Social Connectedness Resource Preferences of Older Adults in Assisted Living: A Scoping Review Based on the WHO-ICF Framework

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Abstract

Background

This scoping review identifies the emerging evidence on social connectedness resource preferences and priorities of older adults in assisted living facilities, on-campus, and in the community.

Methods

Study searches implemented in EBSCOhost via APA Psych info, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, PubMed, Scopus, and Web of Science. We included for review articles that published between January 2000 – September 2022 in English and on assisted living facilities on-campus and community resources for social connectedness. From a total of 134 titles and abstracts, 8 of the studies were included, following the Population, Concept, and Context criteria. Studies comprised a total of 2482 older adults from a total of 233 assisted living facilities in the USA.

Results

Results by themes are framed in the World Health Organization's International Classification of Functioning, Disability, and Health (WHO-ICF). For social activities, older adults preferred facility-based recreation and leisure resources. For their community social connectedness, residents preferred participation in civic life activities. Older age cohorts preferred facility resources, whereas younger age cohort older adults preferred more demanding physical activities. Those from the larger enrollment facilities preferred facility-based resources than community resources. For moderately active and less active residents, their participation was limited to less demanding activities.

Conclusion

The resident's preferences varied based on age, physical limitations, and the size and location of the facility. Findings suggest lines for further research on options for developing assisted living facility-based and community-based resources for older adults' social well-being and quality of life.

Keywords

Social connectedness Resourcing, older people, Assisted Living facility, Quality of life, Preferences and Priorities.

Introduction

There is an exponential increase in assisted living facilities with the greying of the world populations (Abdi et al., 2019; Knecht-Sabres et al., 2020; Morris et al., 2014; Plys, 2019; Trinkoff et al., 2020). In the United States, 40% of older adults are assisted living residents (Zimmerman et al., 2020). About 15 % of community living older adults' transition to assisted living facilities a year, with the proportion projected to increase due to the historical older age bulge to peak around 2060 (Caffrey, 2012; Knecht-Sabres et al., 2020). Assisted living facilities are congregated residential settings that provide personal services, around-the-clock assistance, and supervision of daily living activities (Stevenson & Grabowski, 2010). They benefit older adults by getting help in their daily living activities such as showering, toileting, assisting while eating, and reminding them about taking medication (Stone & Reinhard, 2007). Assisted living facilities provide more of social than medical care, and residents sense of social wellbeing would be important (Trinkoff et al., 2020).

Older adults living in residential care facilities, are more vulnerable to social isolation and loneliness (Bennington et al., 2016). Social isolation refers to lack of interactions with others and society, and loneliness refers to the subjective feeling of the absence of a social network or a companion (Leigh-Hunt et al., 2017). Risk for social isolation and loneliness is higher in institutional living (Bennington et al., 2016; Jansson et al., 2017; Savikko et al., 2005; Tijhuis et al., 1999). Older people generally decrease their social network when they move to assisted living facilities—however, this reduced social network is directly related to increased depression levels. Chronic depression may lead to cognitive decline further limiting their social interaction capabilities (Winningham et al., 2003). Many residents in assisted living facilities may experience social disconnectedness in the abse

nce of resources to enhance the social wellbeing in their facility or the community (Cruwys et al., 2013; Ertel et al., 2008; Toepoel, 2013). Social connectedness refers to quality social relationships with family, friends, and acquaintances, minimizing risk for loneliness and social isolation (Mitra & Shakespeare, 2019; Toepoel, 2013).

Facility-based social connectedness resources.

Facility-based resources to improve the social connectivity of older adults in assisted living include therapies, support groups, educational programs, and communication services (O'Rourke et al., 2018). An example of a facility-based social connection includes memory or cognitive enhancement programs (Winningham & Pike, 2007). A facility-based memory training program may provide memory skills training with resident peers, including remembering faces, names, stories, et cetera for improving subjective wellbeing and cognitive performances (Winningham et al., 2003). As an example of social activity educational training program for older adults, is one that includes grandparenting training and training as volunteer community service providers (Strom & Strom, 2017). These facility-based resources motivate or rekindle residents' sociality activities. Even though residents are located within the facility, motivation to be part of the facility –based social networking is often high. Older adults with facility-based volunteer training are better prepared to be successful on-campus and in the community, where their unique skills are needed for social welling of the communities.

Community-based social connectedness resources.

For community-based activities for older adults in assisted living may participate in day-center, outreach programs, attending religious services contacting/visiting family and friends (O'Rourke et al., 2018; Park, N. S., Zimmerman, Kinslow, Shin, & Roff, 2012). Residents may also go to off-campus restaurants and also do walks in the community for physical and mental

health (Park, N. S. et al., 2012). They also may spend quality time in the community with friends and families and participate in volunteer activities with local schools, colleges, and religious organizations. Participation in off-campus activities helps older adults to refresh their lifestyle by interacting with a variety of people other than resident peers, rejuvenating their mental well-being and quality of life.

