

Conceptualizing Loneliness in Later Life Through a Biopsychosocial Lens

By

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Abstract

Loneliness among older adults represents a growing public health concern with complex psychological, social, and biological needs. Loneliness is associated with an increased risk of mental health concern, cognitive decline, and physical health deterioration, making it a critical issue among aging populations. Despite a growing body of research, there remains no universally accepted model, definition, or measurement framework for loneliness. Current interventions which typically focus on objective isolation and social elements of loneliness have demonstrated mixed and frequently inconclusive results, suggesting that such approaches may inadequately address all dimensions of loneliness. This capstone investigates how loneliness can be conceptualized through the biopsychosocial model to more comprehensively capture the multifaceted factors that influence the experience of loneliness among older adults. Biological, psychological, and social dimensions are examined, with particular attention to how these dimensions interact to reinforce and sustain cycles of loneliness. Ethical and intersectional considerations are also explored, emphasizing the need for culturally responsive and competent research and practice that respect different experiences of aging and loneliness. The themes explored suggest that addressing loneliness effectively requires holistic approaches that address all dimensions of loneliness and incorporate policy, community, and clinical perspectives to do so. Finally, this paper proposes pathways for advancing research, policy and clinical practice to more effectively address the multidimensional nature of loneliness among older adults.

Keywords: loneliness, older adults, biopsychosocial model, interventions

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Conceptualizing Loneliness in Later Life Through a Biopsychosocial Lens

A major public health concern to consider in the coming years is the rapid aging of the Canadian population (Statistics Canada, 2024). Older adults (aged 60+) account for the fastest growing demographic in Canada (Statistics Canada, 2024). Canadians are living longer and fewer are giving birth than ever before which is contributing to this shift in demographics. According to Statistics Canada (2024), in 2023 older adults accounted for approximately 18.9% of the total population which equates to about 7.6 million people. This figure is expected to continue to grow rapidly in coming years with estimates that by 2030 older adults could account for between 21.4% and 23.4% of the Canadian population (Statistics Canada, 2024). According to the World Health Organization (WHO, 2023), risk factors for mental health conditions in older adults include ageism, a decline in functional ability, reduced income, adverse life experiences, and experiences of social isolation and loneliness. Despite this rapid change in demographics and the unique mental health needs of older adults, research shows that these individuals are less likely to seek help and underutilize mental health treatment than their younger counterparts (Kessler et al., 2014). It is for this reason that this paper will use a literature review to explore the research on older adults struggling with the physical, psychological, emotional, and social components of loneliness. Specifically, this paper will explore why current interventions lack efficacy and what factors need to be addressed in order to improve the health and well-being of older adults who experiences loneliness.

Background of the Problem

Both loneliness and social isolation have emerged as growing social issues within the older adult population (WHO, 2023). Loneliness refers to a subjective and distressing experience that arises when an individuals perceived social relationships are less satisfying or are fewer in

number than they desire (Latikka et al., 2021). Social isolation is defined as an objective lack of social contacts and relationships with others (Latikka et al., 2021). Cudjoe et al (2020) have found that nearly half (43%) of older adults reported feeling lonely in 2020. This is of particular significance due to the demographic shift and rise of the older population in Canada (Statistics Canada, 2024). For older adults, social isolation and loneliness are not only emotionally challenging in many ways but are also linked to numerous negative mental health outcomes including depression, anxiety, cognitive decline, and a higher risk of mortality (Taylor et al., 2018). The persistent sense of disconnection that comes with loneliness leads to heightened psychological stress and emotional pain, which in turn contributes to or exacerbate mental or physical health conditions and lead to an increased risk of mortality (Cacioppo & Cacioppo, 2018).

For older adults, the experience of loneliness is a deeply impactful experience that transcends mere social isolation and requires distinct attention to its unique effects and mitigating factors (Nakou et al., 2025; WHO, 2023). While loneliness has destructive potential for all ages, older adults are uniquely at risk (Hawkley & Cacioppo, 2010). A systematic meta-analysis Nakou et al. (2025) demonstrated that loneliness in older adults is independently linked with increased all-cause mortality, even when accounting for covariates such as social isolation, suggesting that loneliness is a distinct predictor of health risks in aging populations. Older adults are more vulnerable to the impacts of both loneliness and social isolation as they already face a heightened risk of both morbidity and mortality, stemming from a combination of age-related challenges such as physical decline, chronic health conditions, reduced mobility, and cognitive impairment (WHO, 2023). Additionally, structural and social factors including ageism, diminished income, bereavement, and limited access to supportive services further compounds

this vulnerability (WHO, 2023). While not necessarily causal, the experience of social isolation exacerbates these risks, contributing to a cycle of deteriorating physical and mental health (Nicholson, 2012). This is significant to the counselling profession because, as the older adult population continues to grow, counsellors are increasingly likely to encounter clients struggling with these issues.

As a result of the concerns regarding the high rates of older adults experiencing loneliness and the associated adverse outcomes, research on this topic has risen significantly (Cudjoe et al., 2020; Hoang et al., 2022; Sahu et al., 2019; Taylor et al., 2018). This growing body of work has deepened the understanding of complex factors that contribute to the experiences of older adults, as well as their impact on mental health and overall well-being (Hoang et al., 2022; Taylor et al., 2018). Because of the increased academic interest, various kinds of interventions have emerged seeking to alleviate this issue (Hoang et al., 2022). Group based interventions have become some of the most common approaches used to address loneliness and social isolation among older adults since they offer a built-in social network which are beneficial for individuals with limited existing social connections (Sahu et al., 2019). There are various types of group-oriented interventions that use groups in order to alleviate social isolation, these include social prescription, group therapy, group exercise, (Hoang et al., 2022). These types of interventions utilize forced proximity in order to alleviate loneliness within older adults (Hoang et al., 2022).

Despite being the most popular interventions for treating loneliness in older adults, social interventions on their own have not demonstrated significant results in improving the adverse emotional impact of loneliness or the quality of life in older adults (Hoang et al., 2022). The ineffectiveness of current loneliness interventions can be attributed at least in part to many older

adults being lonely without being socially isolated (Hoang et al., 2022). Additionally, group interventions as it currently stands do not allow for the necessary time it takes to develop meaningful, high value friendships (Hall, 2018). Group interventions also cannot sufficiently support the loss of an intimate partner or trusted confidant due to the extensive time and care it takes to create requisite bonds, and therefore fail to address the emotional dimension of loneliness (Cacioppo & Cacioppo, 2018). Lonely older adults may be surrounded by people in their lives but still feel the pain associated with loneliness (Newall & Menec, 2019). In addition to this, older adults who struggle with social anxiety may not benefit from group interventions (Hoang et al., 2022). For these individuals, engaging with unfamiliar people is particularly challenging and as a result, group-based interventions alone is insufficient in alleviating their experiences of loneliness (Hoang et al., 2022). Additionally, many older adults report mobility limitations, chronic pain, or other health impairments that make attendance at group difficult or impossible. Fear of injury, lack of accessible facilities, and transportation issues create intrapersonal and environmental barriers that social interventions often overlook (Kalata et al., 2025). Consequently, while group or prescribed physical activity holds potential, without adapting to health status, mobility constraints, and individual preference, social prescription may be ineffective or even counterproductive for some older adults. Norlin et al. (2025) found that while both quantity and quality of social relationships are relevant to loneliness, the quality of those relationships has a significantly greater influence on an individual's experience of loneliness than quantity. This suggests that loneliness is a more complex issue than simply having a lack of social connections. Effectively addressing loneliness in older adults may necessitate a more individualized and introspective approach that extends beyond increasing opportunities for social interaction or simply decreasing the social isolation factor (Hoang et al.,

2022). If the ineffectiveness of these approaches is not addressed, older adults will remain at heightened risk for worsening mental health and reduced quality of life (Taylor et al., 2018).

Statement of the Problem

This capstone identifies a significant gap in the literature regarding the conceptualization of loneliness beyond the conceptualization of social proximity within the older adult population. Despite increased recognition of loneliness and social isolation as distinct but related concepts, current interventions often focus only on increasing social contact between older adults and do not address other factors that contribute to and are associated with the experience of loneliness (Latikka et al., 2021). The counselling literature remains heavily focused on social interventions that aim to increase the quantity of social interaction rather than address the other complex factors that are important to the individual experience of loneliness (Hoang et al., 2022). These approaches, while potentially valuable in addressing objective isolation, often overlook the subjective and internalized experience of loneliness that persist even in the presence of objective social contact. In response to this gap in the literature, the central question guiding the research in this capstone is “how does the literature support the conceptualization of loneliness in older adults beyond social isolation?”. By highlighting the biopsychosocial components of loneliness, this literature review aims to explore why social interventions alone are not enough to improve the well-being of older adults struggling with loneliness.

