



Effects of Social Isolation on the Elderly Living at Home

Literature Review

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Abstract

Aging of the population has led to a significant increase in the number of elderly people living alone, thereby increasing their exposure to social isolation. Social isolation is increasingly recognized as a significant public health issue in later life given its established association with poor cognitive, psychological and physical health and higher healthcare use. The purpose of the study was to compare social isolation's effects on older adults living at home in order to evaluate its impact on cognitive, health care utilization and health outcomes while building awareness amongst families and the general public. The research was conducted in literature review. Eligible studies were identified from CINAHL, Medline and PubMed databases according to pre-specified inclusion and exclusion criteria. Full text, peer-reviewed, English studies published between 2015 and 2025 were included. The data was analyzed by both authors with inductive content analysis, meaning that findings were coded, categorized and synthesized into themes and sub-themes. The social isolation had largely detrimental consequences on home-dwelling elderly persons. Cognitive dysfunction, higher chances of cognitive decline and dementia mediated by depressive symptoms. Social isolation was also correlated with greater healthcare use, particularly more general practitioner and emergency visits. In addition, worse general health, increased mental health conditions and physical frailty as well as a lower quality of life and higher risk of death were found. Finally, social isolation emerged as a significant factor in independent living older adult's health. Results underscore the importance of early detection, community-based interventions and inclusion of social support as a part of health care services to prevent negative consequences like loneliness due to social isolation and ensure healthy ageing in place.

Keywords/tags (subjects)

Social isolation, elderly people, ageing at home, cognitive functioning, healthcare utilization, health outcomes

Miscellaneous (Confidential information)

N/A

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1 Introduction

Ageing at home fosters autonomy, it also enhances the likelihood of social isolation. Social isolation is defined as limited or no social contacts and has been related to loneliness, depression, cognitive decline, and even death (Thompson et al., 2023). Older adults are most vulnerable due to retirement, bereavement, declining mobility, or unavailability to means of transport and ICT facilities. The COVID-19 pandemic further accelerated these dangers by weakening already fragile social bonds.

Social connection is not luxury; it is an important health determinant. Evidence shows that intentional activities and social interaction repel isolation, improve quality of life, and even reduces mortality risk (Leone & Hessle, 2016). Neighborhoods and community spaces, sometimes called "therapeutic landscapes," can foster a sense of belonging and meaning when they foster interaction (Bell et al., 2018; Cowen et al., 2024). Yet, there are challenges that exist, such as the shutdown of local facilities and the fact that a majority of social programs engage more women than men, hence excluding older men (Milligan et al., 2015; Cowen et al., 2024).

Interventions to address loneliness in older people who remain at home range from befriending projects to group-based lifestyle interventions. Ongoing contact opportunities established through group activities are often most effective, though the result is context, culture, and resource-dependent (Thompson et al., 2023). General practitioners play a crucial role in identifying vulnerable individuals and supporting them, while also bridging healthcare services with community participation.

Thus, this thesis aims to examine the impact of social isolation on older adults living independently in their own homes. This research seeks to enlighten family members, and the public to the isolating impacts that the assisted living or independent living process can have on elders. This gap suggests there is a demand for exploration into models that address social isolation factors that do shorten immediate outcomes but also promote ongoing state social connectedness across diverse groups of elders.

2 Background

2.1 Social isolation

Social isolation does provide empirical evidence that an objectively observed state may include diminished social interaction, separation from others with few supportive contacts (Merchant et al., 2020; Koszalinski and Olmos, 2022). Contrary to loneliness (Zaharia et al., 2024; Merchant et al., 2020), social isolation is not a subjective state identified as perceived social isolation but an objective state. Social isolation — absence of social connections to which one can measure; few friends, low social participation, little use of community; national institutions (National Academies of Sciences, Engineering, and Medicine, 2020; Fang et al., 2024; Koszalinski and Olmos, 2022). Living alone, the death of peers, spouse, mobility impairment, chronic health problems, retirement, and gradual decline of senses can be the cause of this for older adults at home (National Academies of Sciences, Engineering, and Medicine, 2020; Fang et al., 2024; Merchant et al., 2020). Social isolation and a weak social network among older persons is especially at risk due to retirement, mobility difficulties and other age-related changes such as vision and hearing issues as well as worsening health (Merchant et al., 2020).

The impact of social isolation on seniors who live at home has serious, well-established effects. In addition to having less social support, isolated older adults have a far greater risk of heart disease, stroke, reduced immune response, and diminished overall physical function (Seabury Life, 2023; National Council on Aging, 2024; Zaharia et al., 2024). The National Academies report that socially isolated older adults have an estimated 29 percent increase in risk for incident coronary heart disease, a 32 percent increase in risk of stroke, and nearly a 50 percent increase in risk of dementia (National Academies of Sciences, Engineering, and Medicine, 2020). Isolation also relates to earlier death, and those rates are equal to, as high as, or higher than conventional risk factors including obesity or inactivity (Holt-Lunstad, 2024; National Academies of Sciences, Engineering, and Medicine, 2020; Merchant et al., 2020). The impact of social isolation on mortality has been suggested to be comparable to quitting smoking and to surpass many well-established risk factors such as obesity and physical inactivity (Merchant et al., 2020).

Mental and cognitive health, too, have been severely compromised. More social isolation is highly associated with heightened levels of depression, anxiety, and mental illness, such as major depressive disorder (Lal, 2025; Luo & Choi, 2024; Li et al., 2025). When older adults do not have regular social contact, they have significantly greater chances of suffering cognitive decline, greater susceptibility to dementia and Alzheimer's disease (Lal, 2025; National Academies of Sciences, Engineering, and Medicine, 2020; Zaharia et al., 2024). Social isolation among older adults has been shown to increase hospital readmission, disease morbidity and mortality rates (Merchant et al., 2020). A poor social network showed its own negative association with slower gait speed, lower perceived health-related quality of life and poorer cognitive performance (Merchant et al., 2020). There is a negative correlation between being socially isolated and the psychological well-being of older persons. Studies have suggested that more social isolation is associated with lower psychological well-being (Li et al., 2025).

Isolation and cognitive decline applies to community-dwelling older adults (older adults living independently in their homes). This population is specifically vulnerable to social isolation (Merchant et al., 2020; Li et al., 2025). Recent research has revealed that a significant portion of homebound seniors, or those provided with home health services, can become socially isolated with declines in cognition, functional ability and increased risk of mortality (Fang et al., 2024). The absence of social connectedness impacts the motivation to exercise, medical treatment compliance, compromised nutrition intake and increased frailty and fall risk (Lal, 2025; Merchant et al., 2020). Isolation has been found to negatively impact self-care behaviours and worsen chronic conditions, over time, too (Lal, 2025). Almost half of older adults in the community are at risk of social isolation, with a very significant association with gait speed, cognitive scores, and perceived health scores (Merchant et al., 2020).

Considering these dangers, major public health organizations such as the World Health Organization (WHO) have increasingly regarded social isolation and loneliness in older people as important public health priorities globally (World Health Organization, 2023; Fang et al., 2024; Merchant et al., 2020; Zaharia et al., 2024). The recognition has only emerged recently, most recently through the UN Decade of Healthy Ageing and the WHO Commission on Social Connection, which is a promising step toward a policy response (World Health Organization, 2023). International institu-

tions such as WHO have flagged social isolation as a key social and policy issue for ageing, with numerous initiatives and age-friendly cities and communities movements promoted to address it (Merchant et al., 2020).

2.2 Elder people

A common definition of seniors, or elderly, is by chronology, although what constitutes an elderly can depend on specific dimensions and countries, and organizations, such as culture, economy, and health. According to the World Health Organization (WHO) definition of older adults, 60 or above stands as defined the age that is referred to in aging and vulnerability in discussing aging, and in the discussion especially in low and middle income countries (WHO, 2022). This is where some of wealthy countries rely heavily, however the high income countries have higher thresholds: the United States and the European Union have a standard of 65+ years of age that aligns with availability of social services and pension plans (European Commission, 2023; U.S. Census Bureau, 2023). Japan, one of the elderly-iest societies worldwide, with a 65 plus threshold under its Long-Term Care Insurance Act, has a 60 plus threshold for the elderly in China, reflecting historical life expectancies and population structure (Japanese Ministry of Health, Labour and Welfare, 2023; National Bureau of Statistics of China, 2021).