WHO -ICF frame work

The World Health Organization's International Classification of Functioning, Disability, and Health Framework (World Health Organization, 2001) provides a valuable framework for understanding health well-being by considering physical and psychosocial dimensions, in which activity limitations are from difficulties an individual may experience with everyday tasks, and participation restrictions refer to problems an individual may experience in involvement in life situations. This WHO-ICF framework explains health well-being through the interaction between body–structure functioning, capabilities (as in activities one can do), and participation (as in a performance or what one does) in the lived environment, considering personal factors (e.g., race/ethnicity, gender, age et cetera). Environmental factors include the physical and social environment in which people live (Mitra & Shakespeare, 2019; World Health Organization, 2001). The WHO-ICF has more explanatory power than the traditional medical framework which emphasizes the disability or disease conditions, and the social model, which focuses on the environmental factors that curb participation in activities. Rather than dwell on impairment as difficulties in bodily function or disability or disease, the WHO-ICF proposes functioning, which is more of an ability term prioritizing what and how people act in their life situations preferences and priorities. In conclusion, the WHO-ICF provides a comprehensive framework for

understanding social connectedness, which combines individuals' activities and participation in environments on their health statuses, choices, or preferences.

As examples of the utility of the WHO-ICF, social connectedness falls under the Recreation and Leisure, Environmental factors, Other specified community, social, and civic life and Environmental factors components of the WHO-ICF (see also Table 4). The Recreation and Leisure aspects include arts and culture, hobbies, socializing, sports, crafts, and communication. In the same way, the WHO-ICF's other specified community, social, and civic life, included aspects are informal associations, formal associations, religion and spirituality, immediate family, friends, strangers, etc. The environmental factors section has the following aspects influencing social connectedness: physical geography, population, flora, fauna, etc. In WHO-ICF, categories are arranged in a stem-branch-leaf structure. Each component has chapters, giving classes that further consist of third-level categories. In our study, we have the recreation and leisure activities, which are coded as (d), for other specified community, social, and civic life, coded as (d and e). For environmental factors, the applicable code is (e).

Priorities and Preferences of older adults

Expectedly, some resident facility older adults may prioritize facility or community-based social resources for their social well-being. For instance, some aging with or into chronic health conditions may prefer assisted living facility-based resources, for their accessibility and also capitalize on their growing relationships with facility staff members over time (O'Rourke et al., 2018). Older adults with debilitating physical conditions may prefer social connectedness resources available in the facility primarily, such as being with a spouse or partner, attending a crafts session, spending time on bird watching, and family gatherings within the facility (Knecht-Sabres et al., 2020). Others would prefer to spend more social time with peers at the

facility as many residents who prefer not to go out into the community for their social lives, which may include group prayer time at the facility (O'Rourke et al., 2018). However, depending on their personal circumstances on the younger to older age cohort spectrum, some older adults may prefer to go out with family for dining, shopping, or for movies. or may not pursue socializing opportunities with family to avoid burdening their children (Park, N. S. et al., 2012).

Moreover, the residents may have certain activity limitations and participation restrictions by their demographics or personal factors. For instance, some with fewer activity limitations and participation restrictions may prefer to engage in community-based social well-being activities such as volunteering, participating in religious activities, and visiting with their family members or grandchildren (Howie et al., 2014; Patterson et al., 2003; Strom & Strom, 2017). The extent of environmental access resources at the assisted living facility such as transportation, facility disability accessibility, location of the facility (away from the shopping centers, malls, dining, etc.), size of the facility and lack of technical knowledge (not comfortable using smartphones, iPad, computers, etc.) may hinder their chances to participate in community participation in their social activities (Howie et al., 2014; Patterson et al., 2003; Strom & Strom, 2017). We could not identify any review study that considered the emerging evidence on assisted living facility residents' social connectedness resource preferences and priorities, considering their physical health function, activity and participation, personal factors and the environment they lived in.

The current study.

We performed a scoping review to identify and profile facility and community social connectedness resources for assisted living older adults by their preferences and priorities. The guiding research questions were:

1. What is the emerging evidence for assisted living facility-based and community-based resources for enhancing social connectedness among residents?

2. What are the older adults' preferences and priorities of assisted living facility-based and community-based resources by their health and function, activity and participation, personal factors and environment?

Method

Research design.