Purpose of the Research

This literature review will be conducted to provide a comprehensive understanding of the existing research on the physical, emotional, psychological, and social factors that contribute to the experience of loneliness. Directed towards an audience of fellow graduate students, mental health professionals, and researchers interested in social isolation and loneliness in older adults,

this capstone aims to explore what is missing from current interventions while also encouraging further research in this understudied area.

The importance of this topic is highlighted by the rapidly aging population of Canada and many other countries (Statistics Canada, 2024). As the proportion of older adults continues to grow, so too does the urgency to address the unique mental health challenges they face. Among these challenges, loneliness stands out as a particularly pressing concern, as it is strongly associated with a heightened risk of numerous adverse mental health outcomes, including depression, anxiety, cognitive decline, and a higher risk of mortality (Taylor et al., 2018). Recent epidemiological data indicates that loneliness is pervasive among older adults across the globe. In the United States, approximately 43% of older adults report experiencing loneliness (Cudjoe et al., 2020). Comparable findings have been reported in Canada where 19% of older adults indicate experiencing loneliness (Islam & Gilmour, 2023). Loneliness is also prevalent outside North America; for example, 26.2% of older adults in China self-identify as lonely (Simon & Chang, 2014). Additionally, research from Latin America indicates that loneliness within older adults has prevalence rates from approximately 25.3% to 32.4% (Gao et al., 2021). These statistics not only reflect the personal suffering of many individuals but also signals a potential public health crisis if left unaddressed.

Significance of the Research

The benefits of addressing this problem exist at both the individual and societal levels. On an individual level, by highlighting the biopsychosocial components of loneliness, mental health professionals can more accurately tailor their approaches to each individual's unique needs, addressing what elements of loneliness they are facing rather than applying a broad intervention that only targets objective social isolation (Hoang et al., 2022). On a societal level,

this work can inform the development of age-sensitive therapeutic training for counsellors, and shape mental health approaches aimed at addressing the complex needs of older adults.

This literature review will contribute to the current body of research by highlighting elements of loneliness that exist beyond lack of social isolation. By identifying themes and patterns within the existing literature, this review explores why social interventions are not enough to treat the complex needs of older adults. This approach seeks to broaden counselling modalities that seriously consider the multifactorial nature of loneliness and deepen the understanding of how counselling can contribute to the complex mental health needs of older adults experiencing loneliness and social isolation.

Theoretical Framework

The biopsychosocial model allows for a broader understanding of the many different factors that contribute to the health and well-being of older adults by seeing each individual as a complex and whole person (Engel 1977). This model was formulated by Engel (1977) as an alternative to the strictly biomedical model, which focused almost exclusively on physical or biological aspects of disease (Lang, 1969). The biopsychosocial model contributes to the literature review by integrating biological, psychological, and social dimensions to understand the causes, experiences, and outcomes associated with loneliness. Through the biopsychosocial model, loneliness can be conceptualized as a variety of complex factors that interact with one another and contribute to the range of physical and mental health concerns that are seen among individuals experiencing loneliness (Engel, 1977).

Previous research has used the biopsychosocial model as a theoretical framework to understand how loneliness impacts a variety of physical, psychological, social, and emotional factors (Megalakaki & Kokou-Kpolou, 2022). In their study, Megalakaki and Kokou-Kpolou

(2022) investigate a variety of biopsychosocial factors to examine the associations between loneliness and mental health and behavioural outcomes.

Definition of Terms

Older Adult

Definitions of older adult vary across different sources. For the purpose of this capstone, the definition provided by WHO's (2023) classification which defines an older adult as a person aged 60 years or older.

Social Isolation

Social isolation is a term that refers to an objectively low or absent level of social interaction and contact with others, typically measured using indicators like a limited number of social interactions or a small social network (Latikka et al., 2021).

Loneliness

Loneliness is defined as a subjective emotional experience which is typically described as distressing (Latikka et al., 2021). This feeling arises when there is a significant gap between an individual's actual social relationships and their desired ones, reflecting the perceived experience of social isolation regardless of whether they are objectively socially isolated or not (Latikka et al., 2021).

Positioning Statement

My interest in exploring the emotional impact of loneliness and social isolation among older adults is shaped by a combination of personal, academic, and professional experiences. Personally, I have witnessed how older adults without social connections can be left behind, having seen family members struggle with disconnection. In my academic career I have seen how this population is often overlooked in the counselling profession. In my opinion this

underrepresentation contributes to a lack of awareness and preparedness among emerging counsellors to effectively support the unique emotional and psychological needs of older adults. Professionally, I have worked with older adults at agencies whose services target this population specifically and have anecdotally witnessed how profound the impact of social isolation and loneliness can be. These experiences have influenced my belief that meaningful therapeutic outcomes must account for the individual's emotional experience rather than their surface level proximity to others. I recognize that I carry a predisposition toward valuing introspective, counselling approaches and am mindful of how this may shape the way I interpret and engage with the literature. Acknowledging these biases is an important part of how I approach this capstone, and it reinforces my commitment to critically and thoughtfully examine all perspectives within the research.

Overview of the Paper

Chapter one introduces the topic of the paper by discussing the background information, presenting problem, purpose, and significance of the research. Chapter one discusses the theoretical framework of the literature review, define important terms, and discuss the researcher's position. Chapter two will then discuss methodological considerations in the study drawing on Cresswell and Cresswell's (2017). The search parameters, inclusion and exclusion criteria, methods of study evaluation, and any challenges encountered during the research process will also be discussed within this chapter. Chapter three will present and analyze key themes relevant to the research question. The third chapter will also identify existing gaps in the literature and address pertinent ethical considerations. Chapter four will then explore the practical applications of the reviewed literature, with a focus on how these findings can be

integrated into clinical practice. Finally, chapter five provides recommendations for future research and reflections of learning throughout the capstone process.

Chapter Two: Methods of Literature Search

This chapter provides a comprehensive overview of the literature search methodology employed in this review. Following Cresswell and Cresswell's (2017) recommendations for systematic and transparent research design, the process involved defining inclusion and exclusion criteria, identifying relevant databases, and refining search terms iteratively to capture both current and foundational studies. This approach facilitated a balanced and evidenced informed synthesis that highlighted key trends, gaps, and implications for practice within the literature. Furthermore, the practical and methodological challenges encountered throughout the search process and how these challenges were confronted are addressed and the significant limitations of the search methodology are explored. Finally, how these constraints may have influenced the breadth and depth of the literature reviewed, as well as the interpretation and generalizability of the study's findings are critically examined.

Description of Literature Search Process

The methodology used for this literature review was guided by the research question; "how does the literature support the conceptualization of loneliness in older adults beyond social isolation?". The literature reviewed was gathered through Google Scholar, PsycInfo, PsycArticles, and Statistics Canada. The search parameters were focused between 2020 and 2025 to ensure current and relevant studies were predominantly included. Older studies were also included as deemed important or relevant to the research topic; however, when older literature was used, more recent research was found to support it. Studies were only included if they related to the research problem and identified research question. The search was limited to studies published in English. Key search terms were organized around three primary concepts: population (e.g., "older adults", "elderly", "aging population"), biopsychosocial factors (e.g.,

“physical”, “psychological”, “emotional”, “social”), and outcomes (e.g., “loneliness”, “social isolation”, “mental health”, “well-being”). Boolean operators were used to combine these terms (e.g., ("older adults" OR "elderly") AND ("technology training" OR "peer support") AND ("loneliness" OR "social isolation"). This allowed for a combination of search terms, allowing for both specificity and general searches during this process. The search terms were discovered by doing preliminary readings of gerontological articles and keeping track of various terms that were used to describe “older adults.”

