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Title: The Axiomatic Approach in Developing the Social Connectedness in Aging Theory

Authors: Deane Joy E. Agoncillo[1,2,*], Jonaid M. Sadang[2,3]

1. *College of Nursing, De La Salle Medical & Health Sciences Institute, City of Dasmariñas, Philippines*
2. *College of Nursing and Allied Health Sciences, Cebu Normal University, Cebu, Philippines*
3. *Graduate Studies Department, College of Health Sciences, Mindanao State University-Marawi (Main Campus), Philippines*

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Abstract

Background: Social connectedness is a critical determinant of health and quality of life in older adults. Despite its significance, there is limited theoretical understanding of how evolving social needs, cultural contexts, and environmental factors interact to influence well-being in later life. This study aimed to develop the Social Connectedness in Aging Theory, explaining how social interactions shape older adults' physical, mental, and emotional health.

Methods: A deductive, axiomatic approach was employed to construct the theory. A comprehensive literature review was conducted across PubMed, Scopus, Web of Science, ScienceDirect, JSTOR, ProQuest, and Google Scholar for publications from 2014 to 2024, supplemented with seminal works. Keywords included social connectedness, aging, social networks, interpersonal relationships, community engagement, psychological resilience, and health promotion. Empirical, theoretical, and conceptual studies involving adults aged 60 and above were included. Literature was synthesized into thematic clusters reflecting social networks, emotional quality of relationships, cultural influences, and health outcomes. Four core axioms and corresponding propositions were formulated to capture the multidimensional nature of social connectedness in aging.

Results: The theory demonstrates that social needs evolve with age, are shaped by environmental and cultural contexts, and directly influence the extent of social connectedness and quality of life. Strong social ties within supportive environments enhance emotional well-being, cognitive function, and physical health. The propositions illustrate how intrinsic social nature, developmental transitions, cultural norms, and environmental factors collectively determine older adults' engagement in meaningful relationships and overall well-being.

Conclusion: This theory provides a comprehensive framework for understanding the dynamic, context-dependent nature of social interactions in older adulthood, positioning social connectedness as a central determinant of healthy aging. Nurses should routinely assess social connectedness (e.g., contact frequency/quality, perceived loneliness, community engagement) and integrate findings into individualized care plans, implement culturally competent interventions such as family- and community-centered care, group activities, referrals, and technology-assisted contact, and collaborate with interdisciplinary teams to remove environmental barriers, document outcomes, and advocate for training and policies that support social connectedness.

Keywords: Aging, Social support, Social networks, Quality of life, Nursing theory development

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Highlights

- The study developed the Social Connectedness in Aging Theory, a framework explaining how social needs, cultural and environmental contexts, and health outcomes interact in older adulthood.
- Humans are inherently social beings, and social needs evolve as individuals age, shifting from broad networks to deeper, emotionally meaningful relationships.
- The extent of social connectedness in older adults is directly shaped by the degree to which their evolving social needs are recognized and fulfilled.
- Cultural and environmental contexts significantly influence social engagement, determining opportunities for inclusion or isolation.
- Strong social ties within supportive cultural and environmental systems enhance emotional well-being, cognitive function, physical health, and overall quality of life, highlighting social connectedness as a central determinant of healthy aging.

Plain Language Summary

As people age, their social needs and relationships become increasingly important for overall well-being. This study developed the Social Connectedness in Aging Theory, which explains how older adults' desire for connection, evolving social needs, and the influence of cultural and environmental factors shape their social networks and health. Findings indicate that older adults prioritize close, meaningful relationships over broad social contacts, and that supportive environments and cultural norms can either enhance or hinder social engagement. Maintaining strong social ties improves emotional health, cognitive function, physical well-being, and overall quality of life, highlighting that social connectedness is essential for healthy and fulfilling aging.

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Introduction

Population aging has become one of the most defining global demographic shifts of the twenty-first century, with the proportion of older adults rapidly increasing across both developed and developing nations. The rising longevity and declining fertility rates have resulted in the unprecedented growth of the older population, prompting governments and health systems worldwide to explore new strategies for promoting healthy aging (Louis-Charles et al., 2024; Lanou et al., 2023). This demographic transformation underscores that aging is not only a biological progression but also a social phenomenon that influences, and is influenced by, the relationships, environments, and communities in which older adults live (Sadang & Palompon, 2021).

Globally, the number of individuals aged 60 and above continues to rise, positioning older adults as one of the fastest-growing population groups (Dai et al., 2025; Sadang et al., 2021). National statistics mirror this trend, with many countries experiencing significant increases in life expectancy and a widening proportion of older persons within their populations (Dai et al., 2025; Oti-Boadi & Dei, 2022). As nations prepare for the societal implications of these demographic changes, attention has turned toward understanding the broader determinants of well-being in later life, including social participation, emotional support, and interpersonal connectedness. These factors have been increasingly recognized as essential contributors to the overall quality of life (QoL) of older adults (Wheele et al., 2023; Oti-Boadi & Dei, 2022).

