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## Interpersonal interactions in a community-based activity program targeting loneliness among older adults: An ethnographic study

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## ABSTRACT

Healthy aging implies physical and psychological well-being, maintaining social relationships and engaging in meaningful activities. Thus, socially inclusive initiatives that address loneliness are needed. The aim of this ethnographic study was to describe interpersonal interactions in a community-based activity program targeting loneliness among older adults. Over 10 weeks, 10 participants were observed during interpersonal interactions on 20 occasions, focusing on *when*, *where*, and *how* the interactions occurred. Field and reflective notes were analyzed using an ethnographic approach. The findings show that support was promoted through communication, which created togetherness in the activities by encouraging each other and exchanging knowledge and information. Furthermore, connecting by embracing openness highlighted a willingness and courage to share life experiences and bring memories into conversations. These findings provide valuable insights for designing future activity programs that reduce loneliness and promote social connectedness among older adults.

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## Introduction

Physical and psychological well-being are central aspects of healthy aging.<sup>1</sup> Moreover, meaningful interactions and participation in the social world,<sup>2</sup> through contribution, decision-making, and opportunities for personal growth.<sup>1</sup> Previous research has demonstrated an association between healthy ageing and loneliness, as healthy ageing encompasses the ability to build and maintain relationships.<sup>3</sup> The growing population of older adults requires society to ensure that each person has the opportunity to achieve a healthy, long life.<sup>4</sup> However, the risk of loss of others increases with age, and feelings of loneliness can be more prominent.<sup>5</sup> Therefore, identifying suitable activities is important but challenging, as the older population is heterogeneous.<sup>2</sup> A collaboration between actors in society is needed to facilitate older adults' awareness of available activities, including assistance in getting to activities, and increase their confidence in attending these activities.<sup>6</sup> Studying different types of community-based group activities aimed at mitigating loneliness can be

valuable, as social interaction, primarily through active group participation, is important.<sup>7</sup>

Loneliness is a subjective phenomenon arising from the discrepancy between a person's desired and actual social relationships.<sup>8</sup> A common conceptualization of loneliness arises because of insufficient social networks and emotional support,<sup>9</sup> with an extensive social network serving as a mitigating factor of loneliness.<sup>10</sup> Loneliness reflects the human need for social connection,<sup>8</sup> which is fundamental to developing self-esteem and identity because humans are social creatures.<sup>11</sup> Humans belong to diverse relationships and socially defined groups that create interactions and engagements with family, friends, neighbors, and work colleagues. These relationships grow and wane throughout life.<sup>2</sup> The social connection necessary to enhance health and improve experiences with others is both simple and complex, as it requires openness and availability.<sup>12</sup> Being surrounded by meaningful connections, such as engaging in shared activities and exchanging thoughts, is essential for reducing loneliness.<sup>13,14</sup>

Initiatives that address loneliness may be a success factor when containing social elements and meaningful interactions.<sup>15</sup> Group-based programs and Internet training may reduce loneliness among older adults on the basis of evidence from randomized trials and observational studies.<sup>16</sup> However, there is a lack of research that provides sufficiently detailed descriptions of the methods used in

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initiatives, making it difficult to replicate and adapt initiatives.<sup>17</sup> Furthermore, there is a need for research demonstrating the impact of initiatives aimed at strengthening social structures, as well as illustrating different strategies for addressing social connections and loneliness.<sup>18</sup> Research that includes both men and women to more comprehensively evaluate initiatives targeting loneliness among older adults.<sup>7,19</sup> The existing need to implement initiatives to reduce loneliness<sup>20</sup> and further explore these actions to strengthen the knowledge of what facilitates these initiatives<sup>20,21</sup> remains important.

Further research is needed on conducting initiatives aimed at alleviating loneliness among older adults.<sup>22</sup> In the Swedish context, existing studies have focused on initiatives targeting loneliness, using, for example, data from interviews<sup>23</sup> and quantitatively through loneliness scales.<sup>24</sup> However, knowledge about initiatives that reduce loneliness is still limited.<sup>15</sup> Moreover, only a few studies in Sweden have explicitly focused on how interpersonal interactions evolve during activity programs aimed at reducing loneliness in older adults. Initiatives undertaken by civil society and by municipal and regional actors are seldom systematically or scientifically evaluated. Consequently, there is a significant need for research conducted collaboratively to reduce loneliness among older adults.

