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LIVING ALONE AND THE RISK OF HOSPITALIZATION AND PATIENT READMISSION: A LITERATURE REVIEW

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ABSTRACT

Introduction and purpose: Loneliness and social isolation are increasingly recognized as significant social determinants of health among older adults. As populations age, a growing number of individuals live alone, which has been associated with adverse physical and mental health outcomes and increased use of healthcare services. The purpose of this literature review was to examine the relationship between loneliness, social isolation, and the risk of hospitalization and hospital readmission, especially among older adults, and to identify factors that may reduce this risk.

Material and method: A narrative literature review was conducted using peer-reviewed articles identified in PubMed and related databases. The review included longitudinal cohort studies, population-based analyses, and retrospective observational studies that examined loneliness or living arrangements in relation to hospitalization, emergency department use, or readmission outcomes among adults, with a focus on older populations.

Results: Most reviewed studies demonstrated a statistically significant association between loneliness or living alone and increased risk of hospitalization, emergency department visits, longer hospital stays, and higher healthcare costs. Although one study did not find an increased hospitalization risk among community-dwelling older adults living alone, the majority of evidence supported loneliness and household context as independent predictors of healthcare utilization. Mental health problems, limited social support, and reduced access to in-home care were identified as important mediating factors.

Conclusions: Loneliness and social isolation are important predictors of hospitalization and rehospitalization, especially among older adults. Incorporating social factors into routine healthcare assessment and implementing interventions that strengthen social support and access to home-based care may reduce hospital utilization and improve health outcomes in aging populations.

KEYWORDS

Loneliness, Social Isolation, Hospitalization, Readmission

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1. Introduction

Loneliness, as a social and psychological phenomenon, is becoming an increasingly visible problem in the context of older adults' health. As societies age, the number of individuals living in social isolation continues to rise, which may lead to deterioration in both physical and mental health (Skierkowska et al, 2020). Loneliness, particularly among older adults, is associated with numerous negative health outcomes, including weakened immune function, depression, cardiovascular problems, as well as an increased risk of hospitalization and hospital readmission (Cacioppo & Patrick, 2008). Numerous studies indicate that individuals living alone more frequently require medical intervention, which may result from a lack of support in daily life and difficulties in recovery after hospitalization (Cacioppo et al, 2002).

In the context of the growing number of hospitalizations and readmissions (Friednamn & Basu, 2004), it is worth noting that the issue of loneliness has become increasingly prominent in scientific discourse. Studies demonstrating an increase in hospitalizations among older populations have shown that social isolation and loneliness may contribute to health deterioration and hinder the recovery process (Chen, Hicks & While, 2013). Additionally, individuals living alone are less likely to have access to regular in-home healthcare support, which significantly reduces their chances of a rapid recovery (Dickens et al, 2011; Cohen-Mansfield & Parpura-Gill, 2006).

Notably, while the relationship between loneliness and mental health has been widely acknowledged, emerging research emphasizes the complex interplay between social, psychological, and environmental factors in shaping health outcomes (Holt-Lunstad, 2024). For instance, some studies suggest that the quality of social interactions, community engagement, and access to supportive resources can moderate the impact of loneliness on hospitalization risk (Newall, McArthur & Menec, 2014). This suggests that interventions targeting

loneliness should not only focus on increasing social contact but also on enhancing the meaningfulness and accessibility of social support for older adults (30, 31).

An analysis of the frequency of the term “*hospitalisation*” in the Google NGram Viewer database reveals a clear upward trend in recent years (see Figure 1). This increase is particularly evident in studies focusing on aging societies, where hospitalization among older adults is becoming increasingly common. Similarly, an analysis of the frequency of the term “*loneliness*” using the same tool shows growing attention to the issue of loneliness, especially among older adults (Figure 2). Both trends indicate a rising social and scientific awareness of the problem of loneliness and its potential health consequences (Courtin & Knapp, 2017; Luo et al., 2012).