The majority of the studies included in this capstone were literature reviews due to their ability to provide comprehensive syntheses of existing research on complex and interdisciplinary topics (Sataloff et al., 2021). For example, the following are all literature reviews that were included in this review: Hajek et al. 2021; Hoang et al., 2022; Shvedko et al., 2018. Given the broad scope of the research question, literature reviews offered valuable insights by summarizing findings from multiple primary studies (Sataloff et al., 2021). This facilitated the identification of important themes, as well as the recognition of gaps in the research regarding the complex nature of loneliness in older adults, extending beyond mere physical presence or social contact. Moreover, because this topic intersects several disciplines, literature reviews served as efficient tools for navigating large volumes of research across a multitude of disciplines. For example, Bzdok and Dunbar’s (2020) review emphasizes the neurobiological underpinnings of loneliness, whereas Erzen and Çikrikci’s (2018) research focuses on its psychological dimensions. In many cases, recent literature reviews also highlighted the most current debates, methodological challenges, and emerging trends in the field, making them particularly relevant for shaping a contemporary and well-informed analysis (Sataloff et al., 2021).

Challenges and Limitations in Literature Search Process

Several challenges emerged during the literature search process. One of the primary difficulties was the inconsistent use of terminology across studies. For instance, some articles referred to the target population using terms like “seniors”, “aged individuals”, or “geriatric population”, which were not always captured by the initial search terms. This required iterative refinement of search terms and frequent adjustments of Boolean combinations to enhance both the sensitivity and specificity of results. Additionally, the interdisciplinary nature of the topic, spanning areas such as gerontology, mental health, technology, and social work, meant that relevant studies were dispersed across a wide range of journals and disciplines, making comprehensive coverage more complex. Finally, filtering for current and relevant studies while preserving the inclusion of foundational literature required a delicate balance, particularly when older studies remained highly cited or influential within the field.

The literature review process presents several limitations that impact the findings of the literature reviewed, as well as the comprehensiveness, generalizability, and depth of analysis. One significant limitation was the limited number of databases available. Having access to only databases provided to City University students constrains the breadth of the analysis. Many articles were inaccessible or locked behind paywalls and were therefore excluded. This limited scope may have led to an incomplete representation of the current research landscape as potentially relevant articles were not included.

Secondly, the restriction to English-language publications introduces a notable language bias. This excludes potentially valuable research conducted in non-English-speaking regions, which is especially significant given that issues such as aging, loneliness, and digital literacy are

global in nature. As a result, the findings may be culturally skewed toward Western perspectives, limiting the applicability of conclusions to more diverse populations.

Table 1

Key Studies

Study	Focus/ Findings	Relevance to Research Question
Bzdok & Dunbar (2020)	Literature review examining neurocognitive basis of loneliness and the consequences it has for physical and psychological well-being.	Conceptualizes loneliness as a physiological response, directly addressing loneliness beyond social isolation. This review explains how neural and hormonal processes contribute to physical and psychological outcomes.
Erzen & Çikrikci (2018)	Meta-analysis finding that loneliness is a significant variable affecting depression.	Demonstrates that loneliness has significant psychological consequences, supporting the idea that loneliness is a subjective multifaceted experience. This underscores the emotional and psychological dimensions of loneliness in older adults, highlighting how internal experiences beyond social contact shape outcomes.
Fierloos et al. (2021)	Meta-analysis investigating and distinguishing between social and emotional loneliness. Results indicate that while social and emotional loneliness often overlap, they are distinct concepts that differ across demographics.	Directly supports the conceptualization of loneliness as more than social isolation by distinguishing between social and emotional loneliness. By showing that these forms of loneliness are overlapping yet distinct and vary across demographics, it reinforces the need to examine biological, emotional, and psychological factors alongside social ones in older adults.

Hoang et al. (2022)	Review and meta-analysis evaluating interventions targeting loneliness and social isolation and loneliness in older adults.	Findings suggest that social prescription interventions are ineffective at reducing loneliness in older adults. Authors suggest interventions should target factors other than social when attempting to alleviate loneliness.
Holt-Lunstad (2021)	Narrative review synthesising existing evidence on the health impacts of social isolation and loneliness. Its primary aim is to highlight social connection as a critical, yet underrecognized, determinant of health and to translate research findings into practical recommendations for clinical and healthcare settings.	Promotes the integration of social wellbeing into medical care, suggesting that loneliness is multidimensional.
Lyu & Forsyth (2022)	A scoping review examining associations between loneliness in older adulthood and built environments at the block, neighborhood, and city levels.	The findings indicate that limited accessibility to social and physical infrastructure (e.g., public transportation) is associated with increased loneliness and social isolation among older adults.
Norlin et al. (2025)	A cross-sectional study measuring loneliness and quality vs. quantity of relationships. Results indicate that quality of relationships is most important for reducing loneliness.	Supports the importance of social relationships as a key factor in conceptualizing loneliness.
Spithoven et al. (2019)	Review examining the genetic underpinning of loneliness.	Supports biology as one of the factors contributing to loneliness.
Vitale & Smith (2022)	A review discussing behavioural and neuropsychological components of loneliness.	Highlights the psychological and biological components of loneliness and how they interact with one another.
Wong et al. (2022)	Meta-analysis finding that loneliness increases reliance on cognitive control networks to manage attention toward social cues and rewards,	Demonstrates that loneliness involves cognitive and emotional processes, not just reduced social contact. It shows how sustained

requiring greater mental effort to process socio-emotional information. Over time, this heightened effort may deplete cognitive resources, contributing to emotional dysregulation and helping explain the clinical impact of chronic loneliness.

cognitive effort to manage social information can lead to emotional dysregulation, supporting a multidimensional conceptualization of loneliness in older adults.

Chapter Three: Review of the Literature

This chapter addresses the research question: “how does the literature support the conceptualization of loneliness in older adults beyond social isolation?”. To answer this question, this chapter reviews and synthesizes the literature on loneliness among older adults through an biopsychosocial lens. The biopsychosocial model provides a comprehensive framework for understanding loneliness as a dynamic and multidimensional phenomenon rather than a purely social or emotional state (Engel, 1977). Central themes within the literature will be discussed and additional gaps in the literature will be identified. Themes within this chapter are organized in accordance with the major dimensions of the biopsychosocial framework, being the biological or physical dimension, the psychological dimension, and the social dimension (Engel, 1977). While prior research has often examined these domains independently in relation to loneliness (Lyu & Forsyth, 2022; Spithoven et al., 2019; Vitale & Smith, 2022; Wong et al., 2022), this literature review will integrate findings across domains to demonstrate how each contributes to the onset and maintenance of loneliness in later life. By synthesizing evidence across these interconnected dimensions, the chapter highlights the limitations of conceptualizing loneliness solely as social isolation.

Conceptualizing Loneliness

Loneliness is a term that refers to the subjective and distressing experience of perceived inadequate social connection (Latikka et al., 2021). In the literature, loneliness is typically conceptualized in two ways, unidimensionally or multidimensionally (Spithoven et al., 2019). Unidimensional researchers come from the approach that loneliness varies mainly in intensity. They argue that there are common themes among experiences of loneliness across different contexts (Spithoven et al., 2019). This approach is less effective as it does not account for the

varying experiences of lonely individuals (Hoang et al., 2022). Researchers that take the multidimensional approach distinguish between different types of loneliness (Walsh et al., 2025). Multidimensional loneliness has been widely conceptualized within the research literature as a subjective and multifaceted experience that is unique to each individual and extends beyond objective social isolation (Cacioppo and Cacioppo, 2018). However, despite the growing consensus on its complexity, there is no single agreed upon model of loneliness, and its definition continues to vary across studies. The multidimensional perspective on loneliness aligns closely with the biopsychosocial model which similarly emphasizes the interplay of various dimensions in shaping each individual's experience (Engel, 1977).

For older adults, loneliness is a deeply impactful experience that transcends mere social isolation and requires distinct attention to its unique effects and mitigating factors. While loneliness has destructive potential for all ages, older adults are uniquely at risk (Hawkley & Cacioppo, 2010; Taylor et al., 2018). The biopsychosocial model allows for a holistic view of loneliness that accounts for varying experiences of loneliness that exist both between individuals and throughout the lifespan (Walsh et al., 2022). These dimensions impact individuals differently and interact and reinforce one another across different biopsychosocial levels.

While social isolation is frequently associated with loneliness, it is not a prerequisite (Vitale & Smith, 2022). It is possible that some individuals are socially isolated but do not feel lonely (Hoang et al., 2022). Alternatively, others may not be objectively socially isolated but still feel lonely (Hoang et al., 2022). Therefore, qualitative or subjective appraisals of social relationships are more relevant predictors of loneliness than the quantitative aspects of social relationships (Vitale & Smith, 2022). Distinctions between loneliness and social isolation have increasingly become prominent within the literature. Using data from 2251 community dwelling

older adults, Fierloos et al. (2021) examine the socio-demographic characteristics associated with different dimensions of loneliness. They evaluated associations between emotional and social loneliness within age, sex, living situation, educational level, and immigration history. Feirloos et al. (2021) found differing predictors for both social isolation and loneliness, suggesting while there is considerable overlap, these conditions often have different demographics. Their findings suggest that it is important for mental health professionals to look at these constructs independently to form a holistic view of each individual's wellbeing.