One way to describe the outcome of an activity program to reduce loneliness among older adults is to observe how interpersonal interactions develop over time. Through ethnography, people are observed in their daily lives, including what happens and what is said. Ethnography further enables close observation within a smaller social group and offers deeper insight into how individuals understand their social world, while employing a reflexive approach to interpreting social life within its cultural context.<sup>25</sup> Guided by this approach, this ethnographic study aimed to describe interpersonal interactions in a community-based activity program targeting loneliness among older adults. Given the limited ethnographic studies focused on initiatives addressing loneliness, this study has the potential to make valuable contributions to enhancing the understanding of key aspects of loneliness, such as interpersonal interactions.

## Method

### Design

An ethnographic research design was used in this study, with data collected primarily from participant observations.<sup>25</sup>

### Context

Initiated by a municipality in southern Sweden, Team Senior is an ongoing project that began in the autumn of 2023. The project was produced and financed on behalf of the Elderly Services Department to reduce loneliness among older adults and enhance their sense of belonging. Its rationale arose from the growing population of older adults in society, where the loss of family and friends becomes more prevalent with age. The project consisted of an activity program adapted to the older population. Its foundation lies in mobility, culture, and health, and it strives to become a permanent feature of senior community centers. Initially, a lead project manager was appointed to direct the project and handle communication, administration, and the organization of the activity program.

Project leaders were assigned to support participants during the activities. Information about the project was advertised on a website, in radio programs, and in written information in primary health centers. The inclusion criteria for participation in Team Senior were 65 years or older, self-reported loneliness, and attendance in all activities to the best of one's ability, with the possibility of highlighting any difficulties in participating or getting to activities. To participate,

older adults must send an application of interest, including their contact information and age, by submitting a registration form online on the municipality's website or by contacting the project leaders. The project leaders contacted potential applicants over the phone, gave them information, and enabled them to answer questions regarding Team Senior. The participants received a schedule illustrating the activities, dates, and addresses. None of the participants needed assistance getting to the activities. The activity program was adjusted over time in accordance with feedback received from previous participants. For this study, the activity program was the third round of Team Senior and consisted of two weekly activities for 10 weeks between September 17 and November 21, 2024 (Table 1).

### Participants

The study sample consisted of a convenience sample from Team Senior. Initially, 18 potential participants registered their interest in Team Senior. However, seven withdrew owing to medical reasons and other commitments, leaving 11 participants for the activity program. After the first week, one participant withdrew owing to medical reasons, resulting in 10 participants in this study, of whom five were women, and five were men, with ages ranging from 66 to 81 years (mean, 72.6 years).

### Data collection

The project leaders of Team Senior, who worked at the senior community centers, acted as gatekeepers to provide the first oral and written information to potential participants, both by phone and e-mail. The first author provided further information to the eight potential participants who attended the first welcome meeting and collected their informed consent. The three potential participants absent were contacted by the first author by phone and provided the same information. All potential participants were informed of their right to withdraw their consent at any time, without providing an explanation. The first author conducted all the observations with support from the last author, who attended seven of the 20 observations. A digital template supported the observations and contained the date, time, place, attending participants, location, and type of activity, followed by field and reflective notes.

The descriptive, detailed, and concrete field notes<sup>25</sup> focused on all the interpersonal interactions between the participants during the activities and included quotes. In addition, notes were made after the observations to ensure that nothing was overlooked.<sup>26</sup> The observations focused on interpersonal interactions, which referred to verbal and nonverbal communication between two or more participants within the activity program. The primary focus was on *when*, *where*, and *how* the interactions occurred. The observer's reflective notes included written thoughts, ideas, and questions. The observations were conducted in the settings where the activities occurred (Table 1) and included a total of 42.5 h, lasting between 1.5 and 4 h. During the observations, the observers were near the participants, and the observers' location varied from sitting close to the participants at the same table to sitting or standing some distance away. Sometimes, the activities required the observers to move around the room, including walking some distance away, such as in the *outdoor walking* and *senior fair*. The field and reflective notes were handwritten on paper during these activities and transcribed verbatim directly after the observations. All other observations were documented digitally continuously and proofread immediately after the activities to avoid memory bias. The participants were pseudonymized in the field, and reflective notes and the code list were kept separate. Each observation was documented chronologically<sup>25</sup> and saved on a secure server.