Research shows that loneliness has a direct impact on the mental and physical health of older adults. Reducing loneliness through appropriate social care and support during recovery may contribute to a reduction in hospitalizations and an improvement in quality of life (Asante & Karikari, 2022; Liu, Gou & Zuo, 2016). The scientific literature offers a range of recommendations aimed at reducing risks associated with loneliness, including initiatives to integrate older adults into social life, the development of social support programs, and improved access to medical services in home settings (Asante & Karikari, 2022; Patil & Braun, 2024; Victor & Yang, 2012).

The aim of this paper is to review existing research on the relationship between loneliness and hospitalization and hospital readmission. This review seeks to understand how social isolation affects the health of older adults and to identify actions that may help reduce this risk.

Research Objective

The objective of this study is to review existing research on the relationship between loneliness and hospitalization and hospital readmission among older adults. The study aims to understand how social isolation affects older adults' health and to identify actions that may help reduce the risk of hospitalization associated with loneliness.

Research Problems

- How do loneliness and social isolation affect the physical and mental health of older adults, particularly in the context of hospitalization and recovery?
- What social and medical factors can reduce the risk of hospitalization and hospital readmission among individuals living alone?
- What actions and social support programs can help integrate older adults into society and reduce loneliness, thereby positively affecting their health and recovery process?

Research Hypotheses

- Loneliness and social isolation increase the risk of hospitalization and hospital readmission among older adults.
- Reducing loneliness through social and medical support leads to fewer hospitalizations and an improved quality of life among older adults.
- There is a positive relationship between social integration of older adults and a reduced risk of hospitalization and improved health outcomes.

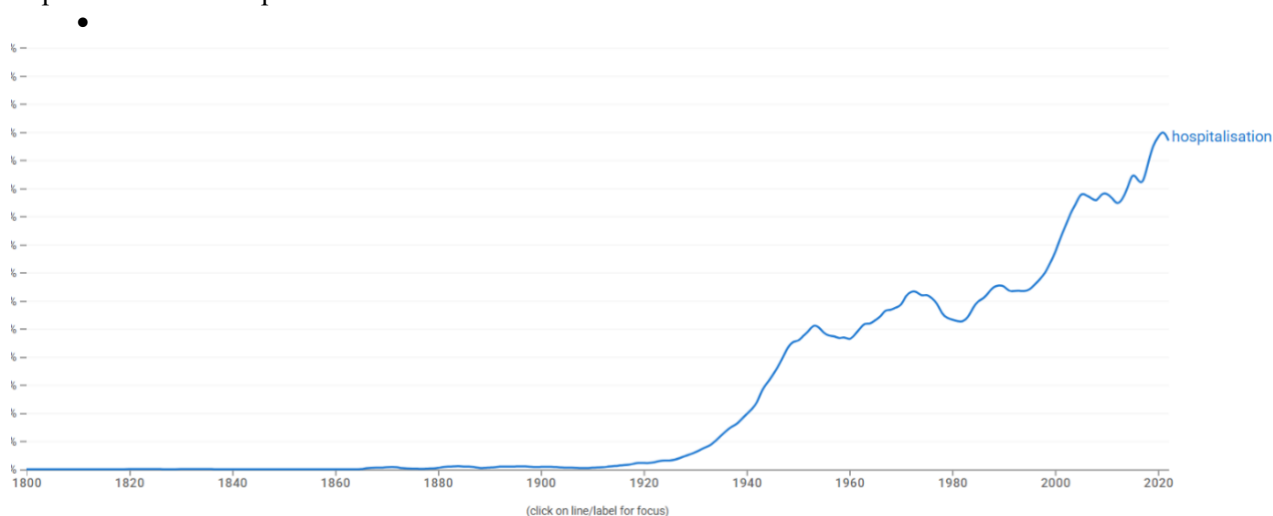


Fig. 1. Frequency of occurrence of the keyword “*hospitalisation*” in the Google NGram Viewer database, author’s own analysis



Fig. 2. Frequency of occurrence of the keyword “loneliness” in the Google NGram Viewer database, author’s own analysis

2. Research materials and methods

2.1. Data collection and analysis

Research on the relationship between loneliness, social isolation, and the risk of hospitalization and other negative health outcomes has a history spanning several decades and has developed alongside growing interest in population aging, the epidemiology of social determinants of health, and healthcare costs (Wat et al, 2014; Xiao, Wu & Zeng, 2019). Early conceptual work on social networks and health in later life emerged in the late 20th century, when researchers emphasized that lack of social contact could constitute an independent risk factor for disease and mortality—comparable in magnitude to classical risk factors such as smoking or obesity (House, Landis & Umberson, 1988; Steptoe et al, 2013).