It was mentioned that the definitions and associated thresholds become less constant as longevity increases; however, the elderly population also produces more social risk, which includes social isolation (Merchant et al., 2020; Zaharia et al., 2024; Li et al., 2025; Koszalinski & Olmos, 2022). The global explosion of the old world is unprecedented. In 2023, 10% of the world's population was aged 65+ and the United Nations (2022) estimates that this figure will be over 16% by 2050. Japan leads, at 29% in the 65+ age group, and Italy finishes at 24%. Approximately 19%, according to the statistics, the EU (Statistics Bureau of Japan, 2023; ISTAT, 2023; Eurostat, 2023). In the US, we estimate 17% (56 million) elderly citizens, whereas in China, rapid aging crisis is wreaking havoc with about 190 million or 14% currently. The elderly population is more living together with family in private homes than in care homes (Merchant et al., 2020; Zaharia et al., 2024; Li et al., 2025).

In the US, 93% of elderly persons live in community settings while only 3–4% of them are living in nursing homes (Administration for Community Living, 2022). Likewise, China reported that 90% of

elderly community resided in their home (Yang et al., 2020), and 25–35% lived in “empty nest” state in their home. 80–90% of elderly persons in Europe and the EU region live independently in their homes and are institutionalized at rates less than 5% (Grillich et al., 2023). The incidence of home-based living is associated with social isolation as it relates to people with significantly few social contacts as well as subjective loneliness (Merchant et al., 2020; Zaharia et al., 2024; Li et al., 2025; Koszalinski & Olmos, 2022). For older adults loneliness is often explained by retirement, bereavement or loss of mobility leading to increased health risky situations (Zaharia et al., 2024; Li et al., 2025; Koszalinski & Olmos, 2022).

The sociodemographic effects of social isolation in China were indirectly mediated by loneliness, including substantial mediation effects in both the observed outcomes and in wide-ranging general studies (Yang et al., 2020). In Ireland, elderly loneliness is linked to 1.08 – 1.33 times the number of visits to a general practitioner regardless of health status (Burns et al., 2020). In a research of loneliness in the elderly in regional Europe, its prevalence ranges between greater than 5% in Northern Europe to over 21% in Eastern Europe while community programmes aimed at addressing loneliness resulted in a moderate effect with ambiguity (Grillich et al., 2023). In the U.S.A, social disconnection was significant for elders emergency patient >50% and social disconnection was highly associated with functional decline and hospital related complications (Kandasamy et al., 2018). It is estimated at around 5.6% of population are aged 60 years or above (about 74.4 million of elderly people) for example in Africa 2020. The number of older adults in Africa is estimated to triple to 235.1 million by 2050 (United States Census Bureau, 2020).

According to the WHO Regional Office for Africa (2023) the elderly population aged 60 years and older was 43 million in Sub-saharan Africa, and 67 million by 2025 and 163 million by 2050. In 2020 in North America 23.4 % of the population was 60 or older so considered as one of regional high proportions in the world (United States Census Bureau, 2020). In the end, social isolation severely lowers quality of life for community dwelling older adults and contributes to the strain on the healthcare system - most particularly due to lost engagement opportunities (Merchant et al., 2020; Zaharia et al., 2024; Koszalinski & Olmos, 2022). Thus, intervening to facilitate social interactions and minimize the effects of social isolation on health must be stressed as well.

2.3 Effects of social isolation among elder people

Social isolation, which notably impacts the physical, mental, and cognitive health of older adults in the community, increases their dependence on the healthcare system. Social isolation is best described as the measurable absence of social contact, such as family or community interactions; as opposed to loneliness, which is the subjective sense of unmet desire for social contact. However, social isolation and loneliness do overlap in older adults (Yang et al., 2020). For community-dwelling older adults, social isolation can be a consequence of retirement, diminished mobility, or the death of peers. Each of these diminishes social networks and increases vulnerability. Socially isolated Chinese older adults were found to have poorer memory, attention, and executive function and this cognitive decline was partially mediated by loneliness, indicating emotional distress, such as loneliness, which can accelerate cognitive decline (Yang et al., 2020).

Social isolation ultimately leads to a higher utilization of services in health care. In Ireland, research showed individuals age 50 and older who reported feelings of loneliness corresponded with increased number of general practitioner visits, which were higher for women, after considering health behaviors such as physical inactivity, obesity, use of tobacco, and for conditions of depression (Burns et al., 2020). This finding indicates that socially isolated women may instead use medical visits as substitutes for socializing. From prior studies done in the United States, research conducted by emergency departments revealed that over half of all individuals who felt socially isolated with neck problems that interfere with completing the activities of daily life, had been recently hospitalized. (Kandasamy et al., 2018). These cases and statistics are examples of how isolation can lead to avoidable health care use while increasing risks such as falls and mortality.

The health consequences go even further, isolated elders show increased rates of depression, cardiovascular disease, and premature death. Poor health behaviors such as inactivity and poor nutrition continue to perpetuate the cycle of decline (Burns et al., 2020). It has also been noted that feelings of burdensomeness or disconnection have contributed to problems accessing food and transportation, which leads to malnutrition and immobility (Kandasamy et al., 2018). Systematic reviews have consistently found that loneliness exacerbates mental health, however reviews newly published in 2023 research on interventions to reduce feelings of isolation found mixed re-

sults and it was concluded there were still methodological limitations. When looking at nine systematic reviews, Grillich et al. (2023) found small to moderate improvement through group-based activities, or digital connections, though the overall evidence base for loneliness and intervention is still limited.

Managing isolation and loneliness in home-dwelling elders has been through various approaches—befriending services, community opportunities, and in some cases, technology, all of which have been shown to have modest effects on loneliness (Grillich et al., 2023). The current state among the most isolated elders is lack of access and involvement, suggesting a need to embed such services within routine health medical checkup, for example, emergency department referrals to services like transportation and meal support, which many isolated elders say they would use (Kandasamy et al., 2018). Culturally responsive approaches are also worth noting, as shown in research with Chinese elders around families' involvement in interventions/roles as caregivers, which act to minimize the impact of isolation (Yang et al., 2020). Addressing social isolation among elderly people living in the community requires linking coordinated policy aimed at engaging the community and building routine healthcare-based screening to safeguard social engagement and prevent more serious health concerns

3 Aim, purpose and research question

Aim: to explore the effects of social isolation of older people living independently at home.

Purpose: to enlighten family members and the public about the effects caused by social isolation among elders.

Research questions: What are the effects of social isolation on cognitive functioning, healthcare utilization, and overall health outcomes among elderly individuals living at home?

4 Methodology

4.1 Literature Review

A literature review is a summary of what other scholars or professionals have done or published. However, a comprehensive literature review does not merely cover a review of literature on the topic at hand to provide insights. Instead, it should encompass analysis of literature, critical dialogue and understanding diverse theories, arguments and approaches and how they relate to the real world. Literature review should be an issue of reviewing and consolidating relevant literature released thus it is linked continuously to your own research purpose and rationale (Mudavanhu, 2017). Support for the definition Snyder (2019) defines literature review as the comprehensive review of existing literature for any research purpose or inquiry. It is a review, analysis and evaluation of existing literature relating to the subject area of investigation, which is about the review of the research done previously. In this example the author is synthesizing and extracting issues, points, methods, findings that may emerge from an evaluation of the articles he or she has read in order to arrive at reasons for the research they plan on conducting (Danson & Arshad, 2014).

Snyder (2019) suggested that as a research method review is useful and is the method that has a lot to say about research, for it builds to a solid basis towards knowledge to be gained, and it also leads to theorizing with much more ease. Literature review tackles a series of study questions with a weight that one study cannot find in one study alone, or when we can gather both findings and perspectives from different studies. It also serves to synthesize and summarize an interdisciplinary study area and a fragmented study area. Additionally literature reviews also provide fantastic methods for synthesizing research to provide meta-levels of evidence and identify gaps of knowledge that warrant later research are integral pieces for constructing conceptual models and theoretical frameworks (Snyder, 2019).

Efron and Ravid (2018) outline a systematic process of writing a literature review, beginning with the definition of a topic, which can be presented as a straightforward research question. The researcher will establish relevant search terms — such as synonyms and alternative spellings — whatever adds value to the search of the literature review. The next stage is to create a comprehensive development of a search strategy which is thorough. Your search strategy should also include writing down specific keywords and phrases you are going to use in order to generate a

search, choosing the appropriate databases / sources, ensuring you have enough history of the search to be able to evaluate the volume and relevance of materials that you are using in the search you conducted, as well as the relevant keywords and phrases you included as a part of the search. If you find not enough literature in the literature search the time to consider a new perspective concerning the research question when a broader project or research topic has not been identified as being "off topic" during the search could be required. You have to check the materials that you saved before you can move on to the next phase – judging for relevance + adequacy. Here you will critically review selected materials, take notes, select and start to decide which studies will be used in the literature review.