**Table 1**

Descriptions of the weekly activities, setting, duration, and number of participants.

Week	Activity	Setting	Duration (hours)	Participants, male/female n
1	Welcome meeting	Senior community center*	2	4/3
	Testing gym equipment & golf simulation	Gym*	1.5	3/5
2	Outdoor walking (with senior club)	Walking trails**	2	4/5
	Practicing handball & warm-up	Sports arena*	2	4/4
3	Gymnastics with station exercises	Gymnastics club**	2	3/5
	Practicing different dances	Dance club**	2	5/5
4	Fall technique, focusing on prevention, Judo	Judo club**	1.5	3/4
	Boule	Sports arena**	2	3/5
5	Lecture by a dietitian, <i>The Joy of Food</i>	Senior community center*	2	2/4
	Bowling	Bowling hall**	2	3/3
6	Cooking together	Senior community center*	2	5/3
	Museum, modern & historical artefacts	Museum**	2	5/4
7	Visit from the Red Cross & Senior in School	Senior community center*	2	4/5
	Library	Library*	2	4/3
8	Senior fair	Sports arena*	4	5/3
	Ping pong	Activity hall**	3	3/3
9	Lecture by a world heritage coordinator	Senior community center*	2	3/2
	Preventive information, <i>smart tools</i>	Viewing apartment*	2.5	4/4
10	Lymfyoga	Senior community center*	2	4/5
	Closure & evaluation	Senior community center*	2	4/4

\* Central area of the city.

\*\* Outside the immediate central area of the city.

## Analysis

The analysis followed the ethnographic approach, where data collection and analysis were performed simultaneously. An essential part of the analysis was the repeated and detailed reading of the material. Patterns of behavior that illustrated how the participants' interpersonal interactions occurred during the activities were extracted from the field and reflective notes. Abduction was used to identify features and concepts that facilitated an understanding of what was happening in the data and to distinguish which experiences, actions, and situations belong together. Concepts also became apparent from participant quotes and were considered a key feature of a setting or process of analytical importance. The analysis required reorganizing the concepts with related segments to identify patterns. In this way, an emerging understanding of the material was created. The different concepts became subtypes of more general categories.<sup>25</sup> Quotes from the field and reflective notes were used to reflect the material in the findings, and the participants were represented using pseudonyms. The first and last authors performed the initial analysis and discussed it to reach a consensus. All five authors read the field and reflective notes and verified the analysis to reach an agreement on the findings (Table 2).

## Results

The analysis brought forth two general categories with four subtypes (Fig. 1). The first general category, *Promoting support through*

*communication*, consisted of two subtypes of categories: *Creating togetherness in the activities by encouraging each other*, and *Exchanging knowledge and information*. The second general category, *Connecting by embracing openness*, describes interpersonal interactions on a deeper level and consists of two subtypes of categories: *Willingness and courage in sharing life experiences*, and *Bringing memories into the conversations*. The findings reveal how interpersonal interactions gradually evolved throughout the activity program.

### *Promoting support through communication*

In interpersonal interactions, the participants promoted support through communication, as reflected in the encouragement they provided each other, which created togetherness in the activities and facilitated an exchange of knowledge and information.

### *Creating togetherness in the activities by encouraging each other*

The interpersonal interactions were characterized by encouragement towards each other, which contributed to togetherness in the activities. Mutual encouragement among the participants gradually evolved as the activity program progressed. Encouragement was provided through nonverbal gestures between the participants, ranging from affirmative eye contact and smiling to nods as a confirming response. In the gym activity, Mary tried out a gym machine and then made eye contact with Alice, after which she nodded to signal

**Table 2**

Patterns of behavior represented in the subtypes of categories and general categories.