This study implemented a scoping review (Arksey & O'Malley, 2005; Levac et al., 2010) to aggregate the evidence on the social connectedness needs of assisted living older adults. A scoping review provides exploratory evidence on an emerging body of evidence in an under-researched topic of study. A scoping review implemented in five steps to follow. 1. Identifying the research question, 2, Finding related studies, 3. Selecting appropriate studies, 4. Charting the data, 5. Summarizing and reporting the findings.

Search strategy

We included review articles published between January 2000 – September 2022. Initially, we conducted an EBSCOhost search to familiarize ourselves with the topic and assess the volume of literature it yielded. We developed search terms based on essential concept areas raised in the research question. These areas include social connectedness, older adults, and available resources. In later stages, these search terms were revised to ensure that keywords were included in the final search. Our definitive list of search terms was "older adults, social connectedness, interactions, geriatric, senior's mental health, social well-being, resources, social isolation, belonging, assisted living, United States" (see Table 1 for search terms).

The first author, the second author, and the librarian were involved to ensure that our search strategy aligned with our research questions. We searched the following databases. APA Psych info, Google Scholar, Scopus, and Web of Science. We engaged our reference librarian to assist with the Cumulative Index to Nursing and Allied Health Literature (CINAHL)and PubMed searches. In addition, we utilized search terms, keywords, subject headings, titles/abstracts, or text of the articles we identified. Our search included the reference list of included articles for additional relevant studies to ensure not to miss any critical articles. We included for review articles that published between January 2000 – September 2022

We limited our analyses to the US at this point. This limitation is due to the diversity in resident facility practices globally, which would limit the interpretability of findings. Focusing on the US has the advantage of controlling the policy and program practices in a jurisdiction. Results would provide leads for studies of our jurisdictions in the global community, which is rapidly greying and may increasingly adopt assisted living facilities.

Inclusion and Exclusion criteria

Based on the population, concept, context (PCC) framework (Peters et al., 2015) we included for review studies on 1) older adults living in assisted living facilities (population); 2) that described their activities of social inclusion(concept); and 3) available facility based socially inclusive resources for (context). Also, we included for review empirical studies on older adults' social connectedness, older adults living in assisted living facilities in the United States, that were published from 2000 – 2022 and that were published in the English language. We excluded from the study articles on younger older adults of 50 years of age or less, and also those that reported living in nursing homes, having dementia or any cognitive impairment, health

conditions, and disabilities, not done in the US, articles published in a language other than English. Table 2 presents our inclusion and exclusion criteria.

Table 1: Final Search Strategy

Key concepts	Search terms
Social connectedness	"social connections" or "connectedness" or "community connections" or "social belonging"
AND	
Older adults	"elderly" or "aged" or "geriatric population" or "65+"
AND	
Assisted living facilities	In the USA

Table 2. Inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Population Older adults aged 65+	Studies included if the older adults are aged 65 and above	Other age groups 65 and below
Concept Social connectedness	Participating in social connectedness intervention programs	With disabilities, health conditions, and cognitive impairment
Context Living in assisted living facilities	Based in the USA and residents of assisted living facilities	Living in nursing homes, home care and other long-term facilities and not in the USA.