Cacioppo et al. (2014) examine loneliness as an evolutionarily adaptive aversive signal with genetic underpinnings and broad physiological and psychological consequences. The authors differentiate between loneliness and solitude, framing loneliness as “perceived social isolation” with deep evolutionary roots comparable to hunger or pain, serving to motivate social reconnection. The review concludes that the experience of loneliness is not merely a psychological condition, but a multidimensional state rooted in our evolutionary past, influenced by genes, shaped by environments, and expressed through social interaction and perception (Cacioppo et al., 2014). The work of Cacioppo et al. (2014) and Spithoven et al. (2019) conceptualize loneliness through a biopsychosocial framework by integrating biological, psychological, and social dimensions. They begin to articulate the complexity of loneliness by emphasizing its multidimensional nature, proposing that loneliness emerges through the dynamic interplay of various biological, psychological, social, and emotional factors. The authors suggest that genetics, neurobiology, stress responses, cognition, perception, social networks, and more all impact the subjective experience of loneliness and emphasize that any one of these conditions does not sum up feelings of loneliness (Cacioppo et al., 2014; Spithoven et al., 2019).

There is increasing recognition that social isolation and loneliness are separate constructs; however, there is still considerable variability in how they are each defined and measured, which complicates efforts to compare findings across studies (Feirloos et al. 2021; Latikka et al., 2021). This lack of conceptual and methodological consistency undermines the reliability to draw conclusions about outcomes of loneliness and limits the development of effective interventions (Hoang et al., 2022). When researchers use inconsistent definitions or tools, studies may capture different aspects of the experience but not the whole picture. As a result, it can be difficult to draw conclusions on causal pathways or the efficacy of interventions at reducing loneliness among older adults (VanderWeele et al., 2012).

Physical Dimension of Loneliness

The physical dimension of loneliness includes the physiological processes and health outcomes associated with the subjective experience of loneliness (Latikka et al., 2021; Musich et al., 2022). Emerging evidence from recent years indicates that loneliness is not only psychologically distressing but biologically consequential (Holt-Lunstad, 2021; Naito et al. 2023; Petitte et al., 2015; Yu et al., 2020). This dimension is shaped by neurobiological and genetic mechanisms as well as health and exercise behaviors, which in turn interact with and influence other dimensions of loneliness (Bzdok & Dunbar, 2020; Taylor et al., 2018).

Neurobiology and Genetics

Latikka et al. (2021) posits that loneliness comes from a biological drive to connect with others. It is suggested that as a social species, humans require social relationships in order to maintain our health and well-being. As a result, social behaviours are seen as valuable and motivating while social isolation is seen as aversive and detrimental (Latikka et al., 2021). Over time, human beings developed neurobiological mechanisms that drive individuals to seek out and

form social relationships with others (Cacioppo & Cacioppo, 2018). Neuropeptides such as oxytocin and vasopressin, and neurotransmitters like dopamine, are essential to promoting social seeking behaviours (Vitale & Smith, 2022). Alternatively, stress related neuropeptides such as glucocorticoids and corticotrophin releasing hormone are increased during social isolation, leading to the anxiety and depressive like behaviours associated with loneliness which can also influence an individual's sociality (Vitale & Smith, 2022). In their review, Cacioppo & Cacioppo (2015) highlight previous findings that a decrease in a neurosteroid called pregnenolone was associated with social isolation in mice as well as loneliness in humans. These neurobiological factors, when viewed through an evolutionary lens, suggest that loneliness is not simply an emotional state but a signal that prompts individuals to restore social connections essential for survival. The authors hypothesise that administering pregnenolone can regulate emotional consequences (such as depression) in humans (Cacioppo & Cacioppo, 2015).

In their meta-analysis of 70 different studies, Spithoven et al. (2019) emphasize that loneliness functions separately from social isolation. While biological drives to socialize do impact the perception of loneliness, they do not paint the whole picture (Latikka et al, 2021). Research on behavioural genetics determine that genetic factors contribute to loneliness, with partial consideration to the overlap between genes contributing to loneliness and genes contributing to neuroticism (Spithoven et al., 2019). Despite this, the authors point out that genes are not the only risk factor, as genetics are not deterministic and do not have a solely causal role in loneliness. Instead, they posit that, environmental factors play a key role in the development of loneliness throughout the lifespan. The authors call for an integrative approach to creating interventions to treat loneliness with an understanding of both genetic and environmental roles (Spithoven et al., 2019).

To address the neurobiological aspects of the physical dimension of loneliness, social prescription alone is not enough (Hoang et al., 2021). The emphasis on social networks and connections based on biological drives may suggest social prescription in order to fulfill an individual's need for social contact; however, the reality is much more complex (Cacioppo & Cacioppo, 2015; Spithoven et al., 2019). This is partly because experiences of long term or chronic loneliness can dysregulate neurobiological systems (Latikka et al., 2021; Spithoven et al., 2019). For example, persistent activation of stress-related neuropeptides can increase cortisol levels, heightening physiological arousal and reinforcing hypervigilance to social threats (Cacioppo & Cacioppo, 2018). This can make the symptoms of loneliness worse, particularly for older adults who are more likely to struggle with physical health (WHO, 2023). Dysregulation in oxytocin and dopamine pathways may also diminish the rewarding aspects of social contact, reducing motivation to seek connection and perpetuating this cycle (Vitale & Smith, 2022). This is especially poignant for older adults who may be more likely to have experienced loneliness to a significant extent throughout their lifespan (Hutten et al., 2022; WHO, 2023).

Despite growing interest in the neurobiological and genetic underpinnings of loneliness, there remain significant gaps in the literature (Spithoven et al., 2019; Vitale & Smith, 2022). Much of the existing research is correlational, making it difficult to determine whether neurobiological changes are causes, consequences, or both in relation to loneliness (Spithoven et al., 2019). While there has been some research on psychopharmacological interventions for loneliness, findings remain preliminary (Cacioppo & Cacioppo, 2015). Illustrating this, research on neurosteroids such as pregnenolone and its derivatives suggest potential in modulating brain regions associated with social threat perception, though these approaches are still in experimental stages (Cacioppo & Cacioppo, 2016). To date, no medication has been approved specifically for

the treatment of loneliness, highlighting both the complexity of its neurobiological underpinnings and the challenges of developing a “pharmacological cure” for what is fundamentally a multidimensional experience (Conn et al., 2024). This suggests that while psychopharmacology may play a supportive role, more research needs to be done to address all dimensions of loneliness among older adults.

Health and Exercise

Another key factor to consider within the biological/physiological dimension of loneliness is health and exercise (Musich et al., 2022). The benefits of physical activity for mental and physical health have been well documented within the scientific literature (Musich et al., 2022; Pels and Klienert 2016; Petitte et al. 2015). Not only does physical exercise directly improve physical health but it also plays a social behavioural role (Musich et al., 2022). In their observational study on older adults aged ≥ 65 (N=6,652), Musich et al. (2022), found evidence that indicates that higher levels of regular physical activity are associated with decreased experiences of loneliness and social isolation. Higher rates of physical activity were also associated with higher levels of protective factors. The authors suggest that physical activity could serve as an effective intervention for older adults struggling with loneliness (Musich et al., 2022). A systemic review analyzing 37 studies conducted by Pels and Klienert (2016) found that lonely individuals have a reduced probability of being physically active. The authors suggest that lonely individuals may have fewer social skills, and that deficit reduces their ability to participate in social physical activity. Petitte et al. (2015) suggest that lonely people are less likely to engage in healthy habits and more likely to engage in destructive behaviours which in turn makes them more vulnerable to health concerns and increases their risk of mortality. This may be especially

true for older adults who already are more vulnerable to physical health concerns (Petitte et al., 2015).