Patterns of Behavior	Subtypes of Categories	General Categories
Two participants sit beside each other while giving another participant instructions on throwing. After she has thrown, they encourage her with cheers	Creating togetherness in the activities by encouraging each other	Promoting support through communication
One participant tells another participant about an app that can be used to check for scam calls	Exchanging knowledge and information	
The conversation turns to home care and residential care. One participant shares a personal experience of his father, who lives in residential care, how poorly he has become, and all the help he needs	Willingness and courage in sharing life experiences	Connecting by embracing openness
After librarians show old newspapers and inform participants how much a newspaper cost a century ago, one participant expresses that he sold newspapers when he was young	Bringing memories into the conversation	

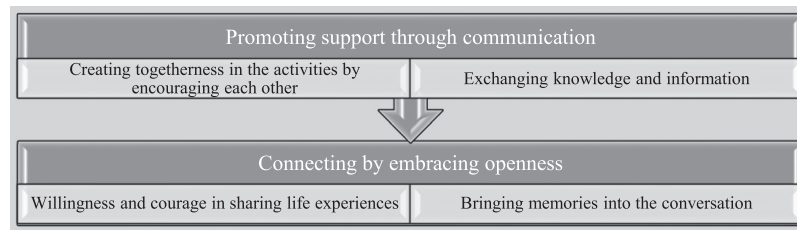


Fig. 1. Overview of the findings and the distribution of the general categories and subtypes of categories.

whether Alice wanted to try the machine. The participants observed each other and often performed similar movements, creating a sense of togetherness. Following the progression of the activity program, verbal conversations were increasingly complemented with body contact, which ranged from a supportive hug or a pat on someone's arm to a thumbs-up, or adjusting someone's clothing. For example, when George scored a strike at the bowling and received cheers from his team and a pat on the back from Robert, Dorothy said to him, "You have been here and trained this week, admit it!".

Encouragement in the activities could involve a sense of equality. During outdoor walking, Mary said to Alice, "I am going to be soaking wet when I finish," to which Alice replied, "We are in the same situation." This suggested that the participants had equal prerequisites. The helpfulness was characterized by a caring attitude when promoting support. It involved helping or engaging each other. For example, during the cooking activity, James noticed that John was idle and told him while chopping garlic, "You can go to the kitchen and help prepare the minced meat", which contributed to increased togetherness. Explaining theoretically and practically how the activities should be performed appeared to communicate support and increase each other's abilities to perform the activity. James gave Ruth the drawing stick at the boule and instructed her verbally and by demonstrating how to draw the ring in the gravel. Furthermore, they verbally encouraged each other or gave each other constructive comments when things were not going well. Another type of support that the participants displayed to each other over time was going together to the program activities, even sharing transport, which created mutual engagement. This approach facilitated engagement and encouraged the development of interpersonal interactions that extended beyond the activity program.

The participants also encouraged each other through humor, which contributed to a positive and supportive atmosphere. The participants allowed themselves to become more generous with humorous remarks as the activity program progressed. They also showed encouragement humorously through acknowledgment. During the boule, Dorothy laughingly said, "She cursed," directing her remark to Alice, who had just thrown her boule (and who also started laughing).

When the participants shared as a form of self-irony, it led to a relieved atmosphere and many laughs. For example, Dorothy admitted, "I can not run. I have arthritis!" to the other participants during handball and warm-up, when the participants were supposed to run and pass balls. During the coffee break, George said, "Shall we spoil everything with a cake?" which led to several laughs.

The conversations also contained ironic comments that related to one's age or ongoing activities. During lymph yoga, the participants were instructed to hold their arms above their heads and close their hands. While in that position, William expressed, "They have locked themselves there. I cannot get them down". As the activity program progressed, participants shifted their behavior, transitioning from leaving the activities individually to departing collectively while continuing conversations on the sidewalk.

### *Exchanging knowledge and information*

As the activity program progressed over the weeks, the participants increasingly exchanged knowledge and information through their interpersonal interactions. This provided support in their daily lives and created opportunities for future activities. The participants shared knowledge related to tax returns, deductions, funds, and financial contributions, as well as how to facilitate the management of their finances. They exchanged information regarding different activities outside the activity program, such as joining each other's organizations and associated activities. Owing to other outside activities, some participants missed out on activities in the activity program. Exchanging information about other activities created a valuable and supportive platform for joint activities. As the participants began to know each other better, their exchanges increased. In addition, the activities created opportunities for continued engagement as several participants signed up for activities. Furthermore, the participants expressed a need for information about possible activities in the municipality, as it became evident that such information was lacking. During the lecture with the dietitian, the participants had opportunities to share their thoughts and ask questions. Mary provided George with positive feedback regarding his involvement in an organization, with Dorothy adding, "I hear you are a passionate advocate," affirming George's strong motivation to organize activities in the association. She further expressed, but this time more towards the whole group, "We do not have to sit at home alone, we who live alone. There is plenty to do".

