

A 10-YEAR SCOPING REVIEW OF PARTICIPATION IN SOCIAL ACTIVITIES AMONG HEALTHY OLDER ADULTS

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Abstract

This scoping review aims to explore the current evidence regarding participation in social activities among healthy older adults and the types of social activities. The Web of Science, Scopus, and PubMed databases were used to search for potential studies published from 2013 to 2023, and 24 studies met our inclusion criteria. The findings revealed variability in the types and number of social activities utilized in the included studies. This review has identified three main categories of social activities: formal social activities, informal social activities, and online social activities. Formal social activities can be further categorized into four sub-categories: participation in religious activities, participation in senior citizen clubs or senior centers, participation in education classes or programs, and participation in community groups, associations, or organizations. On the contrary, informal social activities can be categorized into seven sub-categories: connecting with family or relatives, connecting with friends, connecting with the community, participating in leisure activities, participating in outdoor activities, participating in indoor activities, and participating in physical activities. In conclusion, this review has identified critical and up-to-date evidence on social activities participated in by healthy older adults. With the growing attention on promoting successful aging, the results gathered from this review can significantly inform various community stakeholders in planning strategies to cultivate social participation among this population group.

Keywords: Elderly, Older Adults, Social Activity, Social Participation

Introduction

The entire world is currently experiencing the global phenomenon of an aging population. Globally, there were 771 million individuals aged 65 years or older in 2022, and by 2030, this number is projected to reach 994 million (1). The significantly increased number of older adults has drawn attention to promoting successful aging among this population. One essential aspect of determining successful aging is participation in social activity (2). Maintaining social participation in old age leads to good health, reduces mortality, and supports the achievement of successful aging (3). However, increased age may eventually change social activity patterns. A previous study found that personal characteristics and mobility play a significant role in the social activity patterns of older adults. Therefore, providing various opportunities to encourage their social participation can be helpful and advantageous for them (4). Fostering social participation and preventing social

isolation can also reduce the disengagement of older adults from society (3).

Social activity can be defined as any activity that encourages interpersonal interactions, builds social identity, and regulates emotions (5). To actively participate in a social activity, a person needs to emphasize interpersonal interaction, spending time and communicating with others (6). Literature has previously highlighted that social activity is the most common leisure activity among older adults (5). They frequently seek social activities to satisfy their needs for enjoyment, relaxation, stimulation, and a sense of belongingness (7).

Furthermore, social activities can be categorized into three main types: formal social activities, informal social activities, and online social activities. Formal social activities refer to social participation in formal organizations (8) or pre-designed groups, such as memberships (6). Examples

may include active participation in volunteer organizations, educational institutions, clubs, religious organizations, and political or civic groups (9). Meanwhile, informal social activities refer to casual social interaction with relatives, friends, and neighbors (8). Examples may include any leisure activities obtained informally, such as chatting while relaxing and spending time with grandchildren (5). At the same time, online social activities refer to transferring in-person social activities to online platforms using digital tools like Zoom, FaceTime, Facebook, email, texting, and phone calls (10).

A growing body of literature has highlighted the benefits of social activities for individuals. Regardless of age and gender, participation in social activities generally improves a person's health-related quality of life (11) and social well-being (12). Indeed, a study has reported that socially active older adults had longer survival compared to those who were socially less active (13). Social activity has also been shown to significantly reduce the risk of cognitive impairment (14) and improve global cognition among older adults (15). A previous study has suggested that encouraging social activities among older adults, especially during the transition to retirement, may minimize cognitive decline and promote a healthier retirement (16). Additionally, evidence indicates that participation in social activities may predict higher levels of emotional and social support and, thus, alleviate the risk of depressive symptoms among this population group (17).

However, it is important to note that participation in social activities among older adults directly depends on their current health status (12). Poor health status may lead to decreased participation in social activities. Given our interest in promoting older adults' health and well-being, a scoping review methodology is chosen to explore the overview of the current social activities among the older adult population.

Materials and Methods

This scoping review was conducted according to the framework proposed by Arksey and O'Malley (18), which uses the following steps: (i) identifying the research question, (ii) identifying the relevant studies, (iii) study selection, (iv) charting the data; and (v) collating, summarising, and reporting the results. This review was then reported in accordance with the preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews (PRISMA-ScR) (19)

Step 1: Identifying the research question

This scoping review addresses the following research question: 'What is the current evidence regarding participation in social activities among healthy older adults?' and 'What are the types of social activities participated by them?'