Declining physical health may also create significant barriers for older adults in maintaining and accessing social support networks (Shvedko et al., 2018). Chronic illnesses, mobility limitations, sensory impairments, and fatigue contribute to loneliness by restricting opportunities to engage in social activities, attend community events, or sustain regular contact with friends and family (Hawkley & Cacioppo, 2010; WHO, 2023). In their systemic review and meta-analysis of 38 studies investigating the effects of physical activity on loneliness in older adults, Shvedko et al. (2018) found that as well as reducing access to social spaces, physical limitations may also increase dependence on others for transportation or daily activities, thereby restricting autonomy in social engagement and therefore increasing loneliness despite these individuals not being objectively isolated. Consequently, physical health struggles function as both direct and indirect pathways to loneliness, hindering opportunities for interaction while also influencing willingness to participate in social opportunities (Hawkley & Cacioppo, 2010; Shvedko et al., 2018).

Psychological Dimension of Loneliness

The psychological dimensions of loneliness encompass both the emotional and cognitive processes that shape an individual's experience and perception of social disconnection. While loneliness is often colloquially framed as just an emotional state, research has increasingly emphasized the multidimensional nature of psychological loneliness involving affective, evaluative, and cognitive components (Wong et al., 2022). This perspective highlights the need to address both the emotional distress associated with loneliness as well as the cognitive appraisals that sustain or exacerbate it (Wong et al., 2022). For older adults, the effects of

psychological loneliness may be particularly impactful because later life often entails transitions such as retirement, bereavement, and declining health, all of which increase vulnerability to psychological loneliness (WHO, 2023).

Emotional Processes

Emotional or affective loneliness includes the subjective distressing feelings that arise from the perceived inadequacy of close, intimate relationships (Latikka et al., 2021). This dimension is characterized by feelings of sadness, emptiness, and longing for close companionship (Fierloos et al., 2021). For older adults, emotional loneliness is uniquely impactful. For example, in their cross-sectional survey of older adults aged ≥ 65 (N=1255), Dahlberg and McKee (2018) emphasize that older adults can maintain relatively large social networks and regular contact with others yet still report intense emotional loneliness when they feel that no relationship offers emotional intimacy or a sense of belonging. Supporting this, Feirloos et al. (2021) found that emotional loneliness can arise both when individuals are objectively isolated or if their existing relationships lack closeness or emotional support. Similarly, emotional loneliness has also been closely linked with symptoms of depression and other negative health outcomes beyond the effects of social isolation alone (Erzen & Çikrikci, 2018). As a result, it can be posited that emotional loneliness is not a reflection of the number of social ties but rather the quality and emotional depth of those ties. A cross-sectional study conducted by Axén et al. (2023) investigating the impact of social relations on loneliness found that close emotional connections are required for decreasing levels of loneliness, regardless of the number of social contacts an individual has. The authors suggest that a high perceived quality of emotional connection significantly lowers the risk of loneliness among older adults. This includes close relationships such as with spouses but also expands to a wider network including

children, grandchildren, and friends. The absence of close emotional support, even when social contact is frequent, leaves older adults vulnerable to feelings of emptiness, sadness, and disconnection (Axén et al., 2023).

Cognitive Processes

Cognitive processes play a critical role in sustaining loneliness among older adults (Cacioppo & Hawkley, 2009). Cognitive elements of the psychological dimension of loneliness include beliefs, perceptions, and interpretations about one's social world (Wong et al., 2022). For older adults experiencing loneliness, this means how they think about their connections, expectations of rejection, interpretation of ambiguous social cues, or self-appraisals regarding their social worth (Cacioppo & Cacioppo, 2018). These cognitive components have the potential to sustain feelings of loneliness even when objective social contact appears to be sufficient (Piejka et al., 2021).

Older adults who hold maladaptive social cognitions, such as heightened sensitivity to social threat or negative self-perceptions, are more likely to experience persistent loneliness (Masi et al., 2011). Such cognitive biases can lead to avoidance behaviours and reducing social engagements, creating a cycle where individuals are lonely, so they isolate and become lonelier which reinforces isolation (Smith et al., 2021). Lonely individuals interpret others' intentions in ambiguous social situations, finding that they are more likely to perceive negativity even when none exists (Spithoven et al., 2017). For example, a quantitative study by Piejka, et al. (2021) examining the pathways linking social capacity, objective social isolation and perceived social isolation links chronic loneliness with more hostile attributions of ambiguous social situations. This demonstrates that loneliness in later life is maintained not only by external factors but also

by the internal cognitive processes through which social experiences are understood (Piejka, et al., 2021).

For older adults, reduced cognitive ability may also play a role in loneliness (Lee et al., 2024). Cognitive decline can impair memory, attention, and communication skills, making social interactions more challenging and potentially leading to withdrawal from social activities (Lee et al., 2024). This can exacerbate feelings of loneliness as individuals may perceive fewer opportunities for meaningful social engagement or feel less confident in their ability to connect with others (Piejka et al., 2021). There is some evidence to suggest that the impact of loneliness may also accelerate cognitive decline creating a bidirectional relationship that reinforces both loneliness and cognitive deterioration (Guarnera et al., 2023). Ultimately, more research has to be done on the relationship between loneliness and cognitive decline as much of the literature does not differentiate between the constructs of loneliness and social isolation (Guarnera et al., 2023).

Social Dimension of Loneliness

Within the biopsychosocial framework, the social dimension specifically refers to the structural, interpersonal, and community-level aspects that shape the experience of loneliness (Latikka et al., 2021). Examining this dimension is crucial, as the quantity and quality of an individual's social connections significantly influences their experience of loneliness (Cacioppo & Cacioppo, 2018). For older adults, changes in social networks due to retirement, bereavement, or declining mobility often reduce opportunities for social engagement, making them particularly vulnerable to loneliness (WHO, 2023). Moreover, the social environments in which older adults live are characterized by factors such as community connectedness, social cohesion, and societal

inclusion further shape individuals' opportunities for meaningful interaction and emotional support (Lim et al., 2020).

Objective Isolation

Objective isolation refers to the social isolation piece of loneliness being that is the measurable deficiency or complete absence of social interactions and interpersonal connections, commonly assessed through indicators such as infrequent social engagement or a limited social network (Latikka et al., 2021). At the individual level, this may involve a lack of close personal ties or supportive relationships; at the group level, it may be reflected in weak or absent connections to peer groups or social circles; and at the community level, it may manifest as minimal participation in civic or communal activities (Lyu & Forsyth, 2022). Objective isolation is of particular concern for older adults as research suggests they experience higher levels of social isolation than the general population. Although reported prevalence rates vary across studies due to differences in definitions and measurement approaches, data from the Canadian Longitudinal Study on Aging (CLSA) which followed adults aged 45 to 85 for 20 years, indicates that approximately 5.8% of adults aged 45 to 85 are socially isolated, with this figure increasing to 8.4% among those aged 65 and older (Newall & Menec, 2020).

An important gap to consider is the overemphasis of objective isolation within loneliness literature (Holt-Lunstad, 2021). While this element of the social dimension is undoubtedly important and a significant contributor to loneliness, prioritizing it over other concerns could be problematic. For example, many articles conflate objective isolation with loneliness, using the terms interchangeably (Guarnera et al., 2023; Kotwal et al., 2021; Qualter et al., 2015). This leads to inconsistency in how these terms are defined, which complicates efforts to compare findings across studies or develop standardized interventions.

Interpersonal Connection

Within the social dimension of the biopsychosocial model of loneliness, interpersonal connection represents the qualitative aspect of social relationships (Norlin et al., 2025). This key factor includes the emotional depth and perceived meaningfulness of interactions, rather than their frequency or quantity. With the importance of relationship quality in mind, it is important to consider that older adults may maintain extensive social networks yet still experience loneliness if interactions lack emotional support, mutual understanding, or a sense of connectedness (Norlin et al., 2025).

There is a wide range of reasons why older adults may feel lonely despite having access to objective social connection. For example, older adults are more likely to be in informal caregiving roles for their spouses or other family members (Hajek et al., 2021). According to a systematic review by Hajek et al. (2021), older adults in caregiving roles, despite having access to objective social contact, are more likely to experience loneliness and the physical and mental health consequences of it. The authors highlight caregiver burnout as a significant factor contributing to loneliness in caregivers (Hajek et al., 2021). Alternatively, older adults living in long-term care facilities may have access to frequent social interactions with staff and fellow residents, yet still experience loneliness due to a lack of meaningful or emotionally supportive relationships (Quan et al., 2020). These examples illustrate the importance of quality relationships over having objective social contacts but are not the summation of all interpersonal factors that could influence loneliness. These factors are extensive and impossible to count with each individual's experience being unique.

