative mixed methods approach (Castro, Kellison, Boyd, & Kopak, 2010) enabled us to compare and contrast an individual participant’s survey answers with their qualitative responses to questions exploring issues related to participation and loneliness. To our surprise, it quickly became evident that regardless of how respondents scored on the Loneliness Scale (De Jong Gierveld & Van Tilburg, 2011), almost all reported busy and fulfilling lives. Very few described experiences of loneliness, and some strongly rejected the notion they might be lonely, as suggested by the loneliness screening tool (to be discussed in a forthcoming paper). This caused us to reflect on our chosen methodology, in particular how the structure of individual items and the scoring methods in tools designed to measure social isolation and loneliness may influence responses. Valtorta, Kanaan, Gilbody, & Hanratty (2016)’s review of tools used to measure social relationships provided us with a valuable guide. They highlighted that different tools measure, to varying degrees, different dimensions of social relationships. This variability across tools has implications for how we understand links between social relationships, social isolation, and loneliness. The first dimension highlighted by Valtorta et al. (2016) relates to the structural and functional characteristics of social relationships. Structural characteristics refer to “the number and type of people with whom a person interacts, the diversity,

density and reciprocity of a person's social network, and frequency and duration of contact between individuals" (Valtorta et al., 2016, p. 3). In contrast, functional characteristics relate to how an individual perceives the quality of their social relationships, in terms of emotional and tangible support and friendship (Valtorta et al., 2016).

The second dimension referred to by Valtorta et al. (2016) relates to the degree of subjectivity required when answering questions. As Valtorta et al. (2016) observed, "the degree of subjectivity expected of respondents [across the tools reviewed] varied, based on the way in which items were formulated" (p. 3). They suggested that individual items tend to reflect a continuum in the level of subjectivity required from respondents. For example, questions about the size and scale of social networks require more objective answers, while questions about satisfaction with, and feelings about respondents' social relationships require subjective answers (Valtorta et al., 2016).

Valtorta et al. (2016) concluded that the 11-item De Jong Gierveld Loneliness Scale (from which the 6-item scale used in our study is drawn) requires respondents to exercise a greater level of subjectivity. As they observed, this is not surprising for a tool designed to assess loneliness, which is generally defined as a perceived lack or inadequacy of intimate and social relationships (Courtin & Knapp, 2015). The subjective nature of the tool may, however, help to explain some of the apparent inconsistencies between our individual respondents' loneliness scores and their responses in the qualitative interviews.

In addition, the nature of the rating scale may influence how people respond. As with Victor et al.'s (2008) critique of relative frequency responses to loneliness measures (e.g., always, sometimes; p. 134), we feel that differences in the way our respondents interpreted the terminology in both the individual items and the response options may account for some of the inconsistencies between their loneliness score and their follow-up interview responses.

Our Stage 4 findings contrast with Victor et al.'s (2008) research, which demonstrated strong consistency between responses to a single item self-report question on loneliness and views expressed by older participants in follow-up qualitative interviews with older people (p. 137). On reflection, the structure of our interview guide and the interviewing process may have influenced the interview data. Drawing on the Stage 3 results, we approached the interviews from the perspective that most of the respondents were likely to be experiencing moderate to severe loneliness. Therefore, many of the questions focused on exploring links between respondents' experience of loneliness and/or social isolation and their feelings about participating in local group activities.

## Discussion

As researchers, we saw ourselves as working in partnership with the local government to enable them to support the delivery of programs that better reflected the needs of a heterogeneous older population and contributed to the development of a

more Age Friendly city. Our experiences are therefore relevant to other situations, settings, and population groups where industry partnerships offer the best opportunity for research findings to translate into policy and practice.

Our study proceeded in a stepwise fashion allowing each step to be informed by the preceding steps. The richness of the data collected through this sequential mixed methods approach supported our view that the time spent setting up, conducting, and evaluating each step of the study was worthwhile and that a purely quantitative or qualitative study would have been unlikely to deliver the same richness of results.