In many communities, including those in culturally diverse and relationally oriented settings, the experience of aging is closely tied to the nature and quality of social bonds (Simionato et al., 2023). Older adults often rely on family networks, community relationships, and close interpersonal ties to navigate the challenges of aging (Bower et al., 2021). However, demographic

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transitions such as migration, urbanization, and changing family structures have begun to reshape traditional support systems (Keen et al., 2023). These shifts highlight the need to better understand how older adults maintain meaningful relationships, how they perceive social belonging, and how these interpersonal experiences influence their well-being as they grow older (Sadang & Palompon, 2021).

Existing research on aging has extensively examined the role of social interaction, social support, and social roles in influencing emotional, psychological, and physical health (Cornwell et al., 2008; Feliciano et al., 2022). Past studies have shown that older adults who maintain active social lives tend to demonstrate better resilience, reduced stress, and improved overall health (Cornwell et al., 2008). Scholars have also emphasized that while social networks may diminish in size as individuals age, the emotional quality of relationships often becomes more important, with older adults seeking interactions that are meaningful rather than numerous (Sadang et al., 2023; Feliciano et al., 2022; Sadang et al., 2021).

Studies exploring social engagement have typically focused on the frequency of interactions and the extent of participation in community, familial, or group activities (Keen et al., 2023). Other researchers have investigated the effects of social support, highlighting how feelings of being valued, understood, and cared for contribute to mental well-being and stability in later life (Oti-Boadi & Dei, 2022). More recent works have introduced concepts such as social intimacy, emotional closeness, subjective belongingness, and perceived support as crucial factors that shape the lived experiences of older adults. Across these studies, evidence consistently suggests that the emotional depth of relationships is a stronger predictor of well-being than the simple count of social interactions (Sadang & Palompon, 2021; Bower et al., 2021).

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Comparative and interdisciplinary research has further revealed that social connectedness, a construct emphasizing emotional resonance, mutual understanding, and perceived belonging, is more strongly associated with positive aging outcomes than social engagement alone (Dai et al., 2025). This body of scholarship has demonstrated that older adults with supportive, meaningful relationships report higher levels of resilience, better mental health, and enhanced life satisfaction (Sadang et al., 2023; Bower et al., 2021). Additionally, studies examining cross-cultural contexts show that the ways older adults form and sustain these connections are shaped by cultural values, norms, and expectations, which influence both the structure and quality of social relationships (Simionato et al., 2023).

Despite the growing recognition of social connectedness as a vital component of healthy aging, current literature remains fragmented (Sheikh et al., 2022). Many studies focus either on the structural aspects of social networks or on the subjective emotional experiences of older adults, but few attempt to integrate these perspectives into a unified conceptual model (Feliciano et al., 2022). Moreover, existing theories often overlook the fluid and culturally embedded nature of interpersonal relationships in later life (Dai et al., 2025). They tend to treat social interaction solely as a measurable activity, neglecting the qualitative aspects that determine whether such interactions truly foster belonging, identity, and well-being (Sadang & Palompon, 2021).

This lack of an integrated, culturally sensitive, and theoretically grounded framework leaves a significant gap in understanding how social connectedness develops, evolves, and influences the aging experience (Bower et al., 2021). There remains no comprehensive theory that captures the multidimensional nature of social connectedness by combining observable behaviors, subjective emotional experiences, and cultural influences. To address this gap, the present study adopts an axiomatic approach to develop the Social Connectedness in Aging Theory, a framework intended

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to clarify the core principles that govern how older adults experience meaningful relationships and how these relationships support their overall well-being (Feliciano et al., 2022). This approach establishes a foundation for future empirical research and forms the conceptual basis for designing culturally grounded interventions that promote healthy aging and social flourishing among older adults (Simionato et al., 2023). The aim of this study is to develop the Social Connectedness in Aging Theory, explaining how social interactions shape the physical, mental, and emotional health of the elderly.

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Materials and Methods

This study employed a deductive, axiomatic approach to develop the Social Connectedness in Aging Theory. The deductive method was selected because it allowed the researcher to construct the theory beginning with established principles related to human nature, aging, social interaction, interpersonal relationships, social networks, community engagement, psychological resilience, social integration, and health promotion (Feliciano et al., 2022). These foundational truths, drawn from a wide body of literature, served as the basis for formulating the axioms and deriving propositions that collectively shaped the structure of the new theory.

To gather the theoretical and empirical foundations required for the deductive process, a comprehensive literature search was conducted across several major academic databases. These included PubMed, Scopus, Web of Science, ScienceDirect, JSTOR, ProQuest, and Google Scholar search engine (Yu et al., 2015). The search covered a ten-year interval from 2014 to 2024 to ensure that the theory was grounded in the most recent and relevant scholarship on aging, social connectedness, gerontology, and related social sciences. However, seminal works foundational

to major theories were also included regardless of publication year to ensure theoretical completeness (Depp & Jeste, 2009).

A systematic search strategy was employed using a combination of keywords and Boolean operators. Keywords included: social connectedness, social engagement, aging, older adults, gerontology, interpersonal relationships, social networks, successful aging, emotional well-being, psychological resilience, social support, cultural factors, community integration, and health promotion (Krendl et al., 2024). These were combined using operators such as AND, OR, and NOT to maximize coverage while ensuring relevance as shown in Table 1. The search process was carried out by a primary researcher with periodic consultation from two additional researchers who served as external reviewers during the screening and synthesis phases (Liougas et al., 2025).