In environments where older adults are lonely but not objectively isolated, structured social activities can often only provide superficial engagement, leaving older adults without

opportunities for deeper interpersonal connection or the development of relationships that support this kind of connection (Hoang et al., 2022). Despite the popularity of these kinds of interventions, they are unlikely to address a key factor being the interpersonal needs of older adults within the social dimension of loneliness (Hoang et al., 2022).

Systemic Dimension of Loneliness

Beyond interpersonal connections and objective isolation on an individual level, systemic factors play a crucial role in shaping the social dimension of loneliness among older adults (Meehan et al., 2023). Systemic aspects of loneliness include economic, political, and community-level factors that shape social networks directly or indirectly, highlighting the need to look beyond interpersonal relationships when understanding loneliness in older adulthood (Algren et al., 2020; Lyu & Forsyth, 2022; Ng et al., 2022). For instance, one factor within this dimension is socioeconomic status. Older adults living in poverty with limited access to transportation and community resources are at heightened risk for loneliness (Algren et al., 2020). Inaccessible urban design, lack of public social gathering spaces, or unsafe neighborhoods can further constrain social opportunities for older adults. Financial constraints may also restrict participation in social and recreational activities that require monetary investment, such as group classes, cultural events, or travel to visit friends and family, thereby reinforcing loneliness (Algren et al., 2020).

Institutional and policy level factors are also contributors to systemic loneliness for older adults (Lyu & Forsyth, 2022). Social policies that neglect accessible transportation, affordable housing, or community programming inadvertently reinforce barriers to meaningful social participation, illustrating how loneliness is embedded in larger societal structures rather than solely resulting from individual deficits. Systemic ageism embedded in policy and institutional

frameworks can also reinforce the systemic subdimension of loneliness (Lyu & Forsyth, 2022). Well intentioned or not, language within policy, overmedicalization, as well as the labels we use to describe older individuals can have an impact on their experience of loneliness (Ng et al., 2022).

Additionally, systemic cultural narratives shape the social experiences of older adults across different cultural contexts (Lykes & Kemmelmeier, 2014). The prevalence, perception, and risk factors of loneliness can vary substantially between individualistic and collectivist cultures. In individualistic societies, which prioritize independence and self-reliance, older adults may experience heightened loneliness if they are no longer economically active or living independently, as social value is often linked (Lykes & Kemmelmeier, 2014). In collectivist cultures that emphasize familial interdependence and multiple generations within the home, older adults may benefit from familial support systems but suffer if these systems are disrupted (Barreto et al., 2021; Pan et al., 2023). Shifts in societal norms, urbanization, and immigration can disrupt these traditional supports, leaving older adults vulnerable to loneliness even within cultures that value the inclusion of elders (Barreto et al., 2021). Systemic considerations of loneliness cannot simply be understood without considering the impacts of economic, political, and cultural structures that shape the experiences of older adults (Barreto et al., 2021; Lykes & Kemmelmeier, 2014).

Despite the increasing recognition of systemic contributors to loneliness among older adults, gaps in the current literature remain. For example, much of the existing research continues to prioritize individual or interpersonal-level explanations of loneliness (Meehan et al., 2023). Additionally, while cross-cultural studies have highlighted differences between individualistic and collectivist societies, these comparisons often overlook the influence of

globalization, migration, and shifting family structures that redefine intergenerational relationships and how they contribute to loneliness (Barreto et al., 2021).

Summary

This chapter examined literature on loneliness among older adults through a biopsychosocial lens, emphasizing that loneliness is a multidimensional and emergent phenomenon that cannot be fully understood by focusing on any single domain in isolation (Walsh et al., 2025). Rather, biological, psychological, social, and systemic factors interact dynamically, forming reinforcing feedback loops that shape the onset, intensity, and persistence of loneliness later in life (Walsh et al., 2025). Chronic loneliness, for example, has been associated with heightened physiological stress responses, such as increased cortisol secretion, which can adversely affect neural systems involved in emotional regulation and social cognition (Bzdok & Dunbar, 2020). These biological changes may exacerbate depressive and anxiety symptoms, promote social withdrawal, and further intensify loneliness, illustrating how vulnerabilities across dimensions mutually reinforce one another (Taylor et al., 2018).

Across the literature, key themes emerged within each biopsychosocial domain. The physical dimension highlighted neurobiological, genetic, and health-related mechanisms that influence loneliness and interact with behavioral patterns (Latikka et al., 2021; Vitale & Smith, 2022). The psychological dimension emphasized maladaptive cognitions, emotional processes, and affective experiences that can sustain loneliness even in the presence of objective social contact (Axén et al., 2023; Piejka et al., 2021; Wong et al., 2022). The social dimension underscored not only the quality and quantity of interpersonal relationships, but also broader systemic influences, including socioeconomic conditions, policy frameworks, and cultural norms that shape older adults' social environments (Algren et al., 2020; Cacioppo & Cacioppo, 2018;

Lyu & Forsyth, 2022). Collectively, these findings underscore that loneliness is rarely the result of a single factor, but instead emerges from the interaction of multiple, interdependent systems.

Despite growing recognition of this complexity, gaps in the literature remain. Much of the existing literature continues to examine loneliness through isolated disciplinary lenses, which limits understanding of how these dimensions interact in practice (Walsh et al., 2025). A biopsychosocial perspective emphasizes that these factors are not merely additive but reciprocal, with biological stress responses influencing emotional processing, which in turn shapes social behavior and engagement with the environment (Cacioppo & Cacioppo, 2018; Naito et al., 2023). The biopsychosocial themes discussed in this chapter provide a critical foundation for clinical application and future research by highlighting multiple, interacting targets for assessment and intervention. Rather than focusing exclusively on increasing social contact, the biopsychosocial model encourages professionals across a multitude of disciplines to assess physical well-being, cognitive and mental health, as well as consider social and systemic factors that contribute to loneliness (Cacioppo & Cacioppo, 2018; Holt-Lunstad, 2021; Lyu & Forsyth, 2022; Wong et al., 2022).

Ethical Considerations

Research Ethics

Research and clinical practice addressing loneliness among older adults requires careful ethical consideration. Ethics are essential to address within the conceptualization of loneliness in older adults because ethical framing influences how loneliness is defined, measured, and ultimately researched and treated; without conceptual clarity, research interpretations and their application to policy and practice may be compromised (Mansfield et al., 2021). This shapes the knowledge base within the literature and frames how these concepts are viewed. Highlighting

some of the relevant ethical guidelines is important for ensuring that research and clinical interventions not only protect vulnerable older adults, but also influence how loneliness is conceptualized within the broader biopsychosocial framework (Mansfield et al., 2021).

A prominent ethical concern in this field is that lonely older adults may experience heightened vulnerability due to aging related cognitive decline and the increased likelihood of mental and physical health concerns (WHO, 2023). In Canada, the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS2; Canadian Institutes of Health Research et al., 2018) provides a critical framework to ensure that both research and clinical practice uphold principles such as respect, beneficence, and justice. Within the TCPS2 framework, free, informed, and ongoing consent is heavily emphasized. Researchers must also do their due diligence to minimize potential harms, including emotional distress that may arise when discussing sensitive topics like loneliness. Appropriate safeguards include clear debriefing procedures, access to psychological support, and privacy protection for sensitive disclosures. This is most meaningful for primary research involving direct interaction with older adult participants and less so for reviews and analysis that use data from previous studies (TCPS2, 2018).

Clinical Ethics

Clinical ethics in working with lonely older adults are equally as important. Within the Canadian Psychological Association (CPA, 2017) code of ethics, the four core principles require clinicians to maintain a high standard of competence and ethical practice. The four core principles outlined by the CPA are: Respect for the Dignity of Persons and Peoples, Responsible Caring, Integrity in Relationships, and Responsibility to Society. Each of the four principles has direct relevance to clinical work with lonely older adults.

According to the CPA (2017), Respect for the Dignity of Persons and Peoples requires psychologists to honor autonomy, informed consent, privacy, and respect for diversity. In the context of treating loneliness in older adults, this principle underscores the importance of recognizing clients as autonomous individuals rather than defining them by their isolation or perceived vulnerability. It is paramount that without making assumptions, counsellors must remain attentive to cultural values, generational norms, and lived experiences that shape how loneliness is understood and expressed, particularly in relation to family roles, independence, and help-seeking behaviors. Upholding dignity also involves safeguarding confidentiality and ensuring that interventions do not inadvertently reinforce stigma or dependency (CPA, 2017)

The second principle of Responsible Caring emphasizes the obligation to do no harm, maximize benefit, and practice within the boundaries of professional competence (CPA, 2017). In the context of work with lonely older adults, this principle highlights the need for evidence-informed, developmentally appropriate interventions that address loneliness without pathologizing it. Clinicians must carefully monitor risks associated with chronic loneliness, such as depression, cognitive decline, or increased health vulnerability, while also avoiding over-reliance on the therapeutic relationship as a primary source of social connection (CPA, 2017; Guarnera et al., 2023). Responsible ethical care involves balancing empathy and support with evidenced based strategies that promote resilience and self-efficacy (CPA, 2017).