4.2 Literature Search

The authors used studies from three databases (CINAHL, Medline, and PubMed). Boolean operators used were as follows: "OR" and "AND" and keywords "social isolation" OR "loneliness" OR "social exclusion" AND "elderly" OR "older adults" OR "senior citizens" OR "aged population" AND "living at home" OR "community dwelling" OR "home-based living" OR "aging in place". The inclusion criteria were published full-text English studies published within ten years 2015 to 2025 that addressed the research question or answered the research question, and excluded criteria included articles published before 2015, not relevant to research or did not answer research, unavailable in full text or not in the English language. Using a PICOS strategy outlined below, the author connected the initial research:

Table 1: PICOS Criteria for Author 1

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> • P-population • I-interest • CO-Context • S-Study type 	<ul style="list-style-type: none"> • Older people experiencing social isolation • Community programs and support groups aimed at reducing social isolation • The wellbeing of elderly individual living at home to those engaged in community programs and support groups • Peer-reviewed, full text, articles published between 2015-2025 in English

In order to maintain objectivity, the author screened and selected the data in a separate process. Altogether, N=744 articles were reviewed via CINAHL, Medline, and PubMed. The process of data analysis began with the removal of duplicates n=9. The first screening involved reading the title, at this stage excluding n=523 articles since they did not answer the research question. The second phase was to screen the abstract of n=212 articles and remove n=201 articles (not answering the research question, wrong population, wrong outcome, or wrong setting). These articles were subjected to further screening through full text and 11 articles met the eligibility criteria for this phase. But it was considered in data extraction to drop n=2 articles because they were not answering the research question, as the findings did not pertain to the wellbeing of elderly individuals living at home to community program and support group members. This resulted in n=9 articles included and analyzed for findings. We can see from Figure 1 the article screening process and selection results of the inclusion and exclusion criteria. All articles evaluated by Author 1 are listed here and also fully summarized in Appendix 1.

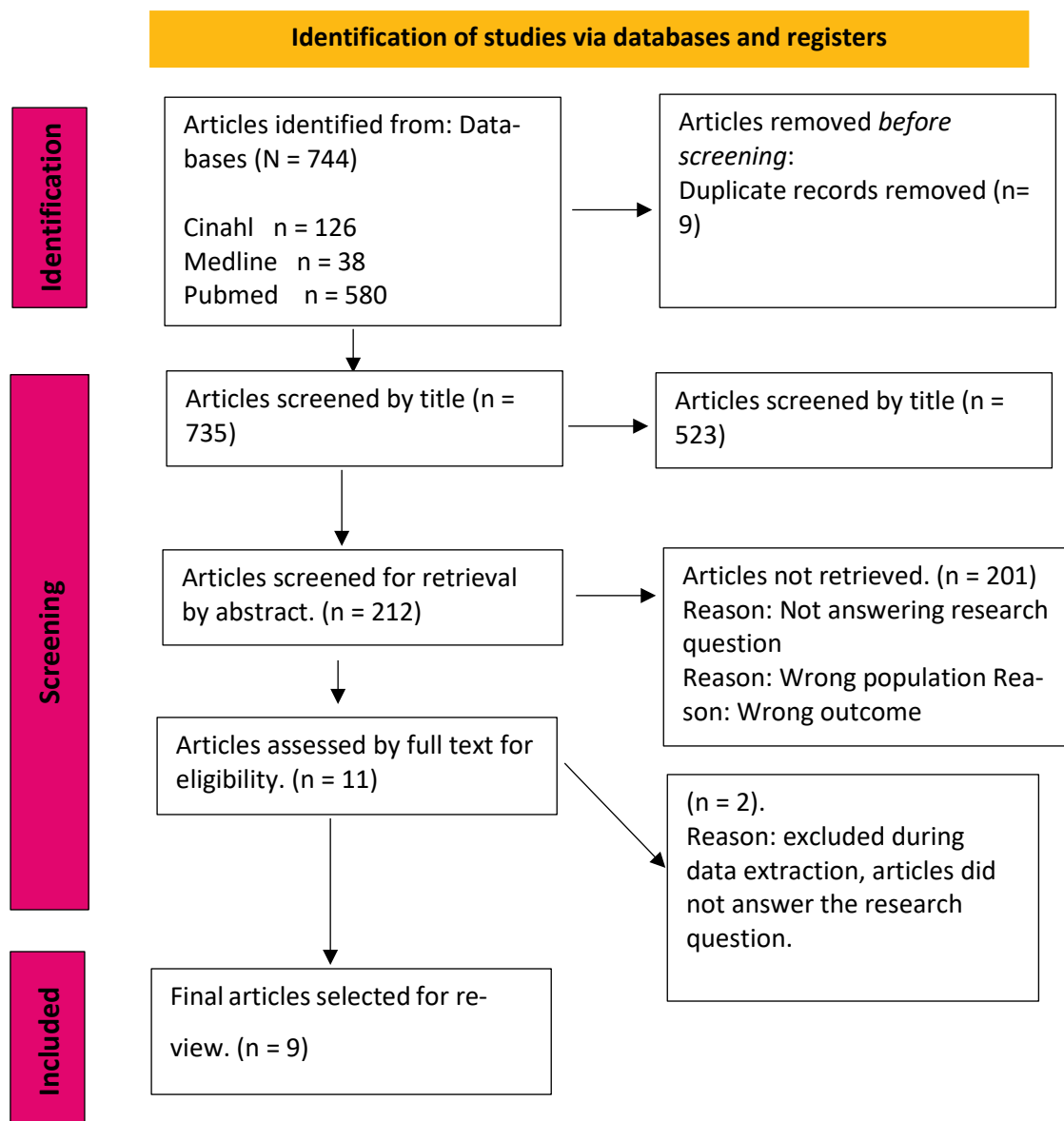


Figure 1: Author 1 inclusion and exclusion process

Author 2: Studies reported in this review were searched on two databases: CINAHL and Med-line with the Boolean terms “AND” and “OR.” The keywords the author used: social isolation OR loneliness OR social withdrawal OR social exclusion OR social disconnectedness AND elderly OR older adults OR senior citizens OR aging population OR geriatric OR older people AND living at home OR community dwelling OR home care OR independent living OR non-institutionalized AND effects OR impact OR influence OR consequences OR outcomes. Full text accessible, English-language, between 2015-2025, and study questions and study-related articles were eligible for screening. Excluded articles were those that were unable to be accessed, not published in English, published prior to 2015, that do not answer any study question, or do not pertain to the study. PICOS was used to conduct a preliminary search (see Table 2 below).

Table 2: PICOS Criteria for Author 2

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> • P-population • I-interest • CO-Context • S-Study type 	<ul style="list-style-type: none"> • Older people experiencing social isolation • Community programs and support groups aimed at reducing social isolation • The wellbeing of elderly individual living at home to those engaged in community programs and support groups • Peer-reviewed, full text, articles published between 2015-2025 in English

To ensure objectivity, the author conducted data screening and selection separately. Altogether, N=320 articles were gathered through two scientific databases: CINAHL and Medline. The process of data analysis began with the elimination of duplicates n=6. The first screening was conducted by reading title, at this phase eliminating n=196 articles, as they did not answer the research question. The next stage was to screen the abstract of n=118 articles and eliminate n=106 articles, due to not answering the research question, wrong population, wrong outcome and wrong setting. The articles were then screened further through full text; 12 articles met this phase of criteria.

However, during data extraction, it was thought to eliminate $n=3$ articles, as they did not answer the research question as the findings did not relate to the wellbeing of elderly individual living at home to those involved in community programs and support groups. In conclusion, there were $n=9$ articles selected and analyzed for results. Refer to Figure 2, which presents the inclusion and exclusion criteria for article screening and selection process. All reviewed articles by Author 2 are comprehensively listen in Appendix 2