Table 1. Database-specific search strategies (2014–2024) and filters

Database	Search string	Filters/ Notes
PubMed	("social connectedness" OR "social connection" OR loneliness OR "social networks") AND (aging OR "older adults" OR elderly OR "later life") AND (health OR "well-being" OR "quality of life")	Humans; English; 2014/01/01–2024/12/31
Scopus	TITLE-ABS-KEY("social connectedness" OR "social connection" OR loneliness OR "social networks") AND TITLE-ABS-KEY(aging OR "older adults" OR elderly OR "later life") AND TITLE-ABS-KEY(health OR "well-being" OR "quality of life")	2014–2024; English
Web of Science	TS=("social connectedness" OR "social connection" OR loneliness OR "social networks") AND TS=(aging OR "older adults" OR elderly OR "later life") AND TS=(health OR "well-being" OR "quality of life")	2014–2024; English; Document types: Article, Review
ScienceDirect	("social connectedness" OR "social connection" OR loneliness OR "social networks") AND (aging OR "older adults" OR elderly OR "later life") AND (health OR "well-being" OR "quality of life")	2014–2024; Research articles; English
JSTOR	("social connectedness" OR "social connection" OR loneliness) AND (aging OR "older adults" OR elderly	2014–2024; English; Content areas:

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	OR "later life") AND (health OR well-being OR "quality of life")	Social sciences, Health
ProQuest	(TI("social connectedness" OR "social connection" OR loneliness) OR AB("social connectedness" OR "social connection" OR loneliness)) AND (TI(aging OR "older adults" OR elderly) OR AB(aging OR "older adults" OR elderly)) AND (TI(health OR "quality of life" OR "well-being") OR AB(health OR "quality of life" OR "well-being"))	2014–2024; Peer-reviewed; English
Google Scholar	"social connectedness" OR "social connection" OR loneliness AND ("older adults" OR aging OR elderly OR "later life") AND (health OR "quality of life" OR well-being)	2014–2024; screen first 200 results by relevance; apply inclusion criteria

Eligibility criteria were established to ensure that only relevant and high-quality studies were included. Studies were selected if they met the following requirements: participants were aged 60 years and above; the study addressed topics related to social connectedness, social networks, emotional or relational well-being, aging experiences, or determinants of successful aging; the research involved community-dwelling or institutionalized older adults; and the article presented empirical findings, theoretical contributions, or conceptual frameworks (Wang et al., 2024). Studies conducted during or referring to health emergencies or social threats were included only if they directly addressed changes in social connectedness or relational patterns. Articles not written in English, studies involving participants below the age threshold, and papers lacking conceptual relevance were excluded.

The literature synthesis process followed an integrative method that allowed the combination of empirical findings, theoretical perspectives, and conceptual insights (Au et al., 2024). After removing 43 duplicates from the 133 records retrieved, 90 unique records were screened by title and abstract by two investigators (disagreements resolved by consensus), after which full-text evaluation was conducted using the eligibility criteria and 21 studies were retained for synthesis;

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references were managed using EndNote software. Included studies as shown in Figure 1 were then organized into thematic clusters based on recurring patterns such as structural social networks, emotional quality of relationships, cultural influences, digital connectedness, and health outcomes (Simionato et al., 2023). These clusters enabled the identification of universal principles that consistently appeared across bodies of literature, which were then extracted and reformulated as axioms.