Step 2: Identifying relevant studies

The studies were identified in March 2023 across the following electronic databases: Web of Science, Scopus, and PubMed. The main keywords used were "older adults", "elderly", "social", and "social activity". The reference lists of records found through the electronic searches were extracted into a reference management software (Mendeley™) for duplicate removal. A total of 353 records were screened after removing 286 duplicates, and no new potential articles were found from cross-reference and hand searching. The flow chart of study selection is illustrated in Figure 1.

Step 3: Selection of studies

A total of 353 articles were screened based on their title and abstracts. The inclusion criteria in this scoping review were: (i) published between 2013 and 2023 to reflect the most up-to-date literature; (ii) studies have full-text articles published in English; (iii) participants of studies should comprise healthy older adults of 60 years and over; (iv) studies should be relevant to social activities. Studies were excluded if they were in the form of comments, editorials, letters, or review papers or if the older adult population was not the study's highlight. This review also excluded intervention studies as we were interested in social activities participated by older adults, particularly in their real-world environments. Only full articles that fulfilled the eligibility criteria were retrieved.

Step 4: Charting the data

The data was charted and summarised in Table 1 according to the characteristic of the studies, such as author, year, study design, the aim of the study, population, country, social activity and summary of findings. Further, the data was extracted concerning the types of social activities participated by healthy older adults (Table 2).

Step 5: Collating, summarising and reporting the results

A narrative summary of the results was also presented to summarise the extracted data. The authors conducted the analysis, and the results were described in relation to the research questions of this scoping review to provide a clear understanding. This content analysis focused on the types of social activities participated in by healthy older adults.

Results

A total of twenty-four articles met the inclusion criteria and, thus, were subjected to this scoping review. The summaries of the selected articles can be found in Table 1, and the types of social activities participated in by healthy older adults are shown in Table 2.