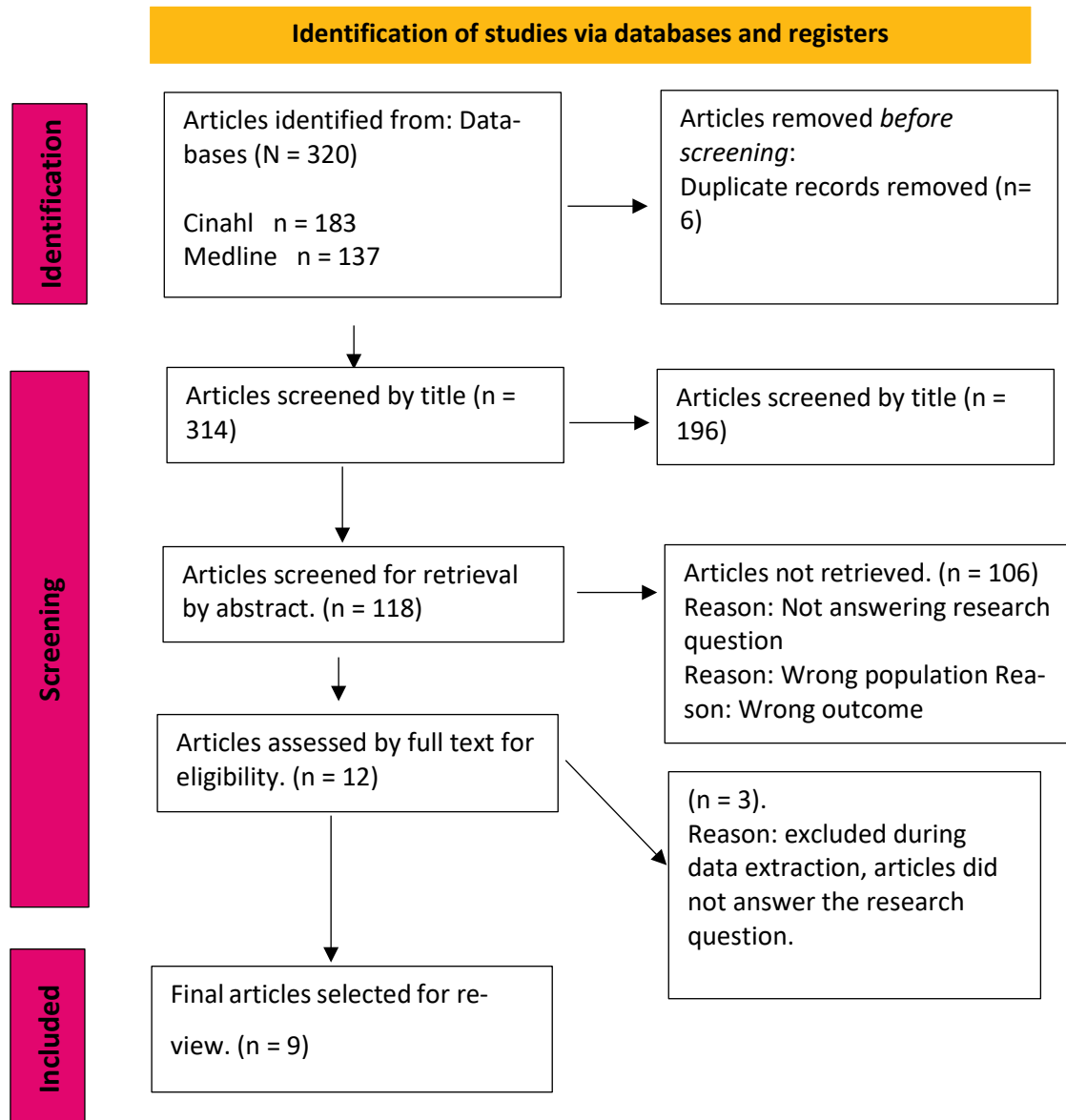


Figure 2: Author 2 inclusion and exclusion process

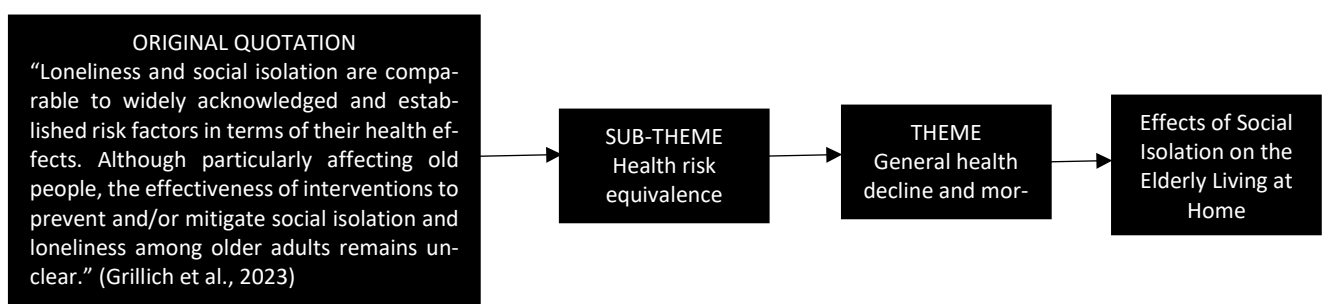
4.3 Data Analysis

Content analysis refers to a study that explores written material, that could be inductively or deductively applied to qualitative or quantitative data (Cole, 1988; Elo & Kyngäs, 2008). One explanation for how to divide the content analysis findings with related connotation into themes and sub-themes can be derived from the data and the related meanings of the analysis associated with the two (Cavanagh, 1997).

An inductive content analysis method was implemented for this investigation. According to Vears and Gillam (2022), inductive content analysis is a coding method where some of the words of a written text are highlighted. The marked-up segments are examined to collate sections of the text that bear analogous significant connections. Those groups are additionally “coded,” i.e. with words or phrases that describe the content of the extracted sentence (Elo & Kyngäs, 2008). The groupings are made within each article and also across all articles analyzed (Vears & Gillam, 2022). Author 1 reviewed each research article in this study and highlighted the key findings relevant to the research question of this study.

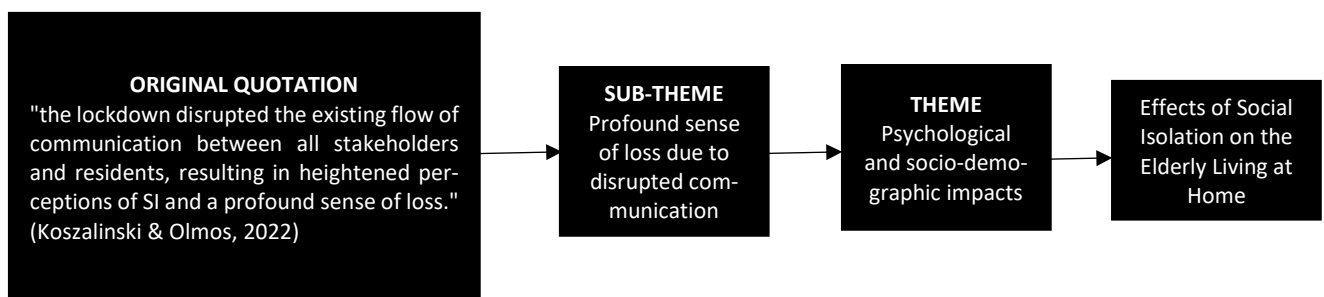
The results above were aggregated into something like an Excel-sheet and put together by using a highlight colour for all sentences that had the same underlying meaning and, therefore, create themes. Following the identification of themes, the articles were analyzed again to identify sub-themes (Vears & Gillam, 2022). Sub-themes were findings in each theme that meant the same. The coding was run several times for all the articles and the themes, and the sub-themes were changed with each iteration as new things can be discovered after a while for which some changes should be made (Vears & Gillam, 2022). A case in point is presented below in Figure 3 for the data interpretation operation.

Figure 3: Sample of Data Analysis Process of Author 1



In this analysis, however, author 2 systematically examined each research article to determine and highlight the findings about the research question. The results were then categorized into a spread-sheet: repeated similar statements were color coded to emphasize common interpretation to assist in finding overarching themes. Following synthesis of the overall themes, a rereading of articles revealed sub-themes, that is, unique findings within each theme indicative of related concepts. Coding and categorization iteratively progressed with themes and sub-themes revised with insights derived from repeated reviews of the data (Vears & Gillam, 2022). Figure 4 shows a presented sample of this analysis.

Figure 4: Sample of Data Analysis Process of Author 2



5 Results

Author 1 and 2 analysed the data separately and created their own themes and subthemes, these were then merged for the final results. From the combined analysis by author 1 and 2, the authors derived three themes on the Effects of Social Isolation on the Elderly Living at Home. The themes include: Effects on Cognitive Functioning, Effects on Healthcare Utilization and Effects on Overall Health Outcomes. These themes represent the Effects of Social Isolation on Cognitive Functioning, Healthcare Utilization, and Overall Health Outcomes Among Elderly Individuals Living at Home.

Table 3: Effects of Social Isolation on the Elderly Living at Home

Theme	Subthemes
Effects on Cognitive Functioning	<ul style="list-style-type: none"> • Impaired cognitive performance • Mediation through depressive symptoms • Association with dementia risk
Effects on Healthcare Utilization	<ul style="list-style-type: none"> • Increased general practitioner visits • Elevated emergency department admissions
Effects on Overall Health Outcomes	<ul style="list-style-type: none"> • Increased mental health issues • Poorer physical health and frailty • Reduced quality of life and mortality risk

5.1 Analysis on the Effects of Social Isolation on the Elderly Living at Home

5.1.1 Effects on Cognitive Functioning

Impaired Cognitive Performance

According to Merchant et al., (2020), social isolation exerts a strong and steady negative influence on cognitive performance in older adults both within community and institutional settings. Among community-dwelling older adults, a poorer social network independently relates to a poor cognitive performance as evidenced by significantly reduced scores of the Chinese Mini-Mental State

Examination (cMMSE). This relationship exists even after accounting for gait speed, frailty, depression, and comorbidities, which indicates that restricted social contact results in a direct reduction of cognitive stimulation and leads to decline in memory, orientation, and executive function.