Charting the data by Study selection

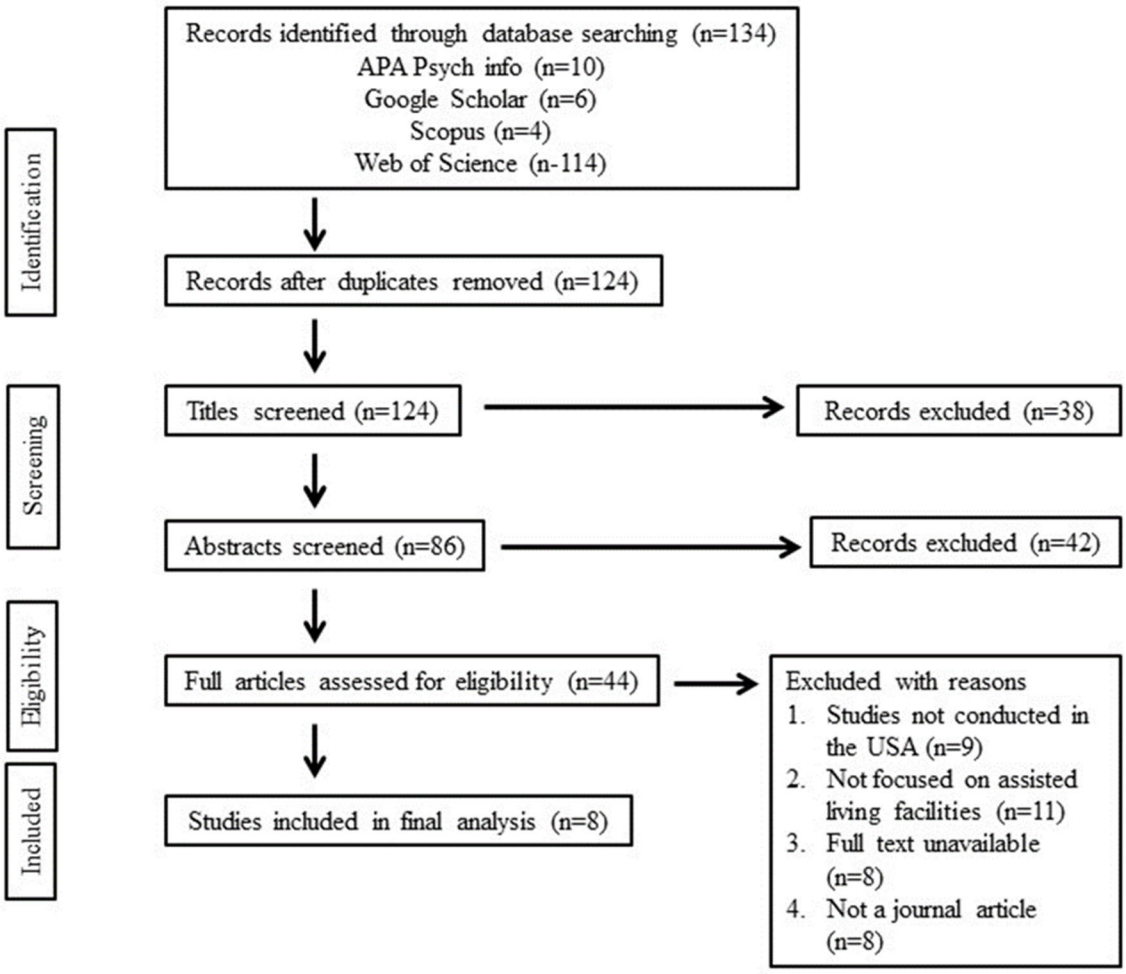
After carefully sorting the articles based on inclusion criteria, we identified 134 studies for further screening. Among the 134 studies were, 10 duplicates, which we removed. In the next

step of title screening, we deleted 38 articles, due to out of our study's scope, leaving 86 articles with appropriate titles. In the next screening phase, we did an abstract screening, and excluded 42 articles since these abstracts were not aligning with our study aims. Applying inclusion criteria of studies published in English and conducted in the USA, we resulted with eight published articles for the review (Knecht-Sabres et al., 2020; Park, I., Veliz, Ingersoll-Dayton, Struble, Gallagher, Hagerty, & Larson, 2020; Park, N. S., 2009; Plys & Qualls, 2020; Sefcik & Abbott, 2014; Yang & Stark, 2010; Zimmerman et al., 2003).

Charting the data

We charted the articles using the Excel data charting form. The primary author created and developed the form with the data. Before finalizing, the studies included in the review were cross-checked by the second author. In the final document, we have included the following information. Source, publication year, participant characteristics, study location, study aim/s, methods used, the condition under investigation, and the main findings of the included articles. Figure 1 represents the PRISMA flow chart.

Figure 1 PRISMA flow chart



Data synthesis

We analyzed the research evidence in two complementary ways. 1. A descriptive numerical summary highlighting the main characteristics of the studies (Levac et al., 2010), 2. A qualitative thematic synthesis (Vaismoradi et al., 2013). The descriptive numerical summary informs the basic information of the selected studies, whereas the qualitative thematic synthesis unveils the themes associated with our included studies (Arksey & O'Malley, 2005). A descriptive numerical summary consists of the characteristics of included studies, the total number of studies included, types of study design, years of publication, types of interventions, characteristics of the participants, and location where studies were conducted (Levac et al., 2010). Thematic analysis as an independent qualitative descriptive approach is mainly described

as "a method for identifying, analyzing and reporting patterns (themes) within data (Vaismoradi et al., 2013).

For the synthesis of findings, we plotted them on the WHO-ICF (2001) framework by activity and participation in facility and/or community-based resources for social connectedness by preferences and priorities among older adults by their health and function, activity and participation, personal factors and environment. Therefore, we focused on finding studies that aimed to understand the social well-being resourcing of older adults who are assisted living facility residents.

Results

Participant's Characteristics

The following information is based on the descriptive statistics from all eight articles. The total sample of all included studies was 2482 older adults with an age range between 51-100 and with the mean age of 74.05. The majority were females, accounting for 80% and the men were at 20%. Based on demographics 93% were white Caucasians and the remaining 7% were Blacks, Asians, and other ethnicities.