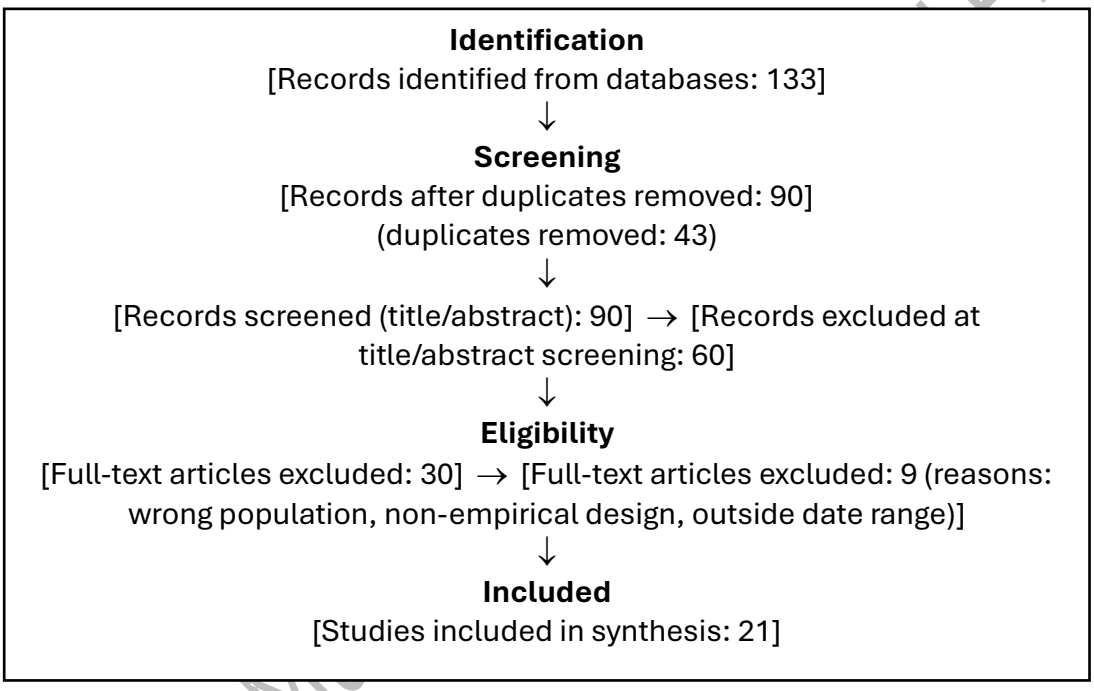


Figure 1. PRISMA 2020 flowchart of study selection

Through this systematic and structured process, the researcher synthesized existing knowledge into four core axioms that collectively captured the multidimensional nature of social connectedness in aging populations. Each axiom was derived from overlapping evidence across multiple thematic clusters, ensuring that the theory rested on strong empirical grounding and robust theoretical logic (Chard et al., 2016). From these axioms, propositions were developed to articulate how structural, emotional, cultural, and supportive dimensions of social connectedness

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interact to influence the well-being of older adults. The axiomatic deductive approach therefore ensured that the resulting Social Connectedness in Aging Theory was coherent, comprehensive, and anchored in high-quality interdisciplinary scholarship.

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Results

The results of the study, synthesized from the included studies summarized in Table 2 and presented in Table 3, reveal a coherent theoretical structure built upon four central axioms and their corresponding propositions that collectively explain the nature of social connectedness in later life. At the foundation of the theory is Axiom 1: Humans are inherently social beings who seek interaction. This axiom reflects a universal principle demonstrated across behavioral, developmental, and sociological perspectives, all of which support the idea that sociability is an intrinsic component of human existence (Umberson & Montez, 2010). The study's synthesis of literature clearly showed that the need to relate to others persists throughout life, underscoring that older adults remain naturally inclined toward meaningful social interactions despite changes in age, health, or environment (Ge et al., 2017).

Table 2. Characteristics of included studies

No.	Reference (author, year)	Aim of study	Population (age/location/sample size)	Design / Methods	Prominent findings (relevant to social connectedness)
1	Kahlon MK et al., 2021	Test whether a layperson-delivered empathy telephone program reduces	Adults (homebound clients, mean age ~69), Texas, N=240	RCT; 4-week telephone calls vs. control	Empathy-focused lay calls reduced loneliness, depression and anxiety at 4 weeks vs. control.

		loneliness, depression, anxiety			
2	Ng, K. S. T et al., 2018	Evaluate horticultural therapy effects on biomarkers and psychosocial outcomes	Older Asian adults (≥60), Singapore, N=59	RCT (waitlist control); 6-month intervention	Horticultural therapy improved social connectedness and reduced IL-6; psychosocial benefits observed.
3	Kim YK & Fingerman K, 2022	Examine daily social media use, social ties, and daily emotional well-being	Community-dwelling older adults (mean age ~74), USA, N=310	Daily-diary study; multilevel models	Social media use associated with better daily mood for those with smaller networks; may compensate for reduced in-person ties.
4	Lei X et al., 2024	Systematic review of social media use and psychosocial outcomes in older adults	Studies of adults ≥65 across multiple countries (64 papers reviewed)	Systematic review (searches up to Oct 2023)	Cross-sectional evidence links social media to better psychosocial outcomes; longitudinal/experimental evidence mixed and heterogeneous.
5	Su Y et al., 2023	Estimate prevalence of loneliness and social isolation among older adults during COVID-19	Older adults in COVID-era studies (30 studies; N≈28,050)	Systematic review and meta-analysis	Pooled loneliness ~28.6% and social isolation ~31.2% during pandemic; prevalence rose after first 3 months.
6	Hussain B et al., 2023	Synthesize literature on loneliness and social networks in rural older adults	Older adults in rural settings across 17 countries (50 studies)	Mixed-methods systematic review / narrative synthesis	Rural older adults' networks (family, friends, neighbours) support well-being; interventions work when they create regular social engagement.
7	Foong HF et al., 2021	Test whether social networks	Community-dwelling older adults,	Cross-sectional /	Stronger social networks buffer cognitive decline

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		moderate fitness–cognition links	population-based sample, (N large; country: noted in paper)	population-based study	and moderate association between physical fitness and cognition.
8	Ermer AE & Proulx CM, 2019	Examine social connectedness, emotional well-being and self-rated health differences by relationship status	Adults 62+, USA (data from national survey)	Secondary data analysis; structural equation models	Social connectedness (network characteristics, support) linked to emotional well-being and self-rated health; associations vary by relationship status.
9	LaRocca MA & Scogin FR, 2015	Explore role of social support in QoL changes from home-delivered Cognitive Behavioral Therapy (CBT)	Older adults (rural, frail), USA, N=137	RCT secondary analysis	Improvements in perceived social support were associated with QoL gains beyond CBT effects; social support matters for treatment outcomes.
10	Ye L & Zhang X, 2019	Identify social network types and test mediation by social support on health	Older adults ≥60, rural China, N=405	Cross-sectional survey; k-means clustering	Five network types identified; social support mediates network type–health relationships.
11	Latikka R et al., 2021	Review information and communication technology (ICTs) (robots, wearables, smart homes) and loneliness in	Empirical studies on older adults using physical ICTs	Systematic literature review	Some physical ICTs (robotic pets, smart homes) can detect/mitigate loneliness; evidence limited and heterogeneous.