However, as the information about the activities was not delivered via regular mail, the participants perceived it as inaccessible, requiring them to search online. During the visit from the Red Cross and Senior in School, the participants discussed the lack of information sent home. In the discussion, George expressed, "When you become a pensioner, you will not know a thing. [...] You are on your own". Furthermore, the participants expressed that newspapers became unavailable because of the fee, which means that they could access the information only digitally. During the lecture by the World Heritage coordinator, Betty commented that the information about available activities sent home was lacking, to which James agreed. Alice commented on the outreach services provided by the municipality for adults older than 80 years, "Then it is too late. [...] Then we are dead." Betty remarked on sending out information early, "If you want active and alert older adults," suggesting a need to receive information concerning activities early. In James' opinion, 60 is the appropriate age to receive information.

The need to inform each other about activities by exchanging information that they otherwise would have missed was expressed in the interpersonal interactions. The exchange could support the participants in trying new experiences. After the activity that provided preventive information, when the participants sat down during the following coffee break, Mary told the group, "If someone asked me to go bowling, I would say yes; I would probably not do that before," further explaining, "You have thought that you had to

belong—that you could not join”, referring to activities at the senior community centers. The information exchange included using digital tools, such as apps, and how to use those tools. The participants provided each other with information about recipes, restaurants, and places that offered pensioner discounts. When questions arose, the participants quickly shared their knowledge, sought information using their phones, and shared it with the rest of the group. This indicates that interpersonal interactions promoted support when exchanging knowledge and information.

#### *Connecting by embracing openness*

The interpersonal interactions were characterized by a willingness and courage to share life experiences and bring memories into the conversation, highlighting a way of connecting deeper with each other by embracing openness.

#### *Willingness and courage in sharing life experiences*

The participants' interpersonal interactions demonstrated increased willingness and courage to share various aspects of their lives, growing as the activity program progressed. For instance, they discussed their marital statuses and how their life changed after the death of a loved one, which created a need for self-development. The participants described changes in social networks after the loss or illness of a loved one who was previously responsible for maintaining their social connections. They described how they learned to manage their finances and the challenge of paying bills independently.

During the cooking activity, Dorothy asked John, "Have you started in old age?" He replied, "My wife died a year and a half ago, and she always cooked good food. Everything tasted good. I had to start from scratch when she died". Dorothy replied, "That is the trouble with being in a marriage. My husband did all the cooking, and I had not even paid one bill". Cooking to prepare a meal for oneself could be associated with negative emotions, as observed in Ruth and William's conversation during outdoor walking. Ruth shared that she had "lost her confidence" about "only cooking for herself." William added, "Cooking for someone is more fun." Participants shared more about their experiences as the activity program proceeded, which increased their emotional connections. Often, they shared their current life situation and lack of activities. They also shared why they had applied for the activity program during the welcome meeting. For example, Mary described, "I live alone, I have lived alone for so long, my friends live in couples, so there is not much to do."

The participants described the difficulty of learning new things in old age while having the courage to create their own ways of doing things. Their conversations included describing close relationships and experiences with having a loved one with dementia in residential care. Their openness to each other included talking about caring for a parent with high-care needs or the loss of a parent at a young age. For example, after ping pong, the participants sat down for coffee and started conversations related to a dementia association in which one participant was already an active member. Robert informed the other participants that he was not interested in membership, sharing that his father had dementia but that he "is not there". This form of openness appeared to increase the connections between the participants. The participants further discussed their plans after the activities in the program, which created a common topic. Favorable environments for interpersonal interaction, such as outdoor walking, evoked conversations. In spite of being out of breath on the uphill parts of the walk, the participants continued to have ongoing and energizing conversations. During the walk, John described a 2-week sailing trip he had planned as a "once-in-a-lifetime trip," saying, "My children encouraged me". After the same activity, while Betty sat

down and unlaced her shoes, she expressed, "I feel like a fit ninety-year-old."