The mean age of the participants was 83 years, and the total number of participants is 19 in the age range between the ages of 70-96. Among this, the majority were females, accounting for 74%, and the remaining 26% were male. Based on the demographics, 95% were Caucasian, and 5% were Asian. Length of stay in assisted living ranged from 0.5 to eight years. The sample was recruited from two assisted living facilities in the western and southwestern suburbs of Chicago, Illinois (Knecht-Sabres et al., 2020). For this study, 100 residents were recruited; the majority were females, 70%, and the remaining 30% were male. With an age range between 65-99 and a mean age of 83.9 years. Most were white, 94% and 6% were Blacks. Based on marital

status, 66% were widowed, and the remaining 34% were married/divorced/single Level of education ranges from high school to doctorate. Participants of this study were recruited from a state-licensed assisted living facility in southeast Michigan (Park, I. et al., 2020). In this study, 8 residents participated, with a mean age of 84.38, ranging from 78 to 90. Among these, 6 women and 2 male participants were there. At the time of data collection, 3 participants were newly admitted, and the rest of the five residents had been residing there for, on average, 2.38 years (Polenick & Flora, 2013). In this study, the number of participants was 13 residents. With a mean age of 90 and age ranges between 68-90. The majority were women and widowed, which accounts for 77%. Only one participant was African American, and the remaining participants were Caucasian; participants had lived in the facility for 33 months on average (Sefcik & Abbott, 2014).

The total number of participants was 202, mean age is 83.03, with the age range of 51-100. The majority of them were women, white, and widowed. 67% had more than a high school education (Plys & Qualls, 2020). A total of 2048 residents participated in this study, with a mean age of 84 ranging from 65-90. Predominantly female, widowed, and white race residents were staying in the facilities (Zimmerman et al., 2003). For this study, researchers recruited 82 participants aged between 71-100 with a mean age of 84.09 most of them were females (Park, N. S., 2009). In this study, the total number of participants was 10, with a mean age of 77.1 years. In this study the majority of the participants were female and African Americans which was consistent with the urban Saint Louis ethnic makeup (Yang & Stark, 2010). Table 3 has detailed information about the final analysis articles.

Study objectives and design

Table 3 presents the characteristics of the studies for review. Among these studies, one study done by Lisa et. al; used the convergent parallel mixed method design. This experimental design allows qualitative and quantitative methodologies, strengthening the study results (Knecht-Sabres et al., 2020). Two studies (Park, I. et al., 2020; Plys & Qualls, 2020) focused on sense of belonging as a resource in examining the relationship between social engagement and the wellbeing of the residents. This study used a cross-sectional descriptive study design to collect the data (Park, I. et al., 2020). The second study used Cahn's quantitative scoring method to collect data (Plys & Qualls, 2020). One study focused on residents' participation in available socially active activities. For this procedure, researchers used a counterbalanced within-subjects design to compare the personalized prompts alone and combined them with a brief conversation. The main objective of this study was to explore the relationship between social participation and the positive outcome of wellbeing based on the available resources (Polenick & Flora, 2013). The outcome measures we focused on/used were resources that are used for residents' social engagement and as social well-being outcome in our included articles.

Environmental factors.

Three studies used the environmental factors of location of the facilities, and size of the facilities as resources in enhancing social activities (Park, N. S., 2009; Yang & Stark, 2010; Zimmerman et al., 2003). These studies used different study methods to collect the data. One study used collaborative studies of Long-Term Care (CS-LTC) with a primary focus on service provision in assisted living facilities based on the size of the facility and the available resources to keep residents socially engaged (Zimmerman et al., 2003). Another study (Park, N. S., 2009) focused on various resources and their contribution to social engagement among residents; this study used a qualitative research design in collecting the data. One study (Yang & Stark, 2010)

316 used a qualitative approach to explaining the role of environmental features as resources for
317 social connectedness. One study (Sefcik & Abbott, 2014) explored the community-based or
318 residents' past experiences and friendships in keeping them socially engaged. For this study,
319 researchers used a focus group to collect data in qualitative research.

Table 3: Summary of the characteristics of the studies included in the final analysis of assisted living Social connectedness Resourcing of Older people in the United States of America.

Table 3.