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		older adults in the era of ambient assisted living (AAL era)			
12	Balki E et al., 2022	Umbrella review of technology interventions for social isolation/connectedness	Older adults across technology studies	Systematic umbrella review	Videoconferencing and ICT show most consistent benefits; overall evidence quality low–moderate; need higher-quality RCTs.
13	Valtorta NK et al., 2018	Systematically review social relationships and health care utilization in older adults	Studies of older adults (multiple countries)	Systematic review	Social relationship deficits linked to higher healthcare use in some studies, but results vary by study design and outcome.
14	Nie Y et al., 2021	Test social networks' prospective association with cognitive function	Older adults from the Health, Alcohol and Psychosocial factors In Eastern Europe (HAPIEE) cohort (Europe/Eastern Europe)	Longitudinal cohort analysis	Stronger and more active social networks predict better cognitive trajectories over time.
15	Hong M et al., 2019	Compare social networks, health behaviors, QoL in older adults with/without arthritis	Korean community-dwelling older adults, N~226	Secondary analysis of survey data	Larger/diverse social networks associated with more health-promoting behaviors and better QoL.
16	Siette J et al., 2020	Characterize network quality/quantity and cognition in	Older adults receiving home/community aged care, N=175	Cross-sectional interviews; Lubben Social	Higher family/friend network scores associated with better cognitive function and QoL.

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		aged-care clients		Network Scale	
17	Vilar-Compte M et al., 2018	Validate Spanish Lubben Social Network Scale (LSNS-6) among Mexican/Mexican-American older adults	Older adults ≥60, Mexico & LA, N=56 focus groups and validation sample	Validation / cognitive testing; qualitative & quantitative	Spanish LSNS-6 adapted and validated; highlights cultural considerations in measuring networks.
18	Pereira H et al., 2024	Explore experiences of social connectedness among older men	Older men (qualitative sample; country detailed in paper), N=104 small (qualitative)	Qualitative interviews	Gendered patterns: older men more socially vulnerable, smaller networks; interventions should consider gendered roles/norms.
19	Wang Y et al., 2024	Examine social participation's effect on frailty; mediation by loneliness & sleep	Chinese older adults (CLHLS 2018), N=7,779	Cross-sectional/secondary data analysis; mediation models	Social participation associated with lower frailty; loneliness and sleep quality partially mediate this relationship.
20	Bakhshandeh-Bavarsad & Stephens C, 2024	Test how social network types relate to purpose in life, mediated by support	Older adults (longitudinal sample; country in paper)	Longitudinal analysis; structural equation modeling	Network types affect purpose in life indirectly via social support types (attachment, reassurance of worth, integration).
21	Reiner A & Steinhoff P, 2024	Synthesize evidence linking social network aspects and depression in community-dwelling older adults	Older adults across multiple countries (review)	Systematic review	Larger/diverse networks and closer ties buffer depression; evidence about density/homogeneity mixed and limited.

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From this foundation emerges Proposition 1: Social needs vary as older persons age. This proposition logically follows from the recognition that while humans consistently seek social interaction, the nature of these interactions shifts over time. The reviewed literature indicated that older adults tend to prioritize emotionally rich, selective, and meaningful relationships rather than broad networks (Monk et al., 2020). This change in preference demonstrates that the core need for interaction remains, but its expression evolves based on developmental transitions, life experiences, and shifting emotional priorities (Eggebø et al., 2019). Thus, Proposition 1 reflects the dynamic interplay between intrinsic sociability and age-related transformations.

The theory then advances to Axiom 2: Humans have evolving needs throughout life, which further emphasizes that social, emotional, and relational requirements are not static but adapt to the individual's stage of life (Drageset, 2004). The study's findings confirmed that aging brings significant changes in priorities, motivations, and capacities, all of which shape how older adults engage socially. This axiom highlights that evolving needs are not deficits but natural developmental shifts that influence patterns of connectedness (Kahhalé et al., 2025).

Derived from this axiom is Proposition 2: The extent of social needs directs the extent of social connectedness by older persons. This proposition explains that the level and nature of an older person's connectedness are shaped by the degree to which their evolving social needs are recognized, expressed, and fulfilled (Bincy et al., 2022). The literature consistently showed that older adults who have their social needs met, whether through family, community, or peer networks, demonstrate stronger social ties and greater engagement (Monk et al., 2020). Conversely, unmet needs often result in weakened connections or social withdrawal (Kahhalé et al., 2025). Thus, the extent of an older adult's connectedness is not arbitrary but is directly determined by the breadth and depth of their evolving social needs.