In the studies analyzed—both those included in the table and the broader literature—data sources include large population-based cohorts and longitudinal studies. For example, literature reviews combine data from multiple independent studies involving tens of thousands of participants of varying ages and health statuses, allowing for population-level generalizations and assessments of the effects of loneliness.

Primary studies commonly utilize:

- large epidemiological and cohort databases, such as representative samples of older adults drawn from healthcare registries or long-term population studies (examples from the literature include thousands of participants from the United States, Europe, and Asia), where data on hospitalizations, social support, and loneliness indicators are collected alongside other health variables;
- measures of isolation and loneliness based on both objective social indicators (e.g., number of social contacts or size of social support networks) and subjective questionnaire-based scales assessing perceived loneliness;
- longitudinal analyses tracking participants over many years to capture the impact of chronic isolation or changes in social status on health outcomes, including hospitalization, rehospitalization, and overall risk of chronic disease;

The studies presented in the table vary in sample size, ranging from cohorts of several thousand participants. The broader literature also includes very large population-based studies (Lloyd et al, 2014) or long-term cross-sectional and longitudinal studies, enabling analysis of the relationship between loneliness and hospitalization while accounting for numerous modifiers and risk factors. In many of these sources, hospitalization and health status data are derived from medical records or electronic health records, minimizing measurement error and enabling reliable risk estimation over time.

Moreover, broader reviews confirm that loneliness and social isolation are associated not only with increased mortality and morbidity, but also with more frequent use of healthcare services, including hospitalizations and readmissions, making this research area highly relevant not only to gerontology but also to health policy and social programs (Courtin & Knapp, 2017).

2.2. Study selection

The studies included in this paper were selected because they directly examine the association between loneliness or social isolation and hospitalization outcomes using robust epidemiological designs, longitudinal cohort studies, and large population-based datasets. The literature search was conducted in PubMed, using combinations of the terms “loneliness,” “social isolation,” “social support,” “hospitalization,” and “older adults”, with filters for peer-reviewed English-language articles. Preference was given to studies with large sample sizes, longitudinal follow-up, or evidence synthesis, as these designs are best suited to assess temporal and population-level health risks.

The selected studies are cited and published in journals with strong impact factors in public health, geriatrics, and social epidemiology, underscoring their relevance and scientific credibility. Studies were excluded if they did not report hospitalization-related outcomes, relied solely on cross-sectional designs without health utilization data, focused on highly specific institutionalized populations, or treated loneliness only as a secondary, poorly operationalized variable.

Table 1. Summary of studies examined in this paper with, along their methodology, profile and approx. quotations.

Study	Study type	Journal profile (field)	Approx. Citations	Relevance to this research
Ennis et al., 2014	Retrospective longitudinal cohort	General internal medicine	60	Examines if living alone predict hospitalization in older adults. Links between objective social isolation and healthcare utilization
Lloyd et al., 2022	Retrospective cohort	Public health / health services research	16	Links household context to higher emergency hospital use, showing objective social environment impacts acute care utilization.
Parmar et al., 2022	Retrospective cohort	Social psychiatry / psychiatric epidemiology	24	Examines if loneliness in mental healthcare patients is associated with higher risk of general hospitalisations, linking loneliness to health-care utilisation outcomes
Chamberlain et al., 2022	Retrospective cross-sectional cohort	Geriatrics / health services research	30	Shows that loneliness is associated with higher odds of emergency department visits in older adults, with some gender differences, linking subjective loneliness to health service use.
Barrenetxea et al., 2021 (14)	Population-based study	Health services research / public health	22	Examines if adults living alone have higher odds of emergency department (ED) admissions, longer inpatient stays, and higher inpatient costs.