No	Source	Publication Year	Participant Characteristics	Location	Study Aim/S	Methods	Condition under Investigation	Main Findings
1.	Knecht-Sabres et al., 2020	2020	N= 19 Mean Age= 83 years Females N= 14 Males N= 5 White= 95% Asian= 5%	Chicago, IL USA	This study explored the participants' perceptions of the supports and barriers of engagement in leisure and social activities in assisted living facilities.	A convergent parallel mixed method design (Qualitative & Quantitative)	Available social support resources	Lack of available resources (e.g., transportation). Lack of provision of activities that match the participants' individual interests and Lack of social supports play a role in decreased engagement in leisure pursuits.
2.	Park et al., 2020	2020	N= 100 Mean Age= 83.9 years Females N= 70 Males N= 30 White= 94% Black= 6%	Southeast Michigan USA	The aim of this study was to examine factors that influence sense of belonging and psychosocial outcomes in assisted living	Cross-sectional descriptive study	Examined relationships among age, social engagement, physical function, vision and hearing impairment, sense	Sense of belonging functioned as a mediator between social engagement and psychosocial outcomes. Social engagement and physical function were found to be associated

					facility residents		of belonging, and psychosocial outcomes	with a stronger sense of belonging, and sense of belonging was associated with psychosocial outcomes, including less depression and social isolation.
3.	Park, 2009	2009	N= 82 Mean Age= 84 years. Female N= 61 (74%) Male N= 21 (26%)	Southern states USA	The purpose of this study is to explore social engagement and its relationship to the psychological well-being of older adults residing in assisted living facilities	Qualitative research design	The study focuses on the salience of social relationships on residents' life satisfaction and depressive symptoms.	The most salient finding of this study was that perceived friendliness of residents and staff and enjoyment of mealtime appeared to have a greater influence on psychological well-being than did perceived social support.
4.	Plys & Qualls, 2020	2020	N= 202 Mean Age= 83.03 years Females N =144 Males N= 58 White N =182 Others N= 20	Colorado USA	The purpose of this study is to investigate resident reported Sense of community in assisted living facility.	Cahn's quantitative scoring method	Investigate associations between sense of community and variables relevant to the assisted living setting, including: built environment, individual, social, health, organizational, and relocation factors	Sense of Community and social engagement in psychological well-being.

5.	Polenik & Flora, 2013	2013	N= 8 Mean Age= 84.38 years Females N= 6 Males N= 2	Ohio USA	The purpose of the present study was to extend the current literature on the use of antecedent interventions to increase activity involvement in older adults living in residential care settings	counterbalanced within-subjects design	Positive social attention combined with similar prompts effective in increasing social activity	Social activity attendance in assisted living residents involved spending increasing time spent in the presence of others and increasing opportunities for social interaction with other residents and facility staff.
6.	Sefcik & Abbott, 2014	2014	N= 13 Mean age= 90 years Women N= 10(77%) Men N= 3 (23%) White N= 12 (99%) Black= 1 (1%)	Eastern United States USA	The purpose of this study is to describe the experience of friendship among assisted living facility residents, discussed in terms of facilitators and barriers to social interactions.	Qualitative study	Facilitators and barriers for developing social relationships in assisted living facilities include control over the move to an assisted living facility and external social support	Quality of the programs to enhance relationships rather than number of activities provided within an assisted living facility was important

7.	Yang & Stark, 2010	2010	N= 10 Mean Age= 77.1 years Females N=6 Males N=4 African American N=7 Caucasian N= 3	urban Saint Louis Missouri USA	The objective of this study was to describe how physical and social environmental features of assisted living facilities influence social engagement behaviors of older residents. A secondary objective was to identify the environmental features that were important to residents' social engagement based on their perspectives.	Qualitative approach,	How physical and social environmental features of assisted living facility's influence the social engagement behaviours of assisted living facility residents	This study identified five physical and social features that shaped the residents' experiences in social engagement. Size of apartment, and multipurpose spaces come under physical features. Homogeneity of residents, and expectations of encounter come under social features. Both physical and social features are positively influence social engagement in older adults
8.	Zimmerman et al., 2003	2003	N= 2048 Mean Age= 84 years. Female N= 1536 (75%) Male N= 512 (25%) white N= 1740 (85%)	Florida, Maryland, New Jersey, North Carolina USA	The purpose of this study was to categorize the underlying constructs of social activity participation in	Collaborative studies of Long-Term Care	Service provision related to social engagement	Facility characteristics such as size, resources, social programming, and interpersonal relationships are associated with high social engagement Community characteristics of private

			Others N= 308 (15%)		a residential care and assisted-living population, determine the extent of social engagement and how it varies by facility type, and relate social engagement to service provision			activities (talking on the phone), group activities (attending religious services), outings (going to movies, shopping, and eating) contributed to increased social interactions among residents.

Main Findings and Discussion

As expected, older adult's social connectedness with a variety of facility and community-based resources are the main findings of this paper. We present and discuss our key findings referencing the WHO-ICF for interpretability. By doing so, we seek to frame the results highlighting the key WHO-ICF variables that also would provide leads to studies of a similar nature both nationally and globally.