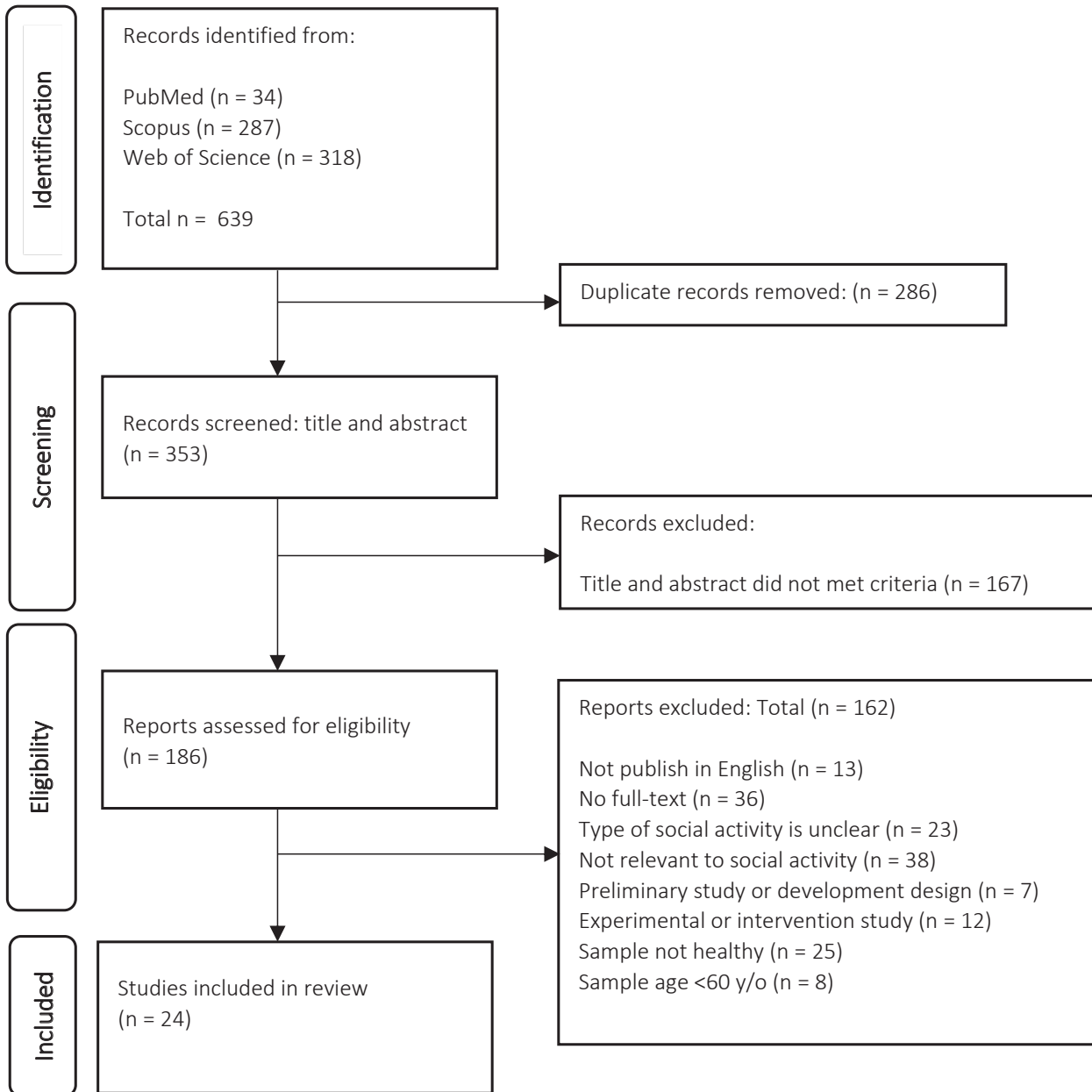


Figure 1: Flow chart of study selection.

Table 1: Articles summary

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
Roberson & Pelclova (2014) (37)	Mixed-method	To identify the ways in which social dancing contributes to the well-being of seniors.	n = 76 Mean age = 68.55 y/o Japan	Social dance	Social dance can be a health-enhancing physical activity. As opposed to a dance class, social dance promotes a playful and spontaneous atmosphere.
Lee & Kim (2016) (25)	Longitudinal study	To examine which type of social activities reduce CD 4 years later among older adults.	n = 1,568 Age = >65 Korea	Formal social activities - Participation in church or other religious groups - Participation in senior citizen clubs or senior centres - Participation in alumni societies or family councils Informal social activities - Face-to-face contact with close friends - Face-to-face contact with children - Contact with children by phone or letters	Overall, the subjects were more involved in informal social activities. Participation in senior citizen clubs or senior centres and frequent contact with adult children may produce beneficial effects in reducing CD in later life among older adults.
Van Holle et al. (2016) (35)	Cross-sectional	To examine associations between neighbourhood social factors and physical activity and sedentary behaviour in older adults	n = 431 Age = >65 y/o Belgium	- Talking to neighbours	A higher frequency of talking to neighbours was associated with higher levels of self-reported walking for transport and for recreation.
Lee & Kim (2017) (29)	Cross-sectional	To identify the degree of health status, social activities, wisdom and the health conservation perceived by older women.	n = 112 Age = >65 y/o Korea	- Volunteer service - Religious activity - Leisure activity	Participation in religious activity was the highest out of other social activities, which is deemed to recover mental stability and maintain healthiness.
Park et al. (2017) (26)	Cross-sectional	To derive a typology of social activity groups in older adults and to identify differences and similarities across the empirically derived groups.	n = 464 Age = > 65 y/o Korea	- Attending religious meetings - Meeting with friends - Volunteering - Attending day centres for the elderly - Attending senior colleges - Joining hobby groups - Attending community centres.	Typologies of social activity could enhance practitioners' understanding of activity patterns and their associations with health and well-being.
Tomioka et al. (2017) (27)	Cross-sectional	To investigate whether the association between social participation, including paid work and IADL, exhibits not only in gender but also in age among community-dwelling older adults.	n = 17,680 Age = >65 y/o Japan	- Volunteer groups - Sports groups - Hobby groups - Cultural groups - Senior citizens' clubs - Neighbourhood community associations - Paid work	Social participation in older age is positively associated with IADL. Volunteer groups were inversely associated with poor IADL only in males.

Table 1: Articles summary (continued)