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The contextual dimension of the theory is articulated in Axiom 3: Social beings are shaped by and connected to their cultural and community contexts. This axiom underscores that social behavior cannot be detached from the cultural and environmental structures within which individuals live (Xu et al., 2021). The findings confirmed that older adults interpret, practice, and sustain social connectedness based on cultural norms, family expectations, community relationships, and available social opportunities (Rashid & Tahir, 2014). These contextual influences provide the framework within which social interaction occurs and is sustained.

Correspondingly, Proposition 3: Social connectedness among older persons is influenced by environmental and cultural factors further clarifies that older adults' engagement is deeply shaped by their surrounding context (Ying et al., 2021). Across the literature, variations in connectedness were consistently linked to differences in cultural values, community cohesiveness, geographic accessibility, and the availability of social resources (Rashid & Tahir, 2014). This proposition affirms that social connectedness cannot be fully understood without examining the cultural and environmental conditions that either support or limit opportunities for interaction.

The health dimension of the theory is encapsulated in Axiom 4: Health in old age is influenced by social factors. This axiom reflects broad evidence indicating that social relationships play an essential role in shaping physical, emotional, and psychological well-being in later life (Krause, 1987). The literature consistently demonstrated that supportive relationships reduce stress, enhance cognitive resilience, stabilize emotions, and contribute to healthier aging trajectories (Cui et al., 2021). Social interaction thus emerges as a protective factor that helps sustain health in older adulthood.

From this final axiom emerges Proposition 4: Social connectedness in older persons promotes QoL. This proposition illustrates how meaningful relationships and supportive networks enhance

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overall well-being, life satisfaction, emotional stability, and sense of purpose among older adults (Liang et al., 2017). Studies consistently showed that older individuals with strong social connectedness reported better mental health, greater life fulfillment, and improved physical functioning (Pereira et al., 2024). As such, social connectedness serves as both a relational and a health-promoting mechanism.

Taken together, these axioms and propositions form a unified theoretical system that explains the complex, evolving, and context-dependent nature of social connectedness in aging populations. The axioms establish universal truths about human sociality, developmental change, cultural embeddedness, and the health implications of relationships. The propositions then articulate how these truths specifically manifest in the lives of older adults, offering an integrated explanation of how needs evolve, how environments shape behavior, and how connectedness influences QoL. Overall, the developed theory highlights that social connectedness among older adults is not static but dynamic, shaped by intrinsic human nature, influenced by developmental changes, conditioned by cultural and environmental contexts, and essential for health and QoL (Emlet & Moceri, 2012). This theoretical framework contributes to gerontology by providing a structured, logical, and comprehensive understanding of how older adults engage socially and how such engagement influences their overall well-being.

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Table 3. Propositional structures from axiomatic extractions

Axiom 1: Humans are inherently social beings who seek interaction	**Proposition 1**: Social needs vary as older persons aged	***"Social Connectedness in Aging Theory"*** The Social Connectedness in Aging Theory underscores how the shifting social necessities of an aging individual, moderated by the cultural and environmental contexts of their lives, play a critical role in shaping not only their social networks but also their overall physical and mental health and evolving social needs, cultural influences, and health outcomes, and enhancing social connectedness may serve as a key lever in promoting healthier, more fulfilling lives for older adults.
Axiom 2: Humans have evolving needs throughout life.	**Proposition 2:** Extent of social needs direct the extent of social connectedness by older persons	
Axiom 3. Social beings are shaped by and connected to their cultural and community contexts	**Proposition 3:** Social connectedness among older persons is influenced by environmental and cultural factors	
Axiom 4. Health in old age is influenced by social factors.	**Proposition 4**. Social connectedness in older persons promotes quality of life	

The Social Connectedness in Aging Theory as reflected on Figure 2 emphasizes that social needs continuously evolve as individuals grow older, shaping the way they form, value, and maintain relationships (Plužarić et al., 2023). As people transition into later life, their priorities shift toward deeper, more meaningful interactions rather than broad social networks (Gawrych, 2024). This evolution in social needs becomes central to understanding the aging experience, as it influences emotional well-being, sense of identity, and the desire for belonging. The theory posits that meeting these changing needs is essential to sustaining mental health and overall life satisfaction, highlighting that social connectedness is not merely a preference but a fundamental requirement for well-being in older adulthood (Davis et al., 2016).