Joyfulness was having activities to occupy oneself with and share one's family situation, emphasizing gratitude for children and grandchildren. The participants described physical problems that affected them and their acquaintances, negatively impacting their joint activities. During the closing and evaluation activity, James and William sat together and discussed William's heart fibrillation. James said, "You cannot become your illness," and drew a parallel to a neighbor with similar problems. William emphasized the need to "try to think positively." A caring attitude emerged as they asked about each other's well-being and shared their health limitations. There was a seriousness in sharing life tragedies, but also a lightness in the conversations. Other conversations describe the sadness of losing friends and the difficulties of being receptive to new acquaintances. As the activity program progressed over the weeks, the noise level gradually increased as participants engaged in more conversation, reflecting greater openness and connection among them.

#### *Bringing memories into the conversation*

Throughout the activity program, the participants visited various locations and environments that stimulated an increasing tendency to bring memories into the conversations in interpersonal interactions. The locations included a former workplace, which led to the recall of memories of shared experiences in the past. The activities ignited conversations about the last time they were performed, sometimes going back several decades. The environment evoked memories from childhood, prompting conversations. The participants discussed a wide range of topics, including their former places of residence, upbringing, schools, teachers, friends, youth work experiences, parents' occupations, and interests and passions.

The cooking activity created a calm atmosphere as the participants worked with their hands, creating a solid foundation for opening up and bringing memories to the conversation. For instance, when George, James, and Robert began discussing army service, their conversation expanded to include various cities, accidents, titles, and roles. Meanwhile, John sat nearby, listening quietly. During the lecture by the dietitian, Dorothy shared about her mother and how she was constantly dieting to get into lovely dresses. After which, Mary remarked, "Throw away the dress instead". Another location was the museum, where artifacts triggered memories of childhood and professional life. When Robert and George walked together around the artifacts, they arrived at some old sewing machines. Robert informed, "My grandmother had one of these". They stopped at antique furniture, talking about family and family history, and describing their upbringing. This illustrates how a deeper connection is established when openness is embraced. The museum facilitated conversations related to clothing, and links were made to parents' clothing. Historical work uniforms triggered conversations about previous work experiences. One participant commented on a historical nurse uniform and expressed thoughts about whether they had met in their former professions. At the museum, William showed Dorothy and Ruth how his friends used to disturb him when he was on a call in a phone booth in his youth by fooling around outside the window. After the visit to the museum, the participants accessed a digital photo archive. When a picture of an old tennis racket appeared, Robert said, "My dad used to play with them. [...] That is the interwar period." He continued to tell others about how the racket material evolved. In connection with the digital photo archive, Dorothy remembered when she was out dancing and walking home at night, which she shared with others: "There you went by yourself sometimes and talked to yourself because you were a little scared".

The participants associated the location of the activities with different memories, which gave rise to discussions around shared yet

separate narratives. During their visit to the library, Ruth and Robert sat and talked about the premises of the library, which was a former cinema. They shared memories, and Ruth told Robert, "I think that is where the projector used to be," pointing to the ceiling.

The location of the activities could be an environment where the participants were regular visitors, such as the library, which created topics of conversation. During the visit to the viewing apartment, George shared how their instructor had difficulty quieting them down. Likening the group to a "school class" may elicit the memory of one's schooling and a sense of deeper community with others. During the same activity, when a memory arose related to assistive devices in the environment, Dorothy interjected, "Like stepping into mum's house, she died last year." When discussing personal emergency alarms, Robert drew a parallel to his mother's alarm. The participants brought memories into their conversations as a way of embracing openness, which facilitated deeper connections.

## Discussion

The findings of this study showed that interpersonal interactions within the activity program consisted of support, which was promoted through communication by engaging each other to actively participate in activities and by exchanging knowledge and information. On a more profound level, the participants connected by emphasizing openness that was rooted in their willingness and courage to share life experiences and bring memories into the conversations to establish deeper connections.