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
Fu et al. (2018) (28)	Cross-sectional	To examine the cross-sectional association between social activities and cognitive function among the Chinese elderly.	n = 8966 Age = >60 y/o China	<ul style="list-style-type: none"> - Interaction with friends - Hobby groups (e.g., Mah-jong, chess, cards or participating in others) - Sports groups (e.g., dancing, fitness, practising qigong, and so on), - Community-related organisations, - Voluntary work 	Interaction with friends and participating in hobby groups and sports groups were associated with better cognitive function and doing volunteer work was associated with better cognitive function only among women.
Han et al. (2018) (20)	Qualitative study	To explore older adults' perspectives on volunteering in an activity-based social program for community-dwelling PwD	n = 8 Age = >67 y/o USA	<ul style="list-style-type: none"> - Volunteering in an activity-based social program 	Volunteering in the Stepping Stones program met older volunteers' desires to help PwD and learn about dementia.
Lindsay-Smith et al. (2018) (34)	Mixed-method	To examine whether loneliness and social support of new members of Life Activities Clubs (LACs) changes in the year after joining.	Survey respondents (n = 28), mean age = 66.9 y/o Focus groups (n = 11), mean age = 67.1 y/o Australia	<ul style="list-style-type: none"> - Walking groups - Table tennis - Dancing class - Exercise class - Bowls - Golf - Cycling groups - Non-physical leisure activities: art and literature groups, craft groups, entertainment groups, food/dine-out groups - Sedentary leisure activities: mah-jong, cards 	Becoming a member of a community group offering social and physical activities may improve social well-being in older adults, especially following significant life events such as retirement or moving house.
Nemoto et al. (2018) (30)	Longitudinal study	To examine factors related to new or continuous participation in social group activities according to group type.	n = 3380 Age = >65 y/o Japan	<ul style="list-style-type: none"> - PrG; hobbies, sports and volunteering - PuG; neighbourhood associations and senior citizen clubs 	The rate of new and continuous participation in PrG was higher than in PuG, and different related factors were identified as existing between social group types.
Su et al. (2018) (32)	Cross-sectional	To explore the possible relationship between social activity and cognitive function among community-dwelling Chinese elderly.	n = 557 Age = >60 y/o China	<ul style="list-style-type: none"> - Joining a social centre - Meeting with friends or relatives - Attending an interest class - Volunteer work - Singing - Religious activity - Cantonese opera 	Joining a social centre and meeting with friends or relatives were the participants' two most common social activities. Some individual social activity items may be associated with better cognitive function among the community Chinese elderly.
Choi et al. (2019) (31)	Cross-sectional	To examine how social activity moderates the relationship between age norms and SHS among older adults in Korea.	n = 10,280 Age = >65 y/o Korea	<ul style="list-style-type: none"> - Friendship group - Volunteer activity - Senior centre participation 	Friendship groups and volunteering presented greater positive interaction effects with learning and remarriage, where higher levels of SHS were reported.

Table 1: Articles summary (continued)

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
Wang et al. (2019) (21)	Longitudinal study	To investigate the mechanisms through which neighbourhood social reciprocity influences older adults' mental health in China.	n = 24,620 Age = >60 y/o China	Neighbourhood social reciprocity - Physical activity - Social interaction with neighbors - Volunteering	Neighborhood social reciprocity influenced older adults' mental health directly and through the mechanisms of the frequencies of physical activity, social interaction with neighbors, and volunteering experience.
Asiamah et al. (2020) (33)	Cross-sectional	To examine the influence of built environmental factors in the community on active social network size and the moderating influence of different dimensions of social activity on this relationship.	n = 515 Age = >60 y/o Ghana	- Interact with friends - Play games (e.g., Ludo, Oware, etc.) - Go to an organised event (e.g., cinema, sports, drama, etc.) - Provide help to a family, friend, and so on - Cater for the sick or a disabled person - Make new friends - Participate in community-related events (e.g., cleaning) - Participate in charity or voluntary work	Social activities such as volunteering, support for social ties, and organised (group) activity are essential to utilising available built environment factors by older adults to make active social ties in the community.
Lee et al. (2020) (41)	Cross-sectional	To examine the relationships between the Mah-jong card game and social activity on sleep-related measurements among older Chinese adults.	n = 4718 Age = >65 y/o China	Mahjong card game	Playing the Mah-jong card game is associated with better sleep quality among older adults. This game should be proposed as a health promotion tool to help older adults attain "healthy ageing."
Scott et al. (2020) (39)	Cross-sectional	To examine relationships between home and community gardening and older adults' self-reported psychosocial and physical well-being, attitudes to ageing relative to gardening activities and benefits of membership to a gardening group.	n = 331 Age = >60 y/o Australia	- Community gardening activities	Members of gardening groups reported significantly more social and physical benefits than non-members.
Nemoto et al. (2021) (22)	Longitudinal study	To investigate the link between changes in social group engagement and changes in PA among community-dwelling older adults.	n = 3833 Age = >65 y/o Belgium	Social group engagement - Senior citizens' club - Volunteer group - Exercise/sports group - Hobby and culture group	PA level decreases with age, and engaging in social activity could help to suppress or prevent age-related PA decline among older adults.
Asiamah et al. (2022) (42)	Cross-sectional	To assess the associations between information technology use and social activity as well as the moderating influences of walkability in these associations	n = 1902 Age = >60 y/o Ghana	The use of information technology - packaged software such as WhatsApp	Packaged software, such as WhatsApp, can more significantly support social activity in higher walkability.