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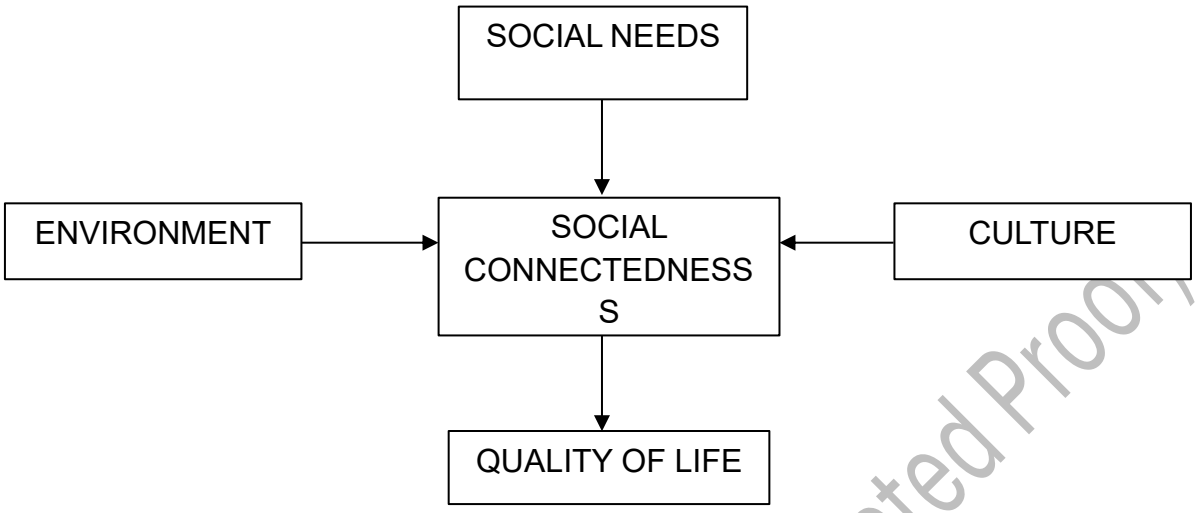


Figure 2. The Social Connectedness in Aging Theory

The theory also underscores the significant role of environmental and cultural contexts in shaping social connectedness. Supportive environments, such as accessible communities, safe neighborhoods, and age-friendly spaces, can either encourage or hinder opportunities for engagement (Davis et al., 2015). Likewise, cultural expectations guide how older adults interact with others, participate in community life, and perceive their own aging (Jacobs & Ellis, 2021). Culture informs norms surrounding intergenerational relationships, caregiving roles, and social involvement, shaping whether older adults experience inclusion or isolation. By integrating these factors, the theory highlights that social connectedness is not solely determined by individual behavior but is deeply influenced by the broader environmental and cultural structures that either facilitate or restrict social engagement.

Ultimately, the Social Connectedness in Aging Theory affirms that strong and meaningful social ties play a pivotal role in promoting QoL in older adulthood (Tüzün et al., 2022). When social needs are met within supportive cultural and environmental systems, older adults experience enhanced emotional stability, reduced loneliness, better cognitive functioning, and improved physical health (Saha et al., 2025). Social connectedness thus emerges as a central determinant of

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overall well-being, reinforcing the idea that healthy aging extends beyond medical care to include a rich network of relationships and meaningful interactions. By highlighting the interconnected roles of evolving social needs, cultural influences, environmental supports, and QoL, this theory offers a comprehensive framework for understanding and enhancing the aging experience.

Discussion

This study explored social connectedness in older adults, highlighting how social needs, cultural contexts, and environmental factors influence overall QoL. The findings demonstrate that older adults prioritize meaningful social interactions and relationships, with family, community, and peer networks serving as primary sources of emotional support and practical assistance (McLoughlin et al., 2019). Social engagement was found to be dynamic, shifting from broader networks in early aging toward deeper, more significant relationships in later life, which is consistent with socioemotional selectivity theory (Umagami et al., 2022). Cultural norms and environmental accessibility were identified as critical factors shaping the ability of older adults to maintain these connections, which in turn affects their holistic well-being (Paiva et al., 2021).

A key finding of this study is the clear link between social connectedness and QoL. Participants with strong and frequent social interactions reported higher levels of life satisfaction and emotional well-being, indicating the importance of social engagement in health-promoting behaviors (Chung & Park, 2023). This emphasizes that social connectedness is not merely a social preference but a determinant of both mental and physical health. These results underscore the protective role of meaningful social bonds against isolation, loneliness, and associated mental health challenges in older adulthood (Ge et al., 2017).

The study also showed that social needs evolve over time. Early older adulthood is often characterized by maintaining broader social networks, whereas later stages prioritize emotionally

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meaningful relationships. This reflects socioemotional selectivity theory, which posits that older adults focus on relationships that provide emotional fulfillment (Umagami et al., 2022). The findings provide empirical support for this perspective, indicating that older adults consciously invest in relationships that meet evolving emotional and social needs (Stewart et al., 2024).

Environmental factors were found to play a crucial role in shaping social connectedness. Access to safe public spaces, transportation, and community facilities significantly affected participants' opportunities for social interaction (Kahhalé et al., 2025). Supportive environments enabled greater engagement in social and cultural activities, while environmental barriers limited participation. This highlights how physical and infrastructural contexts influence both the quality and extent of social connections in later life (Stewart et al., 2019).

Cultural norms and values were equally influential. Family obligations, community-centered practices, and cultural expectations around respect and reciprocity guided interactions among older adults (Liu et al., 2025). Social engagement was reinforced by shared cultural values, promoting a sense of belonging and identity. These findings align with research indicating that cultural embeddedness strengthens social networks and enhances QoL in aging populations (Palmer et al., 2021).

When compared with international literature, these findings corroborate studies emphasizing the protective role of social connectedness in reducing loneliness, depression, and cognitive decline, while promoting overall health (Paiva et al., 2021). However, this study adds nuance by highlighting how cultural and environmental contexts interact with evolving social needs, shaping the nature and depth of social relationships in older adulthood. This offers new insight into the contextualized mechanisms of social engagement (Monk et al., 2020).