The third principle, Integrity in Relationships calls for honesty, transparency, and the avoidance of conflicts of interest or boundary violations (CPA, 2017). In clinical work with lonely older adults, this principle is particularly salient given the potential for blurred boundaries or emotional overreliance (Marks et al., 2021). Psychologists must clearly communicate the limits of the therapeutic relationship, maintain professional boundaries, and avoid assuming roles

that extend beyond clinical responsibilities (CPA, 2017). Integrity also involves transparency and accuracy in creating treatment plans and goals ensuring that interventions are framed as supportive and empowering rather than substitutive for broader social relationships (CPA, 2017).

Finally, the fourth principle, Responsibility to Society emphasizes psychologists' obligations to contribute to the well-being of individuals and communities while addressing systemic inequities (CPA, 2017). Applied to loneliness among older adults, this principle encourages clinicians to consider broader structural contributors such as ageism, inadequate social infrastructure, and barriers to community participation. Such approaches must acknowledge the complex interplay of biological, psychological, and social factors contributing to loneliness in later life (Lyu & Forsyth, 2022). Ethical practice may therefore extend beyond individual treatment to include advocacy, interdisciplinary collaboration, and efforts to inform policy or program development aimed at reducing loneliness and promoting social inclusion among older populations (CPA, 2017).

The CPA (2017) ethical principles provide a comprehensive framework for guiding clinical practice with lonely older adults, ensuring that interventions are respectful, competent, transparent, and socially responsive. By grounding clinical work in these ethical foundations, psychologists can address loneliness in ways that uphold dignity, minimize harm, and support both individual well-being and broader societal responsibility (CPA, 2017).

Chapter Four: Application to Clinical Practice

In this chapter the focus will be on translating the findings of the literature review into applied recommendations for clinical practice, policy, and systemic intervention. The literature revealed that loneliness among older adults is a complex, multidimensional phenomenon shaped by interacting biological, psychological, social, and structural factors, and that approaches focusing on a single domain are often insufficient (Spitoven et al., 2019; Walsh et al., 2025). Research further highlighted gaps between conceptual understanding and practical implementation, particularly the need for interventions that address both individual experiences of loneliness and the broader systems that sustain it (Algren et al., 2020; Hoang et al., 2022).

The primary goal of this chapter is to bridge this gap by offering clinically relevant guidance informed by empirical evidence, ethical frameworks, and contemporary theory. By integrating research findings with legislative considerations and intersectional cultural perspectives, this chapter will emphasize that ethical and effective practice requires coordinated, multilevel approaches (Lykes & Kemmelmeier, 2014; Ng et al., 2022). Such integration ensures that interventions are not only evidence-informed and clinically appropriate, but also responsive to systemic inequities, cultural contexts, and the lived experiences of diverse older adult populations (CPA, 2017).

Recommendations for Clinical Practice

The insights gained within the literature review are highly relevant for clinicians working with older adults, particularly those experiencing social isolation, loneliness, or related mental health concerns. One of the most important takeaways is the distinction between different dimensions of loneliness. This distinction is relevant to informing assessment and intervention planning, as the most common treatment, increasing social interaction typically through

community interventions or digital means, may not appropriately address psychological or physical dimensions of loneliness (Hoang et al., 2022). For instance, clients may attend weekly social group activities yet continue to experience profound loneliness due to a lack of emotional resonance or connection (Lapena et al., 2022). In order to create an appropriate intervention or treatment plan, it is crucial to differentiate whether the client is struggling with social isolation, loneliness, or both, and what kind of intervention is appropriate for their physical and cognitive abilities (Hoang et al., 2022; Lapena et al., 2022).

Based on the literature, practitioners should prioritize comprehensive, individualized assessment, ethical responsiveness, and flexibility in intervention planning when working with lonely older adults (Hoang et al., 2022). This includes attending to clients' subjective experiences of loneliness, functional capacity, health status, and cultural context, while avoiding assumptions that increased social contact alone will resolve distress (Guarnera et al., 2023). Prioritizing collaborative goal-setting and ongoing reassessment allows interventions to remain responsive to changing needs, health status, and environmental constraints commonly experienced in later life (Lapena et al., 2022; Lykes & Kemmelmeier, 2014; Wong et al., 2022).

For older adults struggling with loneliness, more personal and tailored approaches is necessary in order to address each individual's unique experience. A significant body of research has been conducted investigating various types of interventions for treating loneliness with conflicting results (Hoang et al., 2022). This may be because interventions are not currently taking a holistic approach to treating loneliness and are instead only treating one dimension or subdimension at a time. As a result, the interventions developed from the current research fail to address the multidimensional and reciprocal nature of loneliness among older adults (Hawkley & Cacioppo, 2010; Hoang et al., 2022). For instance, while social interventions may enhance

opportunities for contact, they are less effective when cognitive biases or affective symptoms inhibit engagement, just as psychological therapies may have limited impact if physical health concerns or digital literacy restrict social mobility or participation (Masi et al., 2011; Wong et al., 2022).

Practitioners should consider biopsychosocial contributors and the cycles they can cause. Physical symptoms such as chronic illness, pain, or sensory loss can exacerbate feelings of loneliness or make engagement with others more difficult (Courtin & Knapp, 2017). Incorporating physical health promotion alongside social and psychological interventions can support physiological and emotional wellbeing, moving the cycle in a more positive direction that reinforces healthy behaviours and social interaction (Musich et al., 2022).

A factor affecting the applicability of the current research is the methodological variability and conceptual inconsistency between studies. As identified within the literature review, there remains no single universally accepted definition or measurement of loneliness (Cacioppo & Cacioppo, 2018). This inconsistency complicates comparisons between studies and limits the development of standardized clinical approaches. Additionally, older adults who are most isolated due to health limitations, technological barriers, or recruitment challenges may be underrepresented within clinical trials (Guarnera et al., 2023; Latikka et al., 2021). As a result, the evidence base may not accurately reflect the diverse realities of older adults living in rural areas, long term care, or marginalized communities (Algren et al., 2020; Ng et al., 2022). Counsellors and allied professionals must therefore interpret research findings with critical awareness of potential sample bias and work flexibly with their clinical judgement based on client needs (CPA, 2017).

This body of evidence provides a foundation for developing reflective and informed practice that appropriately addresses all biopsychosocial components of loneliness (Hoang et al., 2022; Spithoven et al., 2019; Walsh et al., 2025). By grounding assessment and intervention in current evidence while simultaneously considering cultural, systemic, and individual factors, clinicians can provide interventions that are both compassionate and effective in reducing loneliness and improving the overall well-being of older adults (Taylor et al., 2023).

Clinical Strategies and Considerations

Loneliness is not reducible to lack of social contact alone; therefore, assessment should employ a multimethod approach that captures both subjective and contextual dimensions of the experience (Hoang et al., 2022; Taylor et al., 2023). Validated self-report measures such as the UCLA Loneliness Scale (Russell, 1996) can be used to assess perceived loneliness, while clinical interviewing should explore emotional fulfillment, perceived belonging, health status, functional limitations, and recent life transitions that may contribute to loneliness in later life (Hoang et al., 2022; Lapena et al., 2022). Where appropriate, screening for depression, anxiety, cognitive impairment, and physical health concerns is recommended, as these factors frequently co-occur with and exacerbate loneliness among older adults (Erzen & Çikrikci, 2018; Hounkpatin et al., 2024). Given the dynamic nature of aging-related changes, periodic reassessment is essential to ensure interventions remain responsive over time (Taylor et al., 2023).

For older adults experiencing objective social isolation, evidence supports the use of community engagement initiatives and social prescription programs to increase access to meaningful social opportunities (Hoang et al., 2022). This should also consider systemic barriers as to why these individuals may be isolated in the first place (Lyu & Forsyth, 2022). Individuals

whose loneliness is maintained by psychological or emotional barriers, such as maladaptive beliefs about social worth, fear of rejection, or unresolved loss, may benefit more from individual psychotherapeutic interventions (Hoang et al., 2022; Lapena et al., 2022). Cognitive-behavioral therapy (CBT) has demonstrated utility in addressing negative social cognitions and avoidance patterns, while acceptance and commitment therapy (ACT) and mindfulness-based strategies can reduce rumination and self-stigmatization while promoting values-consistent engagement (Smith et al., 2021; Teoh et al., 2021). Narrative approaches may be particularly useful for older adults navigating identity disruption following bereavement, illness, or role transitions, supporting meaning-making and continuity of self (Roser, 2024).