Table 1: Articles summary (continued)

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
Mizutani et al. (2022) (23)	Cross-sectional	To identify protective or high-risk social activities associated with homebound status among the rural young old (ages 65–74) and the oldest old (ages ≥ 75).	n = 1564 Age = >65 y/o Japan	<ul style="list-style-type: none"> - Visiting friends' houses - Giving advice (listening to problems and lending a helping hand) to family and friends - Visiting sick people - Talking to young people - Volunteering groups - Group sports activities - Group hobbies - Senior citizens clubs - Neighbourhood associations - Lifelong education groups - Long-term care prevention program - Activities to support older adults with care needs - Activities to support parents with childcare needs - Activities to improve the community environment - Activities to pass down culture. 	The odds of being homebound were greater for those who did not visit friends' houses and those who offered advice to family and friends and participated in activities supporting older adults.
Onishi et al (2022) (24)	Qualitative study	To explore the value of social activities and the prerequisites for continuous participation among rural older adults based on their experiences.	n = 14 Age = >65 Japan	<ul style="list-style-type: none"> In groups or organisations - Senior citizens' clubs - Neighbourhood associations - Senior colleges - Activity as a welfare commissioner - Activities at shrines - Volunteer activities - Religious activities - Daycare - Widow support group - Activities of the Cultural Property Protection Committee - Activities of the Gymnastics Federation 	Social activities provide rural older adults with reciprocity ties, coping with ageing, enhanced daily lives, and a social safety net. Continued participation in rural social activities requires adherence to cultural norms and moderation of relationship distances.

Table 1: Articles summary (continued)

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
				<ul style="list-style-type: none"> - Activities at the agricultural cooperative - Women's Association - A group enjoying a hot spring - Group of gate ball players <p>In informal interactions</p> <ul style="list-style-type: none"> - Interaction with friends - Interaction at the kitchen garden - Taking a walk - Picking edible wild plants - Park golf - Interaction with helpers - Interaction with neighbours - Hobby-related activities 	
Veitch et al. (2022) (40)	Cross-sectional	To examine the relative importance of park features for encouraging park visitation, park-based physical activity, and social interaction among older adults.	n = 501 Age = >65 Australia	<ul style="list-style-type: none"> - Park visits 	The most important feature of physical activity was walking paths and a peaceful and relaxed setting for social interaction.
Zhao et al. (2022) (10)	Qualitative study	To examine older adults' experiences and perceptions of their participation in online social activities during the COVID-19 pandemic.	n = 40 Age = >65 Australia	<p>Online social activities (via Zoom, Skype, Facebook, and YouTube)</p> <ul style="list-style-type: none"> - Art activities (ballroom dancing, line dancing, tango, band rehearsal, choir rehearsal, and painting) - Sports activities (yoga classes, Zumba, and gym training) - Crafting activities (patchwork quilting) - Civil activities (committee members in a council or organisation) - Cultural activities (attending lectures, seminars, or courses) - Entertainment activities (playing games with family and friends) 	Online social activities were important during the pandemic for staying connected to other people and helping older adults stay engaged in meaningful activities, including arts, sports, cultural, and civic events.

Table 1: Articles summary (continued)

Author(s)	Study design	Aim	Population/ Country	Type of social activity	Summary of findings
Hou et al. (2023) (38)	Cross-sectional	To explore the association between caring for grandchildren based on living arrangements and cognitive function among Chinese middle-aged and older adults.	n = 5490 Age = >45 y/o China	- Caring for grandchildren	Caring for grandchildren and cohabiting with a spouse were positively associated with cognitive function among Chinese middle-aged and older adults.
Gough et al. (2023) (36)	Longitudinal study	To investigate community participation for a cohort of older adults living in the community before, during, and after the lockdown (during social distancing restrictions).	n = 26 Age = >60 y/o Australia	- Social activity - Virtual face-to-face interactions (e.g., zoom and Facetiming) - Talk to the neighbours - Walk together	During COVID-19, the physical and social activities of community-dwelling older adults changed.

n = number, y/o = years old, CD = cognitive decline, IADL = instrumental activities of daily living, PwD = people with dementia, PrG = private group activity, PuG = public group activity,