2.3. Statistical Software.

Data management and analysis were conducted using Microsoft Excel for data extraction and tabulation, and Google NGram Viewer for graphical presentation of results.

2.4. AI.

AI was utilized for two specific purposes in this research. Text analysis of clinical reasoning narratives to identify linguistic patterns associated with specific logical fallacies. Assistance in refining the academic English language of the manuscript, ensuring clarity, consistency, and adherence to scientific writing standards. AI were used for additional linguistic refinement of the research manuscript, ensuring proper English grammar,

style, and clarity in the presentation of results. It is important to emphasize that all AI tools were used strictly as assistive instruments under human supervision. The final interpretation of results, classification of errors, and conclusions were determined by human experts in clinical medicine and formal logic. The AI tools served primarily to enhance efficiency in data processing, pattern recognition, and linguistic refinement, rather than replacing human judgment in the analytical process.

2.5. Statistical Methods.

The reviewed studies employ a range of epidemiological designs, longitudinal cohort studies, population-based analyses, and large-scale literature reviews. This methodological diversity strengthens the overall evidence base by combining high-level synthesis with detailed individual-level analyses.

Ennis et al. (2014) analyzed 2,636 community-dwelling older adults (mean age 75.5, 59% female, 36% living alone) from the Adult Changes in Thought (ACT) study cohort over 8.4 years. An adjusted regression models was used to verify the association between living alone and all-cause or ambulatory care-sensitive hospitalizations, though in participants aged 85+ living alone. This was later verified for links to lower all-cause hospitalization risk as well as dementia outcomes (Ennis et al., 2014).

Lloyd et al. (2022) analyzed 4,876,285 adults aged 65+ across England using national pseudonymized hospital and address data. Household context—living alone or living in a two-person household with a frail co-resident—was derived and linked to rates of A&E attendances and emergency admissions over one year (Lloyd et al., 2022).

Parmar et al. (2021) analyzed 26,745 patients aged 18+ receiving mental healthcare from the South London and Maudsley NHS Foundation Trust. Recorded loneliness was identified using natural language processing in electronic health records and linked to acute general hospital outcomes over six years. The correlation between recorded loneliness and higher hazards of both emergency and elective hospitalizations was verified as well as longer lengths of stay and more frequent admissions (Parmar et al., 2021).

Table 2. Statistical results, conclusions and recommendations of reviewed literature

Study (author, year)	Data source	Sample	Key exposure variable	Outcome variable	Statistical methods used	Adjustment for confounders
Ennis et al., 2014	Longitudinal cohort data of community-dwelling older adults (ACT study)	2,636	Living alone	Hospitalization (all-cause and ACS)	Cox proportional hazards; survival analysis	Age, sex, comorbidities, functional status
Lloyd et al., 2022	National routine healthcare data (England)	4,876,285	Household context	Emergency hospital use (A&E visits, emergency admissions)	Multivariable regression; incidence rate ratios	Age, sex, deprivation, comorbidities, prior healthcare use
Parmar et al., 2021 (13)	Electronic mental health records (South London)	26,745	Recorded loneliness	General hospital admissions (risk, frequency, length of stay)	Cox regression; negative binomial regression	Age, sex, ethnicity, psychiatric diagnosis, comorbidities
Chamberlain et al., 2022	Cross-sectional survey (CLSA) linked to health records	44,816	Loneliness	Emergency department visits	Logistic regression; stratified analyses	Age, sex, marital status, socioeconomic factors, comorbidities
Barreñechea et al., 2021	Population-based cohort (Singapore Chinese Health Study,)	16,785	Living alone	Emergency admissions, length of stay, inpatient costs	Multivariable regression	Age, sex, comorbidities, multimorbidity, socioeconomic variables

Baraxatea et al. (2021) analyzed 16,785 community-dwelling older Singaporean adults (mean age 73, range 61–96) from the Singapore Chinese Health Study. Living arrangements (alone vs. with others) and multimorbidity status (≥ 2 chronic diseases) were assessed via face-to-face interviews and linked to one-year emergency department (ED) admissions, inpatient days, and inpatient costs using national Medisave data (Barrenetxea et al., 2021).