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The relationship between social connectedness and health outcomes emerged as another significant finding. Older adults with stronger social networks reported better adherence to routines, more frequent physical activity, and greater engagement in health-related behaviors (Chae et al., 2023). This supports the view that psychosocial factors, particularly social bonds, are closely intertwined with physical and mental well-being in later life (McLoughlin et al., 2019). The findings also illuminate the reciprocal nature of social engagement. Supportive environments and cultural expectations facilitate interaction, while active participation by older adults reinforces community cohesion and mutual support. This dynamic suggests that social connectedness is both shaped by and contributes to broader social structures, emphasizing its centrality in healthy aging.

These results provide empirical support for the Social Connectedness in Aging Theory, which posits that evolving social needs, moderated by cultural and environmental contexts, are central to QoL in later life (Lee et al., 2001). The study demonstrates that social engagement, cultural norms, and environmental factors interact to influence the extent and quality of social connections, which in turn affect emotional, psychological, and physical well-being (Harrison et al., 2024).

Overall, the study advances understanding of social connectedness in aging by illustrating how interrelated factors, social needs, culture, environment, and QoL, shape the aging experience. It highlights the importance of considering the dynamic nature of social relationships, the influence of contextual factors, and the central role of meaningful interpersonal connections in promoting holistic well-being in older adulthood (Harrison et al., 2024).

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Implication and Limitations

The findings of this study highlight the central role of social connectedness in promoting holistic well-being among older adults. Recognizing the evolving nature of social needs and the influence of cultural and environmental contexts provides a framework for designing programs, interventions, and policies that foster meaningful social engagement. Enhancing opportunities for social interaction, supporting culturally sensitive practices, and creating age-friendly environments can contribute to improved mental, emotional, and physical health outcomes. These insights are particularly valuable for health professionals, caregivers, and community planners aiming to support older adults in achieving a higher QoL through sustained social bonds.

Despite its contributions, the study has several limitations. First, the findings are primarily derived from reviewed literature and studies, rather than original qualitative data, which may limit direct applicability to all older adult populations. Second, the deductive axiomatic approach relies on existing knowledge and reported findings, which may carry inherent biases from the original sources, including variations in study design, sample characteristics, and contextual factors. Third, while cultural and environmental factors were considered conceptually, the relative influence of each factor was not quantified, leaving an opportunity for future research to examine these relationships empirically. These limitations suggest that, although the study offers valuable theoretical and conceptual insights, further research is needed to validate and refine the theory across diverse contexts and populations.

Conclusion

This study contributes new knowledge by advancing the Social Connectedness in Aging Theory, which emphasizes that social engagement is a core determinant of well-being in older adults. The findings highlight that as individuals age, their social needs evolve, and these needs are intricately

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influenced by cultural norms and environmental conditions. By examining the dynamic interplay of social connectedness, cultural expectations, and environmental supports, the study provides a comprehensive understanding of how meaningful interactions shape not only emotional and mental health but also physical health outcomes. This theoretical contribution adds depth to the existing body of gerontological knowledge by framing social connectedness as a critical factor for promoting resilience, life satisfaction, and overall QoL in aging populations.

In terms of nursing metaparadigms, the study situates person as an inherently social being whose needs and priorities change across the lifespan, emphasizing individuality while recognizing the universality of social engagement. Environment encompasses both the physical and socio-cultural contexts that facilitate or hinder opportunities for meaningful interactions, highlighting the importance of supportive spaces and community resources. Health is conceptualized holistically, not only as the absence of illness but as a state significantly shaped by social relationships and connectedness. Finally, nursing is defined as the deliberate practice of fostering and sustaining social bonds, promoting engagement, and facilitating environments that enhance connectedness, thereby supporting overall well-being in older adults.

Overall, the study advances our understanding of aging by demonstrating that social connectedness is not merely an ancillary component of healthy aging but a central pillar. By integrating the evolving social needs of older adults with environmental and cultural influences, this research provides a framework for both theoretical exploration and practical application in gerontology and nursing practice. The Social Connectedness in Aging Theory therefore enriches the current literature by explicitly linking social engagement to QoL, offering a structured lens through which nurses, caregivers, and researchers can approach aging, health promotion, and supportive interventions in later life.

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Ethical Considerations

Compliance with ethical guidelines

This study did not involve human participants or animals. As it is based solely on the review and synthesis of existing literature for theory development, it is exempt from formal ethics review.

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Authors' Contributions

Assoc. Prof. Agoncillo served as the primary author and corresponding author, responsible for the initial conceptualization of the study, conducting the literature analysis, and drafting the first version of the manuscript. Prof. Dr. Sadang contributed to the refinement, critical review, and preparation of the final version of the manuscript for publication. Both authors have read and approved the final manuscript. For inquiries or further information regarding this study, interested parties should first contact Assoc. Prof. Agoncillo, as she is the main proponent and primary author of the theory.

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Conflict of interest statement

The authors declare no conflicts of interest related to this study. No financial, personal, or professional relationships influenced the design, conduct, or reporting of the research. The study was conducted independently, and the findings reflect an objective analysis and synthesis of the literature for the development of the theory, free from external influence or bias.

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