According to Yang et al. (2020), large-scale longitudinal data from mainland China illustrate how objective social isolation—measured through reduced social activity engagement, infrequent contact with adult children, and lower participation in meaningful roles such as grandchild caregiving—predicts poorer global cognitive performance, with an effect partially mediated by loneliness. This influence seems particularly severe in institutionalized and post-pandemic settings, where social isolation accelerates cognitive decline through interconnected pathways of functional decline and mental health. During the COVID-19 restrictions among Chinese nursing homes, for instance, more than half of the oldest old (that is, 80+) experienced social isolation that significantly worsened MMSE-measured cognitive ability; this impact was sequentially mediated first by loss of BADL and then by depressive symptoms, creating a chain amplifying vulnerability (Fang et al., 2024). In addition, communication barriers and separation enforced by lockdowns during the pandemic escalated subjective cognitive decline and neuropsychiatric symptoms among long-term care residents with dementia—a condition in which reduced social interaction and decreased sensory and emotional stimulation directly weaken cognitive reserve and accelerate the course of impairment (Kozalinski & Olmos, 2022).

Mediation through depressive symptoms

As Yang et al. (2020) has noted, loneliness acts as a significant mediator between objective social isolation and increased psychological distress among Chinese community-dwelling older adults. The research indicates that lower levels of engagement in social activities, lower levels of contact with adult children, and lower involvement in the caregiving of one's grandchildren are related to greater feelings of loneliness, which in turn have a directly worsening effect on mental health burden, although a direct pathway from isolation to distress remains (Yang et al., 2020).

In the studies of Yang et al. (2024) and Fang et al. (2024), depressive symptoms play a central mediating role in the relationship between reduced social connectedness and poorer mental health

among Chinese older adults. Yang et al. (2024) emphasize that participation in diverse social activities, particularly those that are cognitively or physically stimulating, protects mental health largely by reducing depressive symptoms. In the same vein, Fang et al. (2024) show that, among institutionalised oldest resident after COVID-19, social isolation increases depressive symptoms directly and indirectly through declining daily functioning, with lower subjective socioeconomic status further strengthening the pathway from isolation to depression.

Association with dementia risk

As stated by Kandasamy et al. (2018), social disconnection among older adults receiving emergency department care is common, with over half of the sample reporting feelings of burdensomeness or low belonging, both associated with poor health outcomes. This study identifies that social disconnection, defined by the Interpersonal Theory of Suicide, is associated with various increased risks like falls, thus perhaps increasing the risk for dementia through a reduction in social support and participation. Correspondingly, Fang et al. (2024) point out that post-COVID-19 social isolation in Chinese nursing homes accelerates brain impairment in the oldest resident, serving as a chronic stressor negatively impacting hippocampal structures and leading to cognitive decline, including those risks for Alzheimer's disease.

Yang et al. (2024) further illustrate an inverse nonlinear relationship between participation in social activities and the risk of dementia among Chinese older adults. The mediating role of depression in this relationship underlines the fact that social isolation increases depressive symptoms, which, in turn, increase dementia risk, thus justifying the implementation of interventions that help enhance social connections in order to reduce such effects (Yang et al., 2024; Fang et al., 2024).

5.1.2 Effects on Healthcare Utilization

Increased general practitioner visits

Burns et al. (2020) indicated that loneliness among older adults was consistently associated with more general practitioner visits, according to both cross-sectional and longitudinal analyses from a

nationally representative cohort in Ireland. The incidence rate ratios for General Practitioner's visits in the overall sample ranged from 1.08 to 1.33, with associations remaining after adjustments for health and health behaviors, especially among women who exhibited incidence rate ratios ranging from 1.05 to 1.16. This would indicate that loneliness drives higher primary care utilization, potentially straining health services at a population level even independent of social isolation or physical health factors.

Thompson et al. (2023) further support this by highlighting that lonely older people experience more frequent primary care use, often viewing General Practitioner's visits as a source of social contact amid reduced social connections. Their integrative review of interventions mentions a recent meta-analysis confirming elevated primary care attendance among the lonely and emphasizes that it is an issue that has to be identified and addressed by primary care practitioners to avoid unnecessary visits. This is a call for tailored responses in primary care that will help lonely individuals get to the appropriate social resources, thus easing the burden on General Practitioner's services.

Elevated emergency department admissions

Burns et al. (2020) found that loneliness among older adults was associated with a higher risk of Emergency Department's admissions, especially among women. Indeed, after adjusting for physical health conditions and health behaviours, lonely older women were found to have a greater risk of visiting the ED, indicating that loneliness may independently drive healthcare-seeking beyond medical need and provide an opportunity for early intervention within primary care.

As a further step, Kandasamy et al. (2018) reinforced this pattern in a U.S. Emergency Department-based sample, where feeling a burden, lack of belonging, or belief that others would be better off if one were gone—that is, social disconnection—is common among older adults receiving care in the Emergency Department. These patients present more frequently to the Emergency Department, often with complex social and functional needs, representing the Emergency Department as an important setting to identify socially disconnected older adults and connect them to community-based support to reduce potentially avoidable admissions.

5.1.3 Effects on Overall Health Outcomes

Increased mental health issues

According to Kandasamy et al. (2018), feelings of burdensomeness, lack of belonging, and a belief that others would be better off without them are commonly reported among socially disconnected older adults in emergency department settings, all strongly associated with depressive symptoms and heightened suicidal ideation. Koszalinski and Olmos (2022) further highlight that barriers to communication and lockdown policies significantly exacerbated social isolation, causing increased depression, heightened anxiety, and more severe neuropsychiatric symptoms, especially among those with cognitive impairment.

According to the researchers Zaharia et al. (2024), loneliness is one of the determining factors in mental illness for older adults, paving the way for chronic anxiety, major depression, pessimism, low self-esteem, and accelerated mental decline. Zheng et al. (2025) confirms that social isolation undermines psychological well-being by creating negative feelings of loneliness and depression, while reduced physical activity and lower psychological resilience increase these mental health issues.

Poorer physical health and frailty

Li et al. (2025) established that social isolation among community-dwelling older adults has a strong association with poor physical health, typically manifested through having several chronic illnesses and lower levels of physical activity. This study found that the older adults who were more socially isolated had higher numbers of chronic conditions and lower levels of physical activity that contributed to poorer general health and more rapid physical decline.

Similarly, Merchant et al. (2020) underscore how social isolation is also closely linked with frailty and compromised physical function within the elderly population. There are clear manifestations of physical vulnerability among those at risk for isolation, including reduced walking speed and decreased mobility, which further cements frailty as a major consequence of limited social networks and underlines the critical interaction between social isolation and declining physical health in ageing populations.

Reduced quality of life and mortality risk

Merchant et al. (2020) expressed in their study that socially isolated community-dwelling older adults are strongly associated with a decline in perceived health-related quality of life. A weaker social network contributes independently to lower general well-being. Such a decline in the quality of life reflects a broader decline in daily functioning and perceived health status that accompanies limited social connections. The evidence supporting that social isolation and loneliness are strong predictors of mortality-on a par with major established risk factors, such as smoking and obesity-is overwhelming (Holt-Lunstad, 2024; Grillich et al., 2023). Both conditions have been identified as public health priorities because of their reliability in predicting shorter life spans and higher rates of premature death in population studies.

6 Discussion

The discussion chapter is where the researcher's study results receive a critical interpretation concerning existing literature, theory, and study objectives. While this chapter is a continuation and extension of the study findings, it is less about repeating the results and focuses on presenting meaning and context to how it affects the lives of elder individuals living at home and on the implications it holds concerning existing knowledge about the effects of social isolation on individuals living independently at home. The results have been located within contemporary academic literature on myriad subjects and the significance they hold concerning reforms and changes from previous studies concerning healthy outcomes and the crucial role it plays concerning a healthy elder living independently at home. The chapter consists of two subchapters: a discussion of the results and a critical evaluation, ethical considerations, and limitations.

6.1 Discussion of Results

As such, the authors aimed to investigate the impacts of social isolation on cognitive functioning, healthcare use, and general health consequences in older adults who were living independently at home. In line with current evidence, the findings indicated that social isolation has several deep and multi-dimensional impacts on older adults; it is a core determinant of health in later life (Holt-Lunstad, 2024; Merchant et al., 2020).