Facility based resources

From this scoping review, we have identified types of facility-based recreational and leisure activity resources in assisted living facilities to enhance the social connectedness among residents. Facility-based resources are available to residents within the facility. Resources for recreational and leisure activity were diverse and included participating in animal-assisted therapies, access to the community room, common area, group activities, and reminders from the administration to participate in the social activity (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). Other facility-based resources included sports, crafts, arts and culture, hobbies, and socializing. For instance, four studies reported participating in low and high-demand sports is associated with the residents' social well-being (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). The sports facilities included swimming, bowling, golfing, exercising, walking, running, etc. (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). The crafts included sewing, painting, decorating the room, playing an instrument, etc. (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). Hobbies included cooking, baking, reading books/magazines, artwork, attending musical concerts, watching television, and photography (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick &

Flora, 2013; Zimmerman et al., 2003). Socializing included playing bingo, and jigsaw puzzles, participating in bingo/card games, spending time in common sitting areas, enjoying mealtime, talking on the phone, and going shopping (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). Residents participating more of the facility activities showed evidence of social well-being (Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003). When the staff, administrators, and other caring teams reminded residents about activity participation, the results/ attendance increased (Polenick & Flora, 2013). Residents prefer their fellow residents shared interests. For example, friends and former neighbors coming/joining the facility will give them a new chance for older adults to rekindle their social network (Sefcik & Abbott, 2014).

Community-based resources

Community-based resources as environmental factors included family gatherings in a private room, shopping, dining, movies, spending time with friends and families, and keeping pets with the residents (Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003). Also, going shopping, spending time with family, making new friends, participating in volunteer programs, going to church and other religious places enhanced the older adults' social well-being (Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003). When it comes to community, social and civic life activities, and facilities that are very close to the home environment or community environment, residents are more willing to participate in socially engaged activities (Park, I. et al., 2020; Plys & Qualls, 2020). Assisted living facilities that welcome residents to keep up with their past friendships and beliefs were associated with

positive outcomes of older adults' well-being (Sefcik & Abbott, 2014). A summary of the findings of each of the themes based on ICF framework and coding system is presented in table 4

Table 4: Summary of the findings of each theme based on ICF framework and coding system A) Recreation and leisure, B) Other specified community, social, and civic life, C) Environmental factors

A) Recreation and Leisure

1. Activities and participation	References	ICF code
Arts &Culture	(Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003)	d9202
Hobbies	(Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003)	d9204
Socializing	(Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003)	d9205
Sports	(Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003)	d9201
Crafts	(Knecht-Sabres et al., 2020; Park, N. S., 2009; Polenick & Flora, 2013; Zimmerman et al., 2003)	d9203
2. Communication		

Conversation	(Zimmerman et al., 2003)	d350

B) Other specified community, social, and civic life

1. Community life	References	ICF code
Informal associations	(Sefcik & Abbott, 2014)	d9100
Formal associations	(Sefcik & Abbott, 2014)	d9101
Other specified community life	(Polenick & Flora, 2013; Zimmerman et al., 2003)	d9108
Community life unspecified	(Park, I. et al., 2020; Plys & Qualls, 2020)	d9109
2. Community, social and civic life		
Religion and Spirituality	(Park, I. et al., 2020; Plys & Qualls, 2020; Sefcik & Abbott, 2014; Zimmerman et al., 2003)	d930
3. Support and Relationships		
Immediate family	(Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003)	e310
Extended family	(Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003)	e315
Friends	(Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik &	e320

	Abbott, 2014; Zimmerman et al., 2003)	
Strangers	(Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003)	e345
Personal care providers and personal assistants	(Polenick & Flora, 2013)	e340

C) Environmental factors

1. Natural environmental and human made changes to environment	References	ICF code
Physical geography	(Park, N. S., 2009; Yang & Stark, 2010)	e210
Population	(Park, N. S., 2009; Yang & Stark, 2010)	e215
Flora and Fauna	(Zimmerman et al., 2003)	e220
2. Support and Relationships		
Friends	(Park, I. et al., 2020; Plys & Qualls, 2020; Polenick & Flora, 2013; Sefcik & Abbott, 2014; Zimmerman et al., 2003)	e320
Acquaintances, peers, colleagues, neighbors, and community members	(Sefcik & Abbott, 2014)	e325
Domesticated animals	(Park, I. et al., 2020; Plys & Qualls, 2020)	e350

3. Products and Technology		
Products and Technology for personal use in daily living	(Zimmerman et al., 2003)	e120
Products and Technology for communication	(Zimmerman et al., 2003)	e125

Note. ICF Code -D refers to activities and participation. ICF Code –E refers to environmental factors. Three numbered codes refer to sub-category under the main category and four numbered codes refer to further classification under the sub category.