From the outset, this project embodied distinct advantages that were critical to its success. As the original idea for the project was initiated by the City, the project reflected genuine industry "buy-in." This manifested not only in their commitment to identifying issues influencing older people's participation in community-based activities but also in their willingness to facilitate significant stages of the project. Their role was instrumental in gaining the trust of stakeholders and residents, particularly during the audit and the distribution of the questionnaire.

The City's investment in this project to meet their particular needs also presented challenges in meeting the broader research goals. Discussions over the length of the questionnaire highlighted that despite the shared values and common goals of the industry partner and research team, at times different priorities emerged. In part, this was due to the City's priority to promote residents' community participation and the University research team's broader aim to identify determinants of older people's participation and links between participation and loneliness, health, and well-being. In hindsight, these challenges might have been minimized with clearer communication between research partners during the planning stages. As noted above, the City was keen not to overburden older residents and so critically reviewed the suitability and relevance of each survey question. As people working at the "coalface" with a genuine commitment to local residents' well-being, this was understandable. It did, however, require extensive negotiations between the research partners to reach a compromise that balanced the local government's concerns with the broader research objectives.

As with many research projects, recruitment presented considerable challenges. For example, even with the City's assistance, it was difficult to recruit older people to participate in the Stage 2 focus groups. While our strategy of intercept interviews proved successful, it also extended the length of the project and incurred additional costs in terms of shopping center fees and transcription costs beyond those budgeted for.

The difficulty in recruiting people from "hard to reach" population groups has been highlighted in previous research (MacDougall & Fudge, 2001). These difficulties may be compounded further when investigating sensitive topics such as loneliness among potentially vulnerable older adults. In anticipation of these difficulties, our quantitative survey included only one section specific to loneliness, embedded in a larger survey about participation. It was hoped this would encourage



more respondents to volunteer for follow-up interviews and reduce perceptions that respondents were being “singled out.” To further maximize recruitment of older adults at risk of loneliness, the City used multiple channels (e.g., online, direct mailing, and local agencies and organizations) to distribute the survey as widely as possible. It is likely that without the City’s commitment and effort during this stage of the research, the task of recruiting older people at risk of loneliness for the Stage 4 interviews would have been more difficult.

The sequential mixed methods research design we employed meant that the Stage 4 interviews were conducted with respondents who had previously completed the survey. This enabled us to cross-reference the qualitative and quantitative data for each person interviewed, revealing richer contextual understandings about the experience of loneliness at the micro level. Given that most interview respondents had been screened at risk of moderate to severe loneliness, we were surprised to find the majority appeared to be managing those risks so well as to cause us to reflect on the utility of this Loneliness Scale with this population. Our qualitative results suggest that while loneliness screening tools provide a useful starting point to approximate the level of loneliness in a population, their “broad brush” approach may mean that results need to be viewed with some caution.

The inclusion of a qualitative component in this research also strengthened our understanding that older people experience and perceive loneliness in different ways. In the literature, this has been explored in the context of dimensions of loneliness. For example, the De Jong Gierveld 11-item Loneliness Scale has been described as defining three dimensions of loneliness: feelings associated with the absence of a close attachment (e.g., “emotional deprivation”), feelings about being lonely (e.g., is it self-inflicted?), and the emotional response toward the experience of loneliness (e.g., sadness, guilt, shame, etc.) (Victor et al., 2008, p. 61). The subsequent 6-item scale appears to have been simplified, to measure social and emotional dimensions of loneliness (De Jong Gierveld & Van Tilburg, 2006).

As noted previously, Valtorta et al.’s (2016) review of instruments measuring social relationships highlighted that loneliness may be experienced in relation to structural and functional dimensions. A more fine-grained analysis was developed through Stanley and colleagues’ (2010) qualitative research. They identified five “thematic” dimensions of loneliness: as a private emotion, with loneliness often stigmatized as a personal failure; relational, encompassing subjective assessments of the quality of relationships; connectedness, as in a sense of belonging to a community or society; temporal, as feelings that are more often experienced at particular times such as the evening or weekend, or following bereavement. The fifth dimension, readjustment, is defined as an individual’s capacity to adjust to significant life changes, such as losing a spouse, declining mobility, or moving to an aged care facility (Stanley et al., 2010).