One of the most striking findings of this study was the strong association between social isolation and impaired cognitive functioning among elderly people living at home. The findings indicate that socially isolated older adults are at risk of poorer memory, reduced attention span, diminished daily functioning, and an increased vulnerability to cognitive decline and dementia. This finding is consistent with Merchant et al. (2020), who reported that reduced social networks among community-dwelling older adults are independently associated with lower cognitive performance, even after controlling for comorbidities and physical frailty.

The study also proved that the relationship between social isolation and decline in cognition is not merely direct but also mediated by psychological factors, specifically depressive symptoms. This agrees with the work of Yang et al. (2020) that loneliness partially mediates the effect of social isolation on cognitive impairment among older adults in China. The implication is that social isolation

does not only deprive individuals of mental stimulation but also triggers emotional distress that accelerates neurological deterioration. This pathway is further supported by Fang et al. (2024), who found post-COVID-19 isolation in nursing homes to contribute to a decline in cognition through chain mediation with a loss of daily functioning and increased depressive symptoms.

Besides, the correlation between social isolation and the risk of having dementia related to the findings obtained in the study cited above mirrors the developing consensus that neurodegenerative diseases may be brought about by inadequate social participation. Yang et al. (2024) established that insufficient participation in social activities considerably increases the risk of having dementia, with the intermediary effect of depression playing an indispensable role in the said causality. This proves that social participation works like “brain reserve capacity,” which secures the brain against the onset of senile physiological changes. Thus, social isolation faced by elderly residents who live in their home settings does not merely carry social consequences but poses a risk to the brain as well.

Another significant outcome of our study was that there was an extension of, or heightened, usage of services in socially isolated older adults, particularly in terms of high rates of visits to general practitioners and usage of emergency services. This would seem to indicate that socially isolated older adults have both heightened service usage and service dependency, though not solely in terms of illness.

A research done by Burns et al. (2020) with regards to loneliness revealed its significant predictive value in relation to increased rates of visits to General Practitioner’s in Ireland, particularly in older persons, irrespective of their state of health and other health-related factors. This research thus supports the claims of the study in pointing out the fact that lonely older persons tend to have increased primary healthcare utilization as an alternative form of social interaction or due to psychosomatics of loneliness itself. According to Thompson et al. (2023), lonely persons tend to manifest symptoms in an unspecific way due to their unmet social and emotional needs.

Likewise, the rises in emergency department visits observed among socially isolated populations of older adults support the evidence reported by Kandasamy et al. (2018) that more than half of emergency department visits consist of elder patients who report cases of social disconnection.

These patients are often characterized by having multiple problems regarding their social situation, such as falls, poor medication compliance, and home support. These cases provide evidence for emergency care settings as possible venues for the recognition/intervention for socially isolated patients at home settings.

The significance of the above findings is that social isolation greatly influences healthcare system burden both by deteriorating health conditions and by promoting avoidable healthcare use. This emphasizes the significance of including social screenings as part of healthcare procedures, especially during primary and emergency healthcare settings (Holt-Lunstad, 2024; Thompson et al., 2023). The findings of this study again demonstrate that social isolation has a negative impact upon health outcomes for the older person living at home, including mental health deterioration, poor health, quality of life, and even death.

Regarding mental health outcomes, it was established that socially isolated elderly persons had higher rates of depression, anxiety, emotional problems, and stress than others. This study is consistent with the findings of Zaharia et al. (2024), who established the role of loneliness in the mental health of elderly persons, stating that it determines mental illness partly by contributing to chronic anxiety, major depressive disorder, and decreased psychological resilience in the elderly population. Regarding the impact of social isolation within the elderly population, it was established that socially isolated elderly persons had higher rates of neuropsychiatric problems by Koszalinski and Olmos (2022).

Physical consequences of social isolation involved frailty, lack of physical activity, as well as an increased prevalence of chronic health conditions. Findings by Li et al. (2025) observed that older adults facing social isolation have an elevated likelihood of carrying multiple chronic health issues in addition to less physical activity, thus increasing frailty in old age. Insights gained from Merchant et al. (2020) further establish that social isolation is associated with gait speed, physical inactivity, as well as frailty.

The decrease in quality of life that is reflected by socially isolated older individuals further reinforces that concept of how important social connections are for the subjective well-being of older

individuals. Social isolation negatively impacts perceived health, life satisfaction, and even functioning (Mer-Chant et al., 2020). The most concerning fact is that research has indicated that social isolation, coupled with loneliness, is a strong predictor of mortality, even rivaling traditional risk factors such as smoking and obesity. (Holt-Lunstad, 2024; Grillich et al., 2023).

6.2 Critical Evaluation, Ethical Considerations, and Limitations

Critical Evaluation of the Study

This review contributes significantly to the increasing literature related to social isolation and ageing through evidence synthesis on its cognitive, healthcare, and health-related outcome implications for elderly people living at home. With the focus of the study being on community-dwelling older adults, it addresses a population that is often neglected and overlooked for elderly persons who are already institutionalized, when they form the majority of the ageing population (Merchant et al., 2020).

An examination of various empirical findings through the adoption of a literature review methodology is broad and inclusive, with varying cultural and geographical contexts. It enhances the external validity of the conclusions and gives a more global understanding of social isolation as a public health issue. The thematic organization of findings into cognitive functioning, healthcare use, and general health outcomes serves to present a rather clear and analytically strong framework for grasping the complex influences of social isolation.

However, while this literature-based approach strengthens this research's breadth, it also limits its depth in regards to causation. Most of these literature studies were based on observational types of studies, which therefore restricts this paper's ability to establish definitive causal links between social isolation and other health outcomes (Grillich et al., 2023). Thus, it should be noted that findings are merely indicative of strong links but are by no means causal.

Ethical Considerations

While this study is based on secondary data collected through a review of literature, ethical concerns remain at the core of the conduct of this study. Firstly, intellectual honesty was adhered to by giving due credit and proper acknowledgment of any source used in this study, which is a fundamental norm in academic circles globally (Baker, 2016).

Secondly, the research did not involve misrepresentation or selective reporting of results, but the findings were synthesized to create an accurate mix of the results obtained, including the mixed findings obtained by the research study. This aligns with the ethical requirement of honesty in research, which states that conclusions need to be objectively reached rather than to conform to any preconceived notions (Snyder, 2019).

The topic itself also has wide ethical connotations. Social isolation among older adults often is an expression of broader societal neglect, ageism, and structural inequalities. Ethical responsibility thus transcends the process of research itself into application. This calls for action to address social isolation as a form of systemic neglect, argues Holt-Lunstad (2024), in light of the known association of social isolation with morbidity and mortality. By implication, this paper advances ethical accountability in social and health policy.

Limitations of the Study

Despite its contribution to the topic, the study has a number of weaknesses, as the following points show. Firstly, since the study is a review of existing literature, it is greatly influenced by the quality and extent of the original studies used. Any errors in the original studies might have greatly influenced the findings (Hawker et al., 2002).

Secondly, the research focused on studies published between 2015 and 2025 but were written in English, which may have resulted in an omission of studies written in other languages or earlier studies that lay the foundation for current knowledge.

Thirdly, differences in the definition of social isolation or loneliness used in different studies may precipitate a challenge to comparability. Some studies used objective indicators to measure different aspects such as contact frequency. In other instances, subjective methods such as reporting

emotions of loneliness were used. As such, different interpretations of social isolation may result from such processes (Zaharia et al., 2024; Merchant et al., 2020).

Also, cultural differences in social norms, family structures, and ageing experiences mean that findings from one region may not fully be generalised to another. The experience of social isolation will be substantially different, for example, in collectivist societies compared to the experience in individualistic ones, while such nuances cannot be captured by a literature-based study (Yang et al., 2020).

Finally, there was a lacuna in terms of the absence of primary empirical material, which shows the limitations of capturing lived experiences of elderly individuals or realities that could be relevant to specific contexts. Such a qualitative and mixed-method nature of research would probably open up personal narratives and contextual factors further in subsequent research studies.

7 Conclusion and Recommendations for Further Studies

This study aimed to determine the effect of social isolation on aged individuals in their home environment, focusing on their cognitive capacity, healthcare service utilization, and general health outcomes. The research findings clearly prove the major impact of social isolation on older persons, particularly in terms of their health outcomes. Social isolation was found to have an important linkage with cognitive capacity decline, increased depression, high healthcare utilization, quality of life reduction, and increased mortality risk. These research outcomes prove beyond doubt that social connection is not just an important social nicety but an essential aspect of healthy aging.

The effects of social isolation were additionally observed to manifest on multiple dimensions. The lack of social interaction reduced cognitive stimulation/social support, leading to a hastening of cognitive deterioration as well as mental health problems such as depression and anxiety. In turn, mental health problems precipitate greater dependency on health services, focusing on primary care and emergency services without meeting any particular medical condition but unmet aspects of social needs. At a physical level, the effects of social isolation manifest as frailty, decreased mobilization, and higher burdens of disease, all putting greater pressure on independence of aging people residing at home.