Creating togetherness was a central part of interpersonal interactions between the participants and developed progressively as the activity program advanced. This confirmed the findings of a previous study that highlights togetherness as an ongoing process that requires adaptation to one's capabilities and those of others.<sup>27</sup> Furthermore, initiatives to reduce loneliness can lead to increased social support<sup>28,29</sup> and feelings of being cared for.<sup>29</sup> Consequently, promoting support and creating togetherness, as part of social support, are valuable aspects to consider when developing initiatives to decrease loneliness.

Furthermore, togetherness consisted of humorous elements that encouraged social interaction. According to previous research, humor in communication among older adults often takes the form of attachment humor, which helps strengthen social bonds. Humor helps older adults stay socially engaged and can be self-deprecating and self-affirming.<sup>30</sup> This form of humor in interpersonal interactions can strengthen social relationships and can be used as a self-ironic strategy to soften the impact of sensitive topics.

It was evident from the findings that the participants exchanged knowledge and information as a way of providing support to each other. Including engaging one another in activities beyond the activity program. These behaviors align with previous research highlighting the positive impact of extended interpersonal interactions on social support.<sup>29</sup> Furthermore, underscoring the importance of engaging in meaningful conversations within a context perceived as safe.<sup>27</sup> Such engagement in events of others fosters social connection and is associated with greater longevity and life satisfaction.<sup>31</sup> This may suggest that the activity program can have a far-reaching impact on social engagement that extends beyond its duration.

As the activity program advanced, a notable increase in the depth of connections between the participants was observed. The participants showed increased willingness and courage to share different aspects of their lives, including the challenges of learning new things while developing their own strategies. Building and maintaining social relationships and contributing to society are key components of healthy aging,<sup>1</sup> while social isolation is a risk factor for reduced probability of healthy aging.<sup>32</sup> Furthermore, social well-being, which involves forming relationships beyond immediate family and lifelong

learning opportunities, is essential for healthy aging.<sup>33</sup> This underscores the importance of building new social connections, particularly as aging often involves the loss of existing friendships, as reflected in the study findings. In addition, this suggests a need for community initiatives that support interpersonal interactions and meaningful activities. Such initiatives may be essential for healthy aging and for reducing loneliness among older adults.

The design of the activities in this study was focused on mobility, culture, and health, and promoted inclusivity by allowing all participants to participate according to their abilities. The activity program facilitated healthy aging, with its twice-weekly schedule contributing to consistency and encouraging regular participant interactions. Frequent activity among older adults is associated with higher life satisfaction, better self-rated health, and reduced levels of depression.<sup>34</sup> As physical and social activities benefit mental health, encouraging participation is needed, especially in exercise and social interaction.<sup>34</sup> Furthermore, social connectedness enhances the positive effects of physical activity, essential in reducing loneliness.<sup>35</sup> Interactions during physical activities, such as group exercise, are associated with reducing loneliness, often perceived as more impactful than the activity.<sup>36</sup> Joint walking fosters belonging, shared motivation, and deeper relationships.<sup>29</sup> Within this study, joint walking was one of the physical activities that appeared to promote interpersonal interaction, during which conversations flowed. This underscores the importance of incorporating physical activities into programs designed to reduce loneliness in older adults, emphasizing the need for the program to run over an extended period.

The findings indicate that the participants had an increasing tendency to bring memories into the conversations, which indicates their openness to each other. Disclosing memories of visits to various locations and environments increased this tendency. This could be seen in the light of reminiscence, considering reminiscence interventions as a success factor in mitigating loneliness.<sup>37</sup> Nostalgia can serve as a mechanism through which persons derive meaningfulness, facilitating social connectedness and shielding them from existential threats. It is often tied to pleasure and sadness, evoked by memories, and accompanied by a sense of longing.<sup>38</sup> Therefore, engaging in shared activities that evoke memories can be essential in establishing relationships, enhancing a sense of community, and mitigating loneliness. Future activity programs may benefit from incorporating elements that evoke memories, such as museum visits.

Moreover, the participants joined the activity program on self-driven motivation to meet new people and find meaningful activities. Previous research highlights that participation and social relations are linked to a sense of meaning in life. It also promotes a sense of belonging, motivating social engagement.<sup>39</sup> The structure of the activity program offered benefits, as it combined social interaction and participation with opportunities to learn about available activities, both of which may reduce feelings of loneliness.