SHS = subjective health status, PA = physical activity

Table 2: Types of social activities participated by healthy older adults

Types of social activities			
Main Category	Sub-category	Activity	Sources
Formal social activities	Participation in religious activity	Participation in church or other religious groups	(24,25,29,32)
		Attending religious meetings	(26)
	Participation in senior citizen clubs or senior centres	Participation in senior citizen clubs or senior centres	(22–25,27,30,31)
		Attending day centres for the elderly	(26)
		Attending community centres.	(26)
		Joining a social centre	(32)
		Daycare	(24)
	Participation in education, class or program	Attending senior colleges	(24,26)
		Lifelong education groups	(23)
		Attending an interest class	(32)
		Long-term care prevention program	(23)
	Participation in community group, association or organisation.	Joining neighbourhood community associations	(23,24,27,28,30)
		Participate in community-related events	(33)
		Widow support group	(24)
		Activities of the Cultural Property Protection Committee	(24)
		Activities of the Gymnastics Federation	(24)
		Activities at the agricultural cooperative	(24)
		Women's Association	(24)
		Go to an organised event	(33)
		Participation in alumni societies or family councils	(25)
Volunteer service		(20–24,26–33)	
Activity as a welfare commissioner	(24)		
Paid work	(27)		

Table 2: Types of social activities participated by healthy older adults (continued)

Types of social activities			
Main Category	Sub-category	Activity	Sources
Informal social activities	Connecting with family or relatives	Giving advice (listening to problems and lending a helping hand) to family	(23)
		Caring for grandchildren	(38)
		Meeting with relatives	(32)
		Contact with children by phone or letters	(25)
		Provide help to a family	(33)
	Connecting with friends	Make new friends	(33)
		Contact with close friends	(25)
		Interaction with friends	(24,28,33)
		Meeting with friends/ friendship group	(26,31,32)
		Visiting friends' houses	(23)
		Giving advice (listening to problems and lending a helping hand) to friends	(23)
		Provide help to a friend	(33)
	Connecting with community	Social interaction/talking to neighbours	(21,24,29,35,36)
		Interaction with helpers or other people	(24)
		Interaction at the kitchen garden	(24)
		Visiting sick people	(23)
		Cater for the sick, disabled person or people in need	(23,33)
		Talking to young people	(23)
		Food/dine-out groups	(34)
	Participating in leisure activities	Joining hobby groups	(22–24,26–28,30)
		Singing	(32)
		Cantonese opera	(32)
		Cultural groups	(22,23,27)
		Art and literature groups	(34)
		Entertainment groups	(34)
		Leisure activity	(29)
		A group enjoying a hot spring	(24)
	Participating in outdoor activities	Taking a walk together	(24,34,36)
Community gardening activities		(39)	
Park visits		(40)	
Picking edible wild plants		(24)	
Participating in indoor activities	Play games (e.g., Ludo, Oware, etc.)	(33)	
	Mahjong card game	(28,34,41)	
	Chess game	(28)	
	Card game	(28)	
	Table tennis	(34)	
Participating in physical activities	Sports groups	(22,23,27,28,30)	
	Group of gate ball players	(24)	
	Exercise/fitness class	(28,34)	
	Social dance	(37)	
	Dancing class	(28,34)	
	Practising qigong	(28)	

Table 2: Types of social activities participated by healthy older adults (continued)

Types of social activities			Sources
Main Category	Sub-category	Activity	
		Bowls	(34)
		Park golf	(24,34)
		Cycling	(34)
Online social activities		Virtual face-to-face interactions (via Zoom and Facetiming)	(36)
		Interacting (via WhatsApp)	(42)
		Online social activities (via Zoom, Skype, Facebook, and YouTube)	(10)
		- Art activities (ballroom dancing, line dancing, tango, band rehearsal, choir rehearsal, and painting)	
		- Sports activities (yoga classes, Zumba, and gym training)	
		- Crafting activities (patchwork quilting)	
		- Civil activities (committee members in a council or organisation)	
		- Cultural activities (attending lectures, seminars, or courses)	
		- Entertainment activities (playing games with family and friends)	

Overview of the studies

1. Study design

Across this scoping review, there were fourteen cross-sectional studies, three qualitative studies, five longitudinal studies, and two mixed-method studies.

2. Sample of population

All of the studies included in this review used older adults as their sample of the population. In this scoping review, only participants aged 60 years and over were considered as older adults. Sample sizes of the included studies varied significantly, ranging from 18 (20) to over 24,620 (21) social interaction with neighbors, and volunteering experience. Results: The results indicated that more neighborhood social reciprocity related to better mental health. The effects of the three mediators were statistically significant and enhanced mental health. In addition, the effects of the mediators were strengthened by neighborhood social reciprocity, and vice versa. Conclusions: In China, neighborhood social reciprocity influenced older adults' mental health directly and through the mechanisms of the frequencies of physical activity, social interaction with neighbors, and volunteering experience. © 2019 The Author(s) participants. Most of the studies included both males and females as their research participants.