Activity and participation preferences and priorities

Despite various available resources, residents have their preferences and priorities. For example, residents enjoy mealtime in the facility compared to spending time with family and friends (Yang & Stark, 2010). This may be because the availability of family and friends is far less than their mealtime frequency within the facility. Another significant barrier for the residents to participate in community events is the lack of transportation and physical limitations (Knecht-Sabres et al., 2020), so that some residents prefer to engage in less demanding within facility (Knecht-Sabres et al., 2020). Knowing that the facility may be there forever appeared to bias preferences for facility based social connectedness resources (Park, I. et al., 2020; Plys & Qualls, 2020), and residents were likely to invite friends and former neighbors coming/joining the facility to rekindle their social network (Sefcik & Abbott, 2014).

Environmental factors associated with facility resources in obliging residents' social activity demands, mainly the location (urban, rural), building architecture, and size of the facility

(small, medium, large), play a significant role in social connectedness. For instance, a facility that is very closely located to the city's business center will undoubtedly allow the residents to enjoy outdoor activities such as going to a movie, restaurants, and shopping (Park, N. S., 2009; Yang & Stark, 2010; Zimmerman et al., 2003), which will enable them to invite their families and friends to spend some quality time with them without thinking about accommodating in the resident rooms or the common facility area. Despite various available resources, residents have their preferences and priorities.

These two studies (Polenick & Flora, 2013; Zimmerman et al., 2003), did not observe any drastic change when personal prompts were combined with brief conversations about reminding them about activity participation. However, they observed resources such as going out with family and friends, attending religious activities, and participating in volunteer opportunities were associated with increased well-being among residents of the facility (Polenick & Flora, 2013; Zimmerman et al., 2003).

Policy and practice implications

Our key findings of this study are that participating in facility based recreational and leisure activities (sports, crafts, arts, culture, hobbies) was positively associated with residents' social well-being. Residents prefer their fellow residents shared interests. For example, residents enjoy mealtime in the facility compared to spending time with family and friends. Also, residents appreciate friends and former neighbors coming/joining the facility that may have given them a new chance to rekindle their social network (Park, N. S., 2009). Residents may also be more willing to participate in socially engaged activities when it comes to community, social, and civic life activities and facilities that are very close to the home or community environment (Park, I. et al., 2020; Plys & Qualls, 2020). A facility closely located in the city's business center will

undoubtedly allow the residents to enjoy outdoor activities such as going to a movie, restaurants, and shopping.

In general, assisted living facilities follow a scheduled routine for resident activities; sometimes, residents feel monotonous and bored following the routine activities (Lee et al., 2012; Park, N. S. et al., 2012). Assisted living facility management should prioritize residents' preferences and priorities for their social lives, introducing new activities based on residents' preferences and priorities. Hence, residents' involvement will open the doors for a new era in the caring model Assisted living administration, and management should involve residents in decision-making about their social engagement policy-making and programs.

Strengths, limitations and suggestions for further research

Use of the WHO ICF framework for the evidence synthesis is a strength for identifying activity and participation themes for social engagement by environment and resident personal factors (as in preferences and priorities). Moreover, use of the PCC framework allowed for a targeted search of studies on the population, concept and context axis, enhancing the yield for relevance. However, our study has some limitations. First, the study yielded only eight articles for review, suggesting a need for further study as more studies publish on assisted living social connectedness of assisted living residents. Future studies should apply a population, intervention, comparison and outcomes (PICO) framework for study selection and synthesis for more definitive findings. Future research may focus on (1). understanding the unique needs of residents and designing the resources to cater to their needs (2). finding out the community social inclusion and participation priorities of assisted living older adults for their social wellbeing, and (3) profiling older adults' assisted living facility preferences and priorities for facility-based resources for social connectedness.

Conclusion

In conclusion, this scoping review provided a platform to understand available social connectedness resources within and outside the assisted living facilities. It is evident that older adults with or aging with or into chronic health conditions preferred facility to community-based resources. For social activities older adults preferred facility-based recreation and leisure resources they engaged with fellow residents such as sports, arts and culture, crafts, hobbies, and social hours as talking to fellow residents or participating in group discussions for wellbeing. For their community-based resources for social connectedness, older adults preferred participation in civic life activities, and at amenities closer to the facility. Older age cohorts (over 75 years) preferred mealtime in the facility compared to spending time with family and friends. Those from the larger enrollment assisted living facilities preferred facility-based resources more than community resources such as going shopping or restaurants. Personal factors such as age cohort or older adults who are physically active prefer to join in high-demand physical activities such as swimming, sports, walking, exercises, etc. For moderately active and less active residents, their participation is limited to less demanding activities such as watching television, listening to music and taking small walks. However, future studies are needed to profile what residents preferred/prioritized as socially inclusive activities, either facility provided or community-based, that they prefer the most.

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