From a theoretical perspective, the findings can be interpreted in the light of social capital, as described by Bourdieu (1986), when social capital emerged through interpersonal interactions. The participants fostered a sense of togetherness, referring to resources gained through relationships and social networks.<sup>40</sup> Through the lens of *bonding* social capital, often inward-looking, supportive, and consisting of frequent interactions, the participants fostered close, strong connections.<sup>41</sup> *Bridging* social capital, connecting persons from diverse backgrounds through less frequent interactions. Accessing external resources and opportunities offers valuable insights, knowledge, and expanded networks.<sup>41</sup> The activity program in this study is an external resource, connecting participants from diverse backgrounds and enabling interactions that extend beyond the program, which may influence their experience of loneliness.

Lastly, trustworthiness is essential in ethnography, with credibility reinforced through detailed field and reflective notes.

Dependability was strengthened by illustrating interpersonal interactions using quotes. Transferability was strengthened by describing and clarifying the context, including the activity program. Confirmability was strengthened by reflexivity, encompassing fieldwork and the writing process, where social value is constructed within the text. During the observation period, continuous reflexive discussions took place within the research team to mitigate observer bias, with the last author participating in several observations and assuming a more substantial role in the analysis. When two observers were present, the field notes and reflective notes were subsequently compared to ensure consensus in the observations. Participants were informed of the researcher's role and that they would not participate in activities. Interactions between the observers and participants were still possible. For instance, participants engaged with the observers by asking questions or expressing interest in the research. Lastly, the Consolidated Criteria for Reporting Qualitative Research were used for this study.<sup>42</sup>

### Limitations and strengths

The activity program was announced exclusively in Swedish, limiting the study to Swedish-speaking participants and posing a potential limitation. However, one strength of this study lies in the rich observation material, which captured the nuances of interpersonal interactions. An important factor in planning activity programs to reduce loneliness can be group continuity, in which participants meet regularly over an extended period to form new relationships. The study sample represents a relatively healthy and active subset of older adults, which could be considered a limitation. Thus, future research should undertake the challenge of including those with impaired health and who are socially isolated.

### Conclusion

Community-based activity programs targeting loneliness require a longer duration, as it is apparent from the results of this study that interpersonal interactions increase over time. Meeting the social needs of older adults through coordinated community efforts is essential in promoting healthy aging. Furthermore, community awareness of opportunities for social interactions and activities can guide and support older adults experiencing loneliness. The activity program served as an external resource that strengthened social capital by connecting participants from diverse backgrounds and fostering interactions that extended beyond the program. The findings provide valuable insights for designing future activity programs for older adults and enhancing social connectedness by facilitating relationships and meaningful engagements in activities. Future research should focus on identifying effective activity programs for specific population subgroups and evaluating their sustainability in reducing loneliness over a longer period.

### Ethical approval and informed consent statements

This study was approved by the Swedish Ethical Review Authority, Linköping (Dnr. 2024–00,224-01) and conducted in accordance with the ethical guidelines of the Declaration of Helsinki. The participants received oral and written information about the study and their right to withdraw their participation at any time without giving a reason. Written consent was obtained from all the participants. By implementing a coding system, the anonymity of the participants was ensured in the collected data. The transcribed interview data and code list were stored separately to ensure that no participant could be identified. Furthermore, all data materials were securely stored on a protected university server to maintain confidentiality.

### Consent to participate

The participants gave written informed consent to participate in this study and were informed of their right to withdraw without providing a reason.

### Consent for publication

The participant gave written informed consent that their contribution would result in a published article.

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### Data availability

With respect to ethical restrictions, anonymized data may be shared upon reasonable request from the authors.

### Declaration of competing interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### CRediT authorship contribution statement

**Anna Axén:** Conceptualization, Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis. **Elin Taube:** Conceptualization, Formal analysis, Methodology, Supervision, Writing – review & editing. **Christine Kumlien:** Conceptualization, Formal analysis, Methodology, Supervision, Writing – review & editing, Project administration. **Christel Borg:** Conceptualization, Formal analysis, Methodology, Supervision, Writing – review & editing. **Line Christiansen:** Conceptualization, Formal analysis, Methodology, Supervision, Writing – review & editing.

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