3. Location and setting

Five of twenty-four eligible studies in this review were conducted in Australia, China and Japan. Four studies were in Korea, two in Belgium and Ghana and one in the

United States of America (USA). The included studies in this scoping review ranged from 2013 until 2023.

4. Main findings

There was variability in the types and number of social activities utilised in the included studies. This scoping review categorised the types of social activities into three main categories: formal social activities, informal social activities and online social activities. The details of the categories are presented in Table 2.

Formal social activities

Formal social activities can further be categorised into four sub-categories: participation in religious activity, participation in senior citizen clubs or senior centres, participation in education, class or program and participation in community groups, associations or organisations.

Most of the studies (n = 13, 54.2%) reported 'participation in a community group, association or organisation' (20–33) as the activities participated by older adults, with volunteer service (20-24, 26-33) being one of the most reported activities. This is followed by 'participation in senior citizen clubs or senior centres' (22-27, 30-32) reported by nine studies (37.5%). Besides, some studies (n = 5, 20.8%) have reported 'participation in religious activity' (2-26, 29, 32), such as participation in church and attending religious meetings as social activities that older adults commonly participate in. In addition, four studies (16.7%) reported 'participation in education, class or program' (23, 24, 26, 32), such as attending senior colleges (24, 26).

Informal social activities

On the contrary, informal social activities can further be categorised into seven sub-categories: connecting with family or relatives, connecting with friends, connecting with community, participating in leisure activities, participating in outdoor activities, participating in indoor activities, and participating in physical activities.

Most of the studies ($n = 10$, 41.7%) reported 'participating in leisure activities' (22-24, 26-30, 32, 34) as one of the attended social activities by older adults with joining hobby groups (22-24, 26-28, 30) as the most typical ($n = 7$, 29.2%). The second most commonly reported informal social activities are 'connecting with the community' (21, 23, 24, 29, 33-36), 'participating in physical activities' (22-24, 27, 28, 30, 34, 37) and 'connecting with friends' (23-26, 28, 31-33) ($n = 8$, 33.3% each). In the sub-category of 'connecting with the community', social interaction or talking to neighbours (21, 24, 29, 35, 36) are older adults' most reported informal social activities. On the other hand, sports groups (22, 23, 27, 28, 30) had become the most commonly reported informal social activities in the sub-category of 'participating in physical activities'. For the sub-domain of 'connecting with friends', the example of activities are contacting, interacting and meeting with friends (24-26, 28, 31-33). The third most common reported informal social activities are 'connecting with family or relatives' (23, 25, 32, 33, 38) and 'participating in outdoor activities' ($n = 5$, 20.8% each). Some examples of activities for the sub-category 'connecting with family or relatives' are giving advice to family (23), caring for grandchildren (38) and meeting with relatives (32). For the sub-category 'participating in outdoor activities' (24, 34, 36, 39, 40), the examples included taking walks together (24, 34, 36), community gardening activities (39) and park visits (40). Last but not least, few studies ($n = 4$, 6.7%) have reported 'participating in indoor activities' (28, 33, 34, 41) as informal social activities participated by older adults, such as playing Mah-jong (28, 34, 41), chess (28), card (28) and other board games (33).

Online social activities

Instead of offline social activities, as mentioned above, social activities can also occur via online platforms. Several studies ($n = 3$, 12.5%) have reported 'social online activities' (10, 36, 42) but little is known about older adults' experiences of participating in those activities. This paper reports an investigation of older adults' experiences of participating in social activities that they used to attend in-person, but which were moved online because of strict lockdown restrictions. We conducted in-depth interviews with 40 older adults living independently (alone or with others as part of activities that older adults participated in, especially during the COVID-19 pandemic. Studies have reported that older adults interact with others via applications and software such as WhatsApp (42), Zoom (10, 36) but little is known about older adults' experiences of participating in those activities. This paper reports an

investigation of older adults' experiences of participating in social activities that they used to attend in-person, but which were moved online because of strict lockdown restrictions. We conducted in-depth interviews with 40 older adults living independently (alone or with others and Facetimeing (36) key components of healthy ageing including community, physical, and social participation continue to gain traction. However, management of the COVID-19 pandemic aimed to protect older adults and reduce the spread of the virus, this restricted community participation and reduced the opportunities for social interaction. Methods: This mixed methods study investigates community dwelling older adults' community participation; physical activity and social interaction prior to, during, and following the COVID-19 lockdown in Adelaide, Australia. Twenty-six community dwelling older adults were monitored over three time-points between November 2018 and October 2020, with Global Positioning Systems, accelerometry and self-reported diaries. In addition, nineteen participants completed semi-structured interviews. Results: Community participation varied across the three time points, with significant reduction in the number of trips taken out-of-home ($p = 0.021$).