Kotwal et al. (2021) demonstrated that culturally and linguistically matched peer outreach programs providing flexible, individualized contact were associated with sustained improvements in social connection, mood, and perceived accessibility to social engagement among low-income, racially and ethnically diverse older adults. These findings suggest that interventions emphasizing relational continuity, shared lived experience, and cultural alignment may be more effective than group-based or referral-only social prescription models alone (Hoang et al., 2022). However, the absence of a control group in this study limits causal inference and highlights the importance of ongoing evaluation and outcome monitoring in applied settings (Kotwal et al., 2021).

From a counsellor's perspective, effective implementation of these strategies requires careful attention to rapport-building, therapeutic boundaries, and trauma-informed practice. Older adults experiencing loneliness often have histories of cumulative loss, health-related adversity, or social marginalization, underscoring the importance of a non-pathologizing,

validating clinical stance that conceptualizes loneliness as a meaningful signal rather than a personal deficit (Taylor et al., 2023).

Recommendations for Social Policy Reform

From a systemic perspective, improving clinical outcomes for lonely older adults requires policy- and organizational-level changes that extend beyond individual intervention. Government initiatives such as *Age-Friendly Communities*, *the Social Connections Program*, and the *Friendly to Seniors Program* represent important steps toward reducing social isolation through accessible, community-based services (Government of Canada, 2024). However, the National Academies of Sciences, Engineering, and Medicine (2020) suggests that these initiatives are often constrained by short-term funding models, regional variability, and limited integration with healthcare and mental health systems. As a result, many effective interventions lack sustainability, continuity, or sufficient reach to support older adults with complex or long-term needs (Hoang et al., 2022).

Research consistently emphasizes that loneliness in later life is not merely an individual concern, but a reflection of broader social, structural, and cultural influences, including socioeconomic inequality, ageism, transportation barriers, digital exclusion, and limited access to culturally responsive services (Algren et al., 2020; Lykes & Kemmelmeier, 2014). These systemic factors directly shape older adults' ability to engage in social, therapeutic, and community-based interventions, thereby influencing clinical outcomes. Despite growing recognition of loneliness as a public health concern, gaps remain in policy implementation, including the absence of standardized loneliness screening within healthcare systems, and insufficient attention to culturally and linguistically adapted programming for diverse older adult populations (Kotwal et al., 2021; Russell, 1996).

Addressing these gaps requires targeted policy improvements. The literature supports the integration of routine loneliness screening in primary care and geriatric services, increased and sustained funding for community-based and peer-led interventions, and the development of culturally responsive programs that address barriers faced by Indigenous, immigrant, rural, and low-income older adults (Algren et al., 2020; Government of Canada, 2024). Additionally, workforce development policies should prioritize training clinicians in trauma-informed, culturally humble, and aging-specific approaches to loneliness, ensuring ethical and effective service delivery across settings (National Academies of Sciences, Engineering, and Medicine, 2020).

Practitioners play a critical advocacy role at multiple levels. At the individual level, clinicians can connect clients to community resources and support navigation of complex service systems (National Academies of Sciences, Engineering, and Medicine, 2020). At the organizational level, practitioners can contribute to program development, interdisciplinary collaboration, and evaluation of loneliness-focused interventions (National Academies of Sciences, Engineering, and Medicine, 2020). At the policy level, clinicians can advocate for inclusive age-friendly policies, participate in consultation processes, and use clinical data to inform funding priorities and service design (Lykes & Kemmelmeier, 2014). Through these combined efforts, systemic and policy-level changes can meaningfully support more equitable, sustainable, and effective clinical responses to loneliness in older adulthood.

Legislation

In Canada and other Western contexts, policies related to aging, mental health, and social care can shape how loneliness interventions can be implemented. Federal initiatives such as the *National Seniors Council Dialogue on Preventing Social Isolation and Loneliness* recognize

loneliness as a multidimensional issue linked to health, mobility, and digital access (National Seniors Council, 2024). While this kind of framework can provide a valuable foundation, implementation can be inconsistent across provinces, particularly in rural and indigenous communities (Government of Canada, 2024). In addition, provincial regulations, privacy laws, and professional licensing requirements influence how clinicians can apply these interventions, including who can conduct assessments and facilitate group programs (College of Alberta Psychologists, 2021). Legislative priorities also affect funding availability for social and community programs, which directly impacts the feasibility of implementing certain interventions (Employment and Social Development Canada, 2024). This variability can make it difficult to implement evidence-based research into practice as interventions that depend on social prescribing, community programs, or digital engagement may not be equally accessible to all clients (Taylor et al., 2023).

Intersectional Considerations

Cultural background also influences how loneliness is experienced, expressed, and addressed (Lykes & Kemmelmeier, 2014; et al., Ng 2022). Much of the current research on loneliness in older adults originates from Western (and therefore individualistic) society, which may not fully capture the collective, family based social structures that are more common across collectivistic cultures. In some cultures, loneliness may carry social stigma and in others loneliness may be considered a normal part of aging (Lykes & Kemmelmeier, 2014). These cultural differences can influence the rate at which older adults seek help for loneliness. Different cultures may also have different beliefs about the appropriateness of certain interventions. Clinicians must apply the research finding within this review culturally responsively, recognizing that interventions that may be appropriate in one cultural context may

not translate to another (Ng et al., 2022). Incorporating cultural humility and client-centered adaptation ensures that loneliness interventions respect clients values, traditions, and worldviews. Special attention should be given to cultural awareness, particularly when working with Indigenous and immigrant older adults.

Chapter Five: Recommendations and Conclusion

This chapter will bring the project to a close by synthesizing the key findings of the literature review and highlighting their overall significance for conceptualizing loneliness in older adulthood. In addition, this chapter outlines directions for future research. A reflective discussion of personal and professional learning will be included, considering how engagement with the literature and applied frameworks has informed the author's evolving clinical perspective, ethical awareness, and approach to working with older adults experiencing loneliness.

This study examined and conceptualized the complex and multidimensional experience of loneliness among older adults through a biopsychosocial lens, emphasizing that loneliness cannot be meaningfully understood or addressed through social factors alone (Engel; 1977; Spithoven et al., 2019; Walsh et al., 2025). The problem addressed is the persistent prevalence of loneliness among older adults despite a growing number of social interventions and community-based initiatives aimed at reducing it (Hoang et al., 2022). The literature consistently demonstrates that loneliness is multifaceted with a variety of biological, psychological, and social dimensions and subdimensions that interact with one another to shape its intensity and persistence (Cacioppo and Cacioppo, 2018; Lykes & Kemmelmeier, 2014; Spithoven et al., 2019; Walsh et al., 2025). This reinforces that in order to be effective, intervention and assessment require holistic, individualized, and ethically grounded approaches that move beyond the narrow conceptualization of loneliness as an issue tied to objective isolation (Hoang et al., 2022).

Recommendations for Future Research

Building upon the insights drawn from the current literature, future research should continue to deepen the understanding of loneliness among older adults through more intersectional and contextually grounded approaches. While the existing research has provided valuable insight into the biopsychosocial dimensions of loneliness, there remain notable gaps in addressing how these dimensions interact and influence each other across time and in different contexts (Cacioppo & Cacioppo, 2018; Hoang et al., 2022). Future studies could therefore explore how biological, psychological, and social factors interact to shape the persistence and severity of loneliness in older adulthood.

Additionally, there is a pressing need for studies that examine cultural and structural determinants of loneliness among older adults (Lykes & Kemmelmeier, 2014). As the aging population in Canada gets larger and more diverse, it is essential to investigate how cultural values and systemic inequities shape experiences of loneliness (Statistics Canada, 2024). This may include exploring the intersections between ethnicity, language, and access to culturally responsive community supports, which remain underexamined areas within Canadian gerontological research (Guruge et al., 2025). Factors such as immigration status, experiences of discrimination, and barriers to access health and social services may further increase vulnerability to lonely older adults from marginalized communities (Guruge et al., 2025). Without greater attention to these contextual influences, research risks overlooking