Lastly, Chamberlain et al. (2022) analyzed 44,413 adults aged 45–85 from the Canadian Longitudinal Study on Aging (CLSA) using population-based survey data collected between 2015 and 2018. Loneliness was measured dichotomously using a validated scale, and emergency department (ED) visits in the previous 12 months were self-reported. Multivariable logistic regression examined associations between loneliness and ED use, adjusting for demographic, social, and health-related factors, with analyses stratified by gender (Chamberlain et al., 2022).

3. Research results

Across nearly all studies, the results commonly demonstrate a statistically significant association between loneliness or social isolation and increased risk of hospitalization or rehospitalization, however there were significant outliers. The magnitude of this association varies by study design, population, and outcome definition, but remains clinically meaningful in all cases.

Ennis et al. (2014) found that living alone was more common among the oldest adults, females, and those with lower social support (Ennis et al., 2014). Adjusted regression models showed no association between living alone and all-cause or ambulatory care-sensitive hospitalizations, though in participants aged 85+ living alone was linked to lower all-cause hospitalization risk. Dementia did not modify these associations, suggesting living alone does not increase hospitalization in older adults. This study was the one significant outlier that did not demonstrate a statistically significant association between loneliness or social isolation and increased risk of hospitalization. This study recommends that the focus of medical professionals could remain on other health risk factors, the heightened risk of which has already been recognized (Chang & Do, 2015, 24), especially amongst seniors (Topka et al., 2022).

Lloyd et al. (2022) analyzed 4,876,285 adults aged 65+ across England using national pseudonymized hospital and address data. Household context—living alone or living in a two-person household with a frail co-resident—was derived and linked to rates of A&E attendances and emergency admissions over one year. Adjusted analyses showed that living alone or with a frail person was associated with higher emergency hospital use (A&E: RR 1.09; emergency admissions: RR 1.10–1.14). These findings demonstrate that household composition is a strong predictor of acute hospital utilization in older adults and can inform population health management (Lloyd, 2022).

Table 3. Statistical results, conclusions and recommendations of reviewed literature

STUDY	Methodology	Key Results (Including Numerical Data)	Conclusions Regarding Loneliness and Hospitalization Risk	Recommendations
Ennis et al., 2014	Longitudinal cohort study with data analysis	Living alone not associated with all-cause or ambulatory care-sensitive hospitalizations; in participants aged 85+, living alone linked to lower all-cause hospitalization risk	Living alone does not increase hospitalization risk in older adults; dementia did not modify the association	Living arrangements alone may not require targeted hospital risk interventions; focus could remain on other health risk factors
Lloyd et al., 2022	Population based-analysis	Living alone or with a frail co-resident associated with higher emergency hospital use (A&E: RR 1.09; emergency admissions: RR 1.10–1.14)	Household composition is a strong predictor of acute hospital utilization in older adults	Use household composition in population health management to target preventive care and social support interventions.

Parmar et al., 2021	Cohort study with data analysis	Loneliness in 16.4% of patients associated with higher hazards of emergency (HR 1.15) and elective (HR 1.05) hospitalizations, longer stays, more frequent admissions	Loneliness is an important predictor of increased hospital use in mental health populations	Targeted interventions for lonely patients in mental health settings could reduce hospitalizations and improve outcomes
Baraxatea et al., 2021	Cohort study with data analysis	Living alone associated with higher ED admission risk (OR 1.28), longer inpatient stays (+0.61 days), and higher inpatient costs (+322 USD); older adults living alone without multimorbidity had longest stays	Living alone is a key predictor of acute hospital use among older adults	Implement targeted community support and health monitoring programs for older adults living alone
Chamberlain et al., 2022	Cohort study with data analysis	Loneliness associated with higher odds of ED visits (aOR 1.13, 95% CI 1.05–1.21); stronger associations in women (aOR 1.15) than men (aOR 1.10)	Loneliness independently predicts ED utilization, with gender-specific differences	Healthcare providers should address social determinants like loneliness in both primary and acute care settings