Discussion

The present study aimed to review the current evidence regarding social activities among healthy older adults. The results of this scoping review provide the latest evidence that older adults participate in various types of social activities in their natural environment. Social activities can be classified into three main categories: formal social activities, informal social activities, and online social activities.

The first category is formal social activities, which usually involve an individual's active participation in an organization (8). Apart from improving the quality of life for older adults, it has been reported that participation in formal social activities may protect them from developing chronic conditions and reduce depressive symptoms (9).

The most frequently reported formal social activities in this review are 'participation in a community group, association, or organization,' such as volunteer service. A study highlighted that older adults' perceived personal responsibility to volunteer has become the most crucial factor that attracts them to formal volunteering (43). Secondly, there is 'participation in senior citizen clubs or senior centers.' A previous study found that male, younger, and married older adults were more likely to engage in senior citizen clubs and usually had good ability to perform independently in Activities of Daily Living (ADL) (25). This supports the findings from another study, which stated that older adults with difficulties in Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL) might be less involved in formal types of social activities (44). Thirdly, there is 'participation in religious activity.' Older adults who pray often will probably increase their engagement in formal social activities following retirement

(44). Fourthly and lastly, there is 'participation in education, class, or program,' such as attending senior colleges. Older adults involved in educational programs such as informative lectures may fulfill their cognitive and overall life satisfaction (45).

The second category is informal social activities, which often involve social interaction with relatives, friends, and neighbors (8). Compared to formal social activities, informal social activities, such as contacting friends and family, may alleviate the risk of geriatric depression (46).

The most frequently reported informal social activity is 'participating in leisure activities,' such as engaging in hobby groups. In particular, engagement in hobby groups may prevent IADL decline (27). Secondly, there is 'connecting with the community,' such as talking to neighbors. Interestingly, a previous study has revealed that frequent talking to neighbors was related to higher levels of walking for transport and recreation, thus promoting physical activities among older adults (35). Thirdly, there is 'participating in physical activities,' such as participating in sports groups. Older adults who participate in sports groups are less likely to have depressive symptoms; therefore, promoting sports groups in the community should be encouraged (47). Fourthly, there is 'connecting with friends,' which includes contacting, interacting, and meeting with friends. Interaction with friends among the older adult population has been found to lead to better cognitive function in both men and women (28). Next, there is 'connecting with family or relatives,' such as caring for grandchildren. A study in China has reported that the social role of grandparents, which involves caring for grandchildren, was positively related to cognitive function among older adults (38). Other informal social activities include 'participating in outdoor activities,' such as gardening. Leisure outdoor activities such as community gardening have also been found to provide positive therapeutic benefits to older adults, even just by watering the garden (39). Lastly, there is 'participating in indoor activities,' such as playing Mahjong card games. A result from a previous study suggests that playing the Mahjong card game is positively related to better sleep quality among older adults, especially in those who play the game daily (41).

The third and last category of social activities is online social activities, which refer to any social activities engaged in online platforms (10). Nowadays, many online platforms can assist people in communication. Widely known software packages such as WhatsApp can crucially support older adults' social activity by encouraging them to access or share information about neighborhood social activities (42). The noticeably increased use of technology resulting from the effects of the global COVID-19 pandemic, which restricts physical face-to-face social interaction (36), has allowed online interaction. Online social activities play a critical role in maintaining social connections and supporting older adults in continuous engagement in

meaningful activities such as arts, sports, culture, and others (10).

Limitation of the study

This study has several limitations. Firstly, we restricted our review to only three databases and excluded all non-English articles. Secondly, this review only focuses on studies within a ten-year period, potentially overlooking other relevant studies. Thirdly, studies in the form of developmental design, experimental, and intervention studies were excluded, which may result in incomplete findings. Lastly, this review did not provide a detailed appraisal of the evidence quality, as the main goal was to explore the current availability of evidence. Future reviews could investigate barriers that may impede social activity participation among older individuals, further enhancing our understanding of social participation and promoting health and well-being in older populations.

Conclusion

This scoping review has identified critical up-to-date evidence on social activities participated among healthy older adults. To conclude, three main types of social activities are found in the analysis of this review. The types included are formal social activities, informal social activities and also online social activities. Older adults' continuous and regular participation in these social activities may lead to a gateway to healthier life and well-being. With the growing attention on promoting successful ageing, the results gathered from this review may have significantly informed various community stakeholders in planning the strategies to cultivate social participation among this population group.

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Competing interests

The authors declare that they have no competing interests.

Ethical clearance

Not applicable.

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