We believe the “take-home message” from our study is that researchers investigating loneliness among older people should

have a clear understanding of the dimensions of loneliness their chosen instrument focuses on. In particular, this understanding should inform the development of qualitative tools designed to “tease out” quantitative results. In our research, the Stage 4 qualitative interviews may have yielded even richer insights had the interview questions and data analysis been linked more closely to the social and emotional dimensions of loneliness (De Jong Gierveld & Van Tilburg, 2006) and with reference to broader dimensions such as connectedness, temporality, and readjustment (Stanley et al., 2010).

We aligned our research approach to Victor and colleagues (2008), who asserted that “the meaning of loneliness and social isolation lives in the individual’s mind and seeking their specific and personal accounts may be the only way to access them” (p. 40). However, we acknowledge the data we gathered were written and oral and excluded data that could not be understood or expressed in words. We could have used other techniques such as photovoice (Florian et al., 2016) or community asset mapping (Baker, 2014) to allow people to express matters that are more easily communicated nonverbally. These other techniques might have better captured the importance of “local” places such as libraries, cafés, and other public places that afford social encounters but are neither a home nor a workplace, or the value placed on weak social ties and nonhuman aspects of community such as landscapes, animals, plants, and technologies that influence older people’s sense of belonging to a community and their community participation. Such techniques might have increased the time required for a project such as ours and are probably not appropriate for use with individuals whose participation in community is tightly constrained by their other commitments. Those techniques would, however, yield data not readily collected by our adopted approach and are worth considering for future research.

## Conclusion

Promoting participation among older residents has become an integral part of many local governments’ strategies to promote “Age Friendly” communities. This reflects a growing awareness of the importance of minimizing social isolation and loneliness, particularly post-retirement, and the value of implementing preventative strategies at the community level to encourage older people’s participation. Our study represents a departure from much previous research, which has tended to focus on evaluations of interventions using primarily objective measurements or explored older people’s perspectives through single-phase qualitative studies.

This article has documented methodological decisions and reflections relating to our mixed methods approach. Overall, our research design provides important lessons for other researchers investigating complex issues such as loneliness. In this study, the audit and quantitative survey were instrumental in identifying patterns of participation among older people at the local level, while the qualitative components proved critical to developing richer understandings of factors that influence participation patterns, particularly among those most

at risk of social isolation and loneliness. The inclusion of qualitative interviews with respondents screened at risk of loneliness enabled a deeper understanding of the subjective experience of loneliness, while also highlighting the need for caution in interpreting potentially contradictory findings.

Situating the study in a local government area enabled us to cross-reference participation with program characteristics and local infrastructure such as transport, which have been previously identified as determinants of participation. Combining these elements, while working in close collaboration with a local government authority, has resulted in the generation of new and valuable information to support the needs of the local community and inform future research.

Finally, the approach taken in this study provides a model for other local governments both in Australia and internationally, as well as program developers and administrators at other levels of government and in the private and not-for-profit sectors who are keen to develop collaborative research at the local community level. While our research focused on community participation among older people, the benefits of enhancing social inclusion through participation also apply to other sections of the general population. These include younger people (age 15–30 years) who are at risk of loneliness and social isolation due to relationship breakdowns and living alone (Hawthorne, 2008); marginalized groups such as older lesbian, gay, bisexual, transgender, and intersex people (Hughes, 2016); and socioeconomically disadvantaged communities (Kearns, Whitley, Tannahill, & Ellaway, 2015). As such, the research design documented here can be used as a guiding “framework” for researchers keen to engage stakeholders and the community in developing local solutions to local problems.

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Our study received Ethics approval from the Edith Cowan University Human Research Ethics Committee (approval number 11693).

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