Parmar et al. (2021) analyzed 26,745 patients aged 18+ receiving mental healthcare from the South London and Maudsley NHS Foundation Trust. Recorded loneliness was identified using natural language processing in electronic health records and linked to acute general hospital outcomes over six years. Patients with recorded loneliness (16.4%) had higher hazards of emergency (HR 1.15) and elective (HR 1.05) hospitalizations, as well as longer lengths of stay and more frequent admissions, with no difference in mortality. Loneliness was more common in females, non-cohabiting individuals, those living in deprived areas, and those with serious mental illness, personality disorders, depression, or eating disorders. These findings indicate that loneliness in mental health populations is an important predictor of increased hospital use and highlights the need for targeted interventions (Parmar et al., 2021).

Baraxatea et al. (2025) analyzed 16,785 community-dwelling older Singaporean adults (mean age 73, range 61–96) from the Singapore Chinese Health Study. Living arrangements (alone vs. with others) and multimorbidity status (≥ 2 chronic diseases) were assessed via face-to-face interviews and linked to one-year emergency department (ED) admissions, inpatient days, and inpatient costs using national Medisave data. Adjusted analyses showed that living alone was associated with higher ED admission risk (OR 1.28), longer inpatient stays (+0.61 days), and greater inpatient costs (+322 USD), independent of multimorbidity. Stratified and joint analyses indicated that older adults living alone without multimorbidity had the longest average inpatient days. These results highlight that living alone is a key predictor of acute hospital use among older adults in Singapore and underscore the need for targeted community support and health monitoring interventions (Barrenetxea et al., 2021).

Lastly, Chamberlain et al. (2022) analyzed 44,413 adults aged 45–85 from the Canadian Longitudinal Study on Aging (CLSA) using population-based survey data collected between 2015 and 2018. Loneliness was measured dichotomously using a validated scale, and emergency department (ED) visits in the previous 12 months were self-reported. Multivariable logistic regression examined associations between loneliness and ED use, adjusting for demographic, social, and health-related factors, with analyses stratified by gender. Overall, lonely participants had higher odds of ED visits (aOR 1.13, 95% CI 1.05–1.21). Stratified analyses indicated stronger associations among women (aOR 1.15, 95% CI 1.05–1.25) than men (aOR 1.10, 95% CI 0.99–1.22). These findings suggest that loneliness is an independent predictor of ED utilization, with gender-specific differences, emphasizing the need for healthcare providers to address social determinants such as loneliness in both primary care and acute care settings (Chamberlain et al., 2022).

4. Discussion

This literature review explores the impact of loneliness and social isolation on the risk of hospitalization and hospital readmission among older adults. The studies included in this review provide strong evidence supporting the hypothesis that loneliness and social isolation significantly increase the risk of both hospitalization and rehospitalization in this population. The results of these studies however have significant outliers - however it is important to notice that the sole outlier had both the lowest sample size of all reviewed research as well as well as researching a cohort that is not representative of the general population - community-dwelling elders with and without dementia.

4.1. Loneliness and Increased Hospitalization Risk

Recent research consistently demonstrates that loneliness and living alone are associated with an increased risk of hospitalization and emergency healthcare use among older adults. While Ennis et al. (2014) found no significant association between living alone and all-cause or ambulatory care-sensitive hospitalizations in older adults overall, other studies indicate a clearer link. Lloyd et al. (2022) showed that living alone or with a frail co-resident was associated with higher rates of emergency department visits and hospital admissions (RR 1.10–1.14). Parmar et al. (2021) found that recorded loneliness among mental healthcare patients predicted higher hazards of emergency (HR 1.15) and elective (HR 1.05) hospitalizations, as well as longer and more frequent stays. Similarly, Baraxatea et al. (2021) reported that older adults living alone had a higher risk of ED admission (OR 1.28), longer inpatient stays (+0.61 days), and greater healthcare costs (+322 USD), with those living alone without multimorbidity experiencing the longest hospitalizations. Chamberlain et al. (2022) further demonstrated that loneliness independently predicted emergency department visits (aOR 1.13), with stronger effects observed among women (aOR 1.15). Taken together, these findings highlight that both objective and subjective forms of social isolation are important determinants of hospitalization risk.