Importantly, this study emphasizes that the elderly living alone, comprising a majority of the ageing population worldwide, are still far more exposed to social isolation, resulting from retirement, bereavement, loss of mobility, and decreased social networks. While ageing at home is often equated with autonomy and dignity, the findings from this study suggest that when bereft of adequate social support infrastructures, it may also put older adults at serious social and health-related risks. Given these findings, addressing social isolation among older adults must be treated as a priority in public health. The health systems, social services, families, and communities need to acknowledge social isolation as a modifiable risk factor and engage in strategies that ensure social inclusion as part of the regular care offered to elderly patients.

Beyond these findings, this study also points to a number of important directions for future research and action. There is a need for more longitudinal and experimental studies capable of establishing causal relationships between social isolation and specific health outcomes, especially

cognitive decline and mortality. Further research is also needed in terms of rigorously evaluating the effectiveness of various intervention strategies, including community-based programs, psychosocial support models, and technology-driven solutions, in reducing the levels of social isolation among community-dwelling older adults. Culturally sensitive and context-specific studies, particularly in low- and middle-income countries with rapidly growing ageing populations, become quite relevant in designing locally relevant policies and interventions. Qualitative research that truly captures the lived experiences of socially isolated older adults could shed greater light on their needs, perceptions, and coping strategies, thus supplementing quantitative findings. Future studies will need to explore the role that digital communication tools and telehealth could play in mitigating social isolation while carefully weighing issues of accessibility and sustainability.

In conclusion, social isolation among elderly people living at home is an extremely important public health issue that has enormous implications for individuals and societies. To address social isolation, it is necessary to work together on healthcare, social policies, community, and families. Every society can greatly improve the health and quality of life for elderly people by putting social connections at the heart of public health approaches. In doing so, societies can develop approaches that are more sustainable, effective, and compassionate.

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Appendices

Appendix 1. Author 1: Selected articles for the literature review

Title of Study	Year	Author/s	Country	Participants	Context	Methodology	Key Findings	Quality Appraisal Score (Hawker et al., 2002)
Loneliness as a mediator of the impact of social isolation on cognitive functioning of Chinese older adults	2020	Rumei Yang, Haocen Wang, Linda S. Edelman, Eunjin L. Tracy, George Demiris, Katherine A. Sward, Gary W. Donaldson	China (study focus); USA (authors' affiliations)	N=7,410 community-dwelling older adults aged 60-101 years (from baseline wave of China Health and Retirement Longitudinal Study, 2011-12)	Community-dwelling older adults in China, examining social isolation, loneliness, and cognitive functioning within cultural context	Secondary analysis of longitudinal survey data; Multiple Indicator Multiple Cause (MIMIC) approach to define social isolation; Structural Equation Modeling (SEM) for direct/indirect effects	Social isolation indirectly affects cognitive functioning through loneliness ($\beta=-0.15$); Direct effect also significant ($\beta=-0.83$), indicating partial mediation; Social activity, adult children contact, and grandchild caregiving reduce isolation	32/36 (High: Strong methods, clear analysis, good generalizability; minor gaps in ethics discussion)
The impact of loneliness on healthcare use in older people: evidence from a nationally representative cohort	2020 (published online 22 June 2020)	Annette Burns, Gerard Leavey, Mark Ward, Roger O'Sullivan	Ireland	N=8,175 community-dwelling adults aged 50+ years (from The Irish Longitudinal Study on Ageing, TILDA)	Community-dwelling older adults in Ireland, focusing on loneliness and its association with General Practitioner's	Secondary analysis of nationally representative cohort; Negative binomial and logistic regression, adjusting for confounders like health/behaviors;	Loneliness positively associated with General Practitioner's visits (IRRs 1.08-1.33); Less consistent for ED visits; After adjustments, associations persist in women but not men; Women with loneliness	34/36 (High: Robust cohort data, clear regression methods, strong implications; excellent transferability)

					/Emergency Department visits, stratified by gender	Stratification by gender	have higher Emergency Department risk (OR 1.08) and General Practitioner's visits	
Social Disconnection Among Older Adults Receiving Care in the Emergency Department	2018	Deepika Kandasamy, Timothy F. Platts-Mills, Manish N. Shah, Kim A. Van Orden, Marian E. Betz	USA	N=289 community-dwelling older adults aged 65+ receiving care at two U.S. EDs	Older adults in U.S. emergency departments (EDs), assessing social disconnection and interest in resources	Cross-sectional survey; Chi-square tests and logistic regression for associations; Descriptive statistics for prevalence and interests	56% reported social disconnection (e.g., 37% feel burdensome); Associated with functional needs, hospitalization, low community engagement; High interest in resources (68% transportation, 58% food, 55% mental health)	30/36 (High: Clear methods, good sampling; some limitations in generalizability beyond ED context)
The effectiveness of interventions to prevent loneliness and social isolation in the community-dwelling and old population: an overview of systematic reviews and meta-analysis	2023	Ludwig Grillich, Viktoria Titscher, Pauline Klingenstein, Eva Kostial, Robert Emprechtlinger, Irma Klerings, Isolde Sommer, Jana Nikitin, Anton-Rupert Laireiter	Austria	Overview of 5 systematic reviews (SRs) containing 30 studies; Focus on community-dwelling older adults (60+)	Community-dwelling older adults globally, reviewing interventions for loneliness/social isolation	Overview of SRs (umbrella review); Searches in MEDLINE, etc. (2017-2021); AMSTAR 2 for quality; Random-effects meta-analysis (SMD)	Interventions reduce loneliness (SMD 0.63, 95% CI -0.10 to 1.36) but not social support (SMD 0.00); Low confidence in evidence; Need for rigorous evaluation	33/36 (High: Strong overview methods, meta-analysis; good implications; minor bias in SR selection)

The effect of social isolation on the cognitive ability of the oldest old in Chinese nursing homes in post-COVID-19: a moderated chain mediation model	2024	Yi Fang, Linlin Ma, Huixian Chen, Shuya Cai, Wen Jiang, Fen Luo, Jialu Wang, Enjie Zheng, Chuncong Zhou, Lijuan Zhu, Qiaoqiao Guo, Zhiqin Yin	China	N=453 oldest old (aged 80+, mean 87.1±3.8) in 11 nursing homes in Ningbo, Zhejiang Province	Post-COVID-19 nursing homes in China, focusing on oldest old and social isolation's impact on cognition	Cross-sectional survey; Mediation/moderation analysis using SPSS/PROCESS; Tools: LSNS-6 (isolation), MMSE (cognition), BI (BADL), PHQ-9 (depression)	56.1% experienced social isolation; Isolation affects cognition via BADL and depression (chain mediation); Subjective SES moderates isolation-BADL/depression links but not isolation-cognition	31/36 (High: Clear mediation models, good tools; cross-sectional limits causality/generalizability)
The contribution of primary care practitioners to interventions reducing loneliness and social isolation in older people—An integrative review	2023	Cristina Thompson, Elizabeth Halcomb, Malcolm Masso	Australia	Integrative review of 14 papers (13 primary studies) from 2000-2022; Focus on older people in community settings	Primary care practitioners' role in interventions for loneliness/social isolation in older community-dwellers	Integrative review; Searches in Scopus, Web of Science, etc.; Thematic analysis; Methodological quality appraisal	Interventions mostly multi-component (e.g., group-based); Only 6/13 reduced loneliness; Themes: Intervention characteristics, implementation barriers/facilitators, varying PCP contributions; Need to equip PCPs for identification/response	32/36 (High: Strong review methods, thematic analysis; good implications; minor gaps in ethics of included studies)
Social connection as a critical factor for mental and physical health: evidence,	2024	Julianne Holt-Lunstad	USA	Not a primary study; Review of global evidence/trends (no specific N); Focus	Global trends in social connection, isolation, loneliness post-COVID-19; Implica-	Special article/review; Synthesis of evidence (observational, meta-analyses); Discussion of trends, challenges, recommendations	Social connection predicts mental/physical health and mortality; Rising isolation/loneliness globally; Challenges: Common language, measurement, solutions; Recommendations:	29/36 (Moderate: Strong evidence synthesis, implications; not empirical, so lower on

trends, challenges, and future implications				on general population, emphasizing older adults	tions for mental/physical health		Address gaps, foster connection	sampling/analysis; good transferability)
Relationship between social activities and cognitive impairment in Chinese older adults: the mediating effect of depressive symptoms	2025	Qianke Yang, Shichong Lin, Zhuyun Zhang, Shuhao Du, Dan Zhou	China	Data from CHARLS (nationally representative; specific N not in snippet, but older adults 60+ implied)	Older adults in China, examining social activities, depression, and cognitive impairment	Cross-sectional analysis of CHARLS data; Restricted Cubic Spline (RCS) and Structural Equation Modeling (SEM) for mediation	Social activities non-linearly inversely related to cognitive impairment/depression; Depression mediates the relationship; Cognitively/physically stimulating activities most beneficial	30/36 (High: Robust national data, SEM/RCS methods; cross-sectional limits causality; strong implications)

Appendix 2. Author 2: Selected articles for the literature review

Title of Study	Year	Author(s)	Country	Participants	Context	Methodology	Key Findings	Quality Appraisal Score (Hawker et al., 2002)
Chain Mediating Effect of Physical Activity and Psychological Resilience on Social Isolation and Psychological	2025	Zheng Li, Shuang Chen, Yilin Wang, Bei Wang, Jing Yuan, Wenkui Zheng, Yanling Li	China	265 community-dwelling older adults (≥60 years) from six communities in Baoding City, recruited November 2023–March 2024	Community-dwelling older adults in urban China	Cross-sectional survey with convenience sampling; validated scales (Chinese Version of Social Isolation Scale in Older Adults, PASE, CD-RISC-10, Multiple Happiness Questionnaire); SPSS PROCESS macro for	Social isolation significantly negatively predicts psychological well-being; physical activity and psychological resilience partially mediate the relationship individually and in sequence (chain mediation); total mediation effect = 60% of total effect; all	35/36 (excellent reporting across all nine Hawker criteria; only minor deduction for convenience sampling)

Well-Being in Community-Dwelling Older Adults						chain mediation analysis	correlations significant ($p < 0.001$)	
Communication challenges in social isolation, subjective cognitive decline, and mental health status in older	2022	Rebecca S. Koszaliniski, Brenda Olmos	United States	Scoping review of published studies (2019–2021) on older adults, including those with dementia/subjective cognitive decline, in community and long-term care settings	Scoping review using PRISMA-ScR guidelines; searched MEDLINE, PsycInfo, Embase; included quantitative and qualitative studies on social isolation/communication challenges during early COVID-19 pandemic	Quantitative studies showed increased depression/anxiety and neuropsychiatric symptoms during pandemic; communication restrictions (e.g., visitor bans, impaired sensory channels) were primary stressors; qualitative studies highlighted profound	36/36 (exemplary scoping review; transparent, comprehensive, well-justified)	

adults: A scoping review (2019–2021)						sense of loss and disrupted communication flow; strong evidence that human contact ameliorates negative outcomes		
Factors associated with social isolation in community-dwelling older adults: a	2020	Reshma A. Merchant, Shumei Germaine Liu, Jia Yi Lim, Xiaoxi Fu, Yiong Huak Chan	Singapore	202 community-dwelling older adults ≥ 60 years recruited via grass-roots/senior activity centres (2017–2018)	Cross-sectional observational study; Lubben Social Network Scale-6 (LSNS-6), FRAIL scale, cMMSE, GDS, EQ-5D-5L VAS, gait speed, SPPB; binary logistic regression	45.5% at risk of social isolation (LSNS-6 < 12); poor social network significantly associated with slower gait speed (OR 0.674, $p=0.039$), lower cMMSE (OR 0.630, $p=0.032$), and lower EQ-VAS (OR	34/36 (very high quality; minor deductions for convenience sampling and cross-sectional design limiting causality)	

cross-sectional study						0.561, $p < 0.01$); independent of frailty status		
The Long-Lasting Effect of Multidisciplinary Interventions for Emotional and Social Loneliness in Older Community-Dwelling Individu-	2024	Georgiana Zaharia, Vanessa Ibáñez-del Valle, Omar Cauli, Silvia Corchón	Spain	Systematic review of 30 studies on community-dwelling older adults experiencing loneliness (no restriction on intervention type)	Systematic review (PRISMA-ScR); searched MEDLINE/PubMed, SCOPUS, Web of Science, PsycINFO; inclusion: validated loneliness tool, loneliness as primary/secondary outcome; CASPe checklist for bias assessment	24/30 interventions reduced loneliness post-intervention; 16 showed sustained effects at follow-up (3–24 months); psychosocial, technological, physical exercise, health promotion, and multicomponent interventions all effective; volunteer-led interventions (8 studies) also successful; depressive symptoms and	36/36 (outstanding systematic review; rigorous methodology, clear reporting, robust synthesis)	

als: A Systematic Review						social connectivity improved in most		
The effectiveness of interventions to prevent loneliness and social isolation in the community-dwelling and old population: an overview of systematic reviews and meta-analysis	2023	Ludwig Grillich, Viktoria Titscher, Pauline Klingenstein, Eva Kostial, Robert Emprechtlinger, Irma Klerings, Isolde Sommer, Jana Nikitin, Anton-Rupert Laireiter	Austria	Overview of 5 systematic reviews (SRs) containing 30 studies; Focus on community-dwelling older adults (60+)	Community-dwelling older adults globally, reviewing interventions for loneliness/social isolation	Overview of SRs (umbrella review); Searches in MEDLINE, etc. (2017-2021); AMSTAR 2 for quality; Random-effects meta-analysis (SMD)	Interventions reduce loneliness (SMD 0.63, 95% CI -0.10 to 1.36) but not social support (SMD 0.00); Low confidence in evidence; Need for rigorous evaluation	33/36 (High: Strong overview methods, meta-analysis; good implications; minor bias in SR selection)

The effect of social isolation on the cognitive ability of the oldest old in Chinese nursing homes in post-COVID-19: a moderated chain mediation model	2024	Yi Fang, Linlin Ma, Huixian Chen, Shuya Cai, Wen Jiang, Fen Luo, Jialu Wang, Enjie Zheng, Chuncong Zhou, Lijuan Zhu, Qiaoqiao Guo, Zhiqin Yin	China	N=453 oldest old (aged 80+, mean 87.1±3.8) in 11 nursing homes in Ningbo, Zhejiang Province	Post-COVID-19 nursing homes in China, focusing on oldest old and social isolation's impact on cognition	Cross-sectional survey; Mediation/moderation analysis using SPSS/PROCESS; Tools: LSNS-6 (isolation), MMSE (cognition), BI (BADL), PHQ-9 (depression)	56.1% experienced social isolation; Isolation affects cognition via BADL and depression (chain mediation); Subjective SES moderates isolation-BADL/depression links but not isolation-cognition	31/36 (High: Clear mediation models, good tools; cross-sectional limits causality/generalizability)
The contribution of primary care practitioners to interventions reducing loneliness	2023	Cristina Thompson, Elizabeth Halcomb, Malcolm Masso	Australia	Integrative review of 14 papers (13 primary studies) from 2000-2022; Focus on older people in community settings	Primary care practitioners' role in interventions for loneliness/social isolation in older community-dwellers	Integrative review; Searches in Scopus, Web of Science, etc.; Thematic analysis; Methodological quality appraisal	Interventions mostly multi-component (e.g., group-based); Only 6/13 reduced loneliness; Themes: Intervention characteristics, implementation barriers/facilitators, varying PCP contributions; Need	32/36 (High: Strong review methods, thematic analysis; good implications; minor gaps in

and social isolation in older people— An integrative review							to equip PCPs for identification/response	ethics of included studies)
Social connection as a critical factor for mental and physical health: evidence, trends, challenges, and future implications	2024	Julianne Holt-Lunstad	USA	Not a primary study; Review of global evidence/trends (no specific N); Focus on general population, emphasizing older adults	Global trends in social connection, isolation, loneliness post-COVID-19; Implications for mental/physical health	Special article/review; Synthesis of evidence (observational, meta-analyses); Discussion of trends, challenges, recommendations	Social connection predicts mental/physical health and mortality; Rising isolation/loneliness globally; Challenges: Common language, measurement, solutions; Recommendations: Address gaps, foster connection	29/36 (Moderate: Strong evidence synthesis, implications; not empirical, so lower on sampling/analysis; good transferability)
Relationship between social activities	2025	Qianke Yang, Shichong Lin, Zhuyun	China	Data from CHARLS (nationally representative; specific N not in snippet,	Older adults in China, examining social activities, depression, and cognitive impairment	Cross-sectional analysis of CHARLS data; Restricted Cubic Spline (RCS) and Structural Equation	Social activities nonlinearly inversely related to cognitive impairment/depression; Depression mediates	30/36 (High: Robust national data, SEM/RCS methods;

and cognitive impairment in Chinese older adults: the mediating effect of depressive symptoms		Zhang, Shuhao Du, Dan Zhou		but older adults 60+ implied)		Modeling (SEM) for mediation	the relationship; Cognitively/physically stimulating activities most beneficial	cross-sectional limits causality; strong implications)
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