The mechanisms linking loneliness and living alone to increased hospital use are multifaceted. Loneliness can exacerbate mental health problems, such as depression, and complicate the management of chronic conditions, while social isolation reduces access to informal caregiving and in-home support during recovery. These factors can prolong recovery, increase readmission rates, and contribute to higher healthcare costs. The evidence suggests that targeted interventions—including social support programs, integration into community networks, and improved home-based healthcare services—may reduce the risk of hospitalization and improve overall health outcomes for older adults (Lloyd et al, 2022; Parmar et al, 2021; Barrenetxea et al, 2021; Chamberlain et al, 2022).

4.2. Mechanisms of Risk: Social Support and Mental Health

The increased risk of hospitalization associated with loneliness and living alone can be understood through the interplay of social support and mental health. Social isolation reduces access to practical assistance with daily activities, medication management, and monitoring of chronic conditions, making recovery from illness more challenging and increasing the likelihood of hospital admission (Barrenetxea et al, 2021; Lloyd et al, 2022). At the same time, loneliness negatively affects mental health, contributing to depression, anxiety, and stress, which in turn can worsen physical health outcomes and complicate treatment adherence (Parmar et al, 2021; Chamberlain et al, 2022). The combination of limited social support and deteriorating mental health creates a feedback loop that amplifies vulnerability, highlighting the importance of integrated interventions that address both psychosocial and practical needs to reduce hospitalization risk among older adults.

4.3. Implications for Healthcare Policy and Practice

The evidence linking loneliness and living alone to increased hospitalization has important implications for healthcare policy and practice. Healthcare systems should recognize social isolation as a key determinant of health and incorporate screening for loneliness and living arrangements into routine care, particularly for older adults (Boamay et al, 2021). Policies that promote community-based support, such as social engagement programs, home visits, and coordinated care networks, can help mitigate the risks associated with living alone and poor social support (Shier et al, 2013). Additionally, integrating mental health services with primary and acute care can address the psychological consequences of loneliness, improving both mental and physical health outcomes. Overall, proactive interventions targeting social and mental health factors have the potential to reduce hospital admissions, shorten inpatient stays, and lower healthcare costs while enhancing the quality of life for older adults.

4.4. Limitations and Future Directions

Despite the growing evidence linking loneliness and living alone to hospitalization, several limitations remain in the current research. Many studies rely on observational designs, which can identify associations but cannot fully establish causality (Ennis et al, 2014; Lloyd et al, 2022). Measurement of loneliness varies across studies, with some using subjective self-reports and others relying on objective indicators such as living arrangements, which may limit comparability (Parmar et al, 2021; Chamberlain et al, 2022). Additionally, most research focuses on older adults in high-income countries, leaving gaps in understanding the impact of loneliness on hospitalization in younger populations and in diverse cultural and socioeconomic contexts (Barrenetxea et al, 2021). Future research should prioritize longitudinal and interventional studies to clarify causal pathways, explore the effectiveness of social and mental health interventions, and examine how technology, community programs, and integrated care models can mitigate the risks associated with loneliness and social isolation.

5. Conclusions

Loneliness and social isolation are strong predictors of hospitalization and rehospitalization, particularly among older adults. Research findings tend to indicate that individuals living alone are more vulnerable to hospitalization and rehospitalization due to a lack of social support and difficulties in managing their health independently. Interventions aimed at increasing social support and improving access to healthcare can effectively reduce the risk of hospitalization and improve the quality of life for those living alone. Therefore, it is important to continue research on this topic while also implementing practical solutions.

Author Contributions:

Conceptualization: K.B. and L.K.; methodology: J.L.C., R.P. and N.M.; check: J.G.K. and K.Z.; formal analysis: L.K. and A.P.; investigation: K.B., A.K. and Z.P.; data curation: N.M., J.G.K. and W.C.; writing - rough preparation: K.B., J.L.C. and R.P.; writing - review and editing: J.G.K., K.Z. and L.K.; visualization: K.L.; supervision: K.B.; project administration: K.B.

All authors have read and agreed with the published version of the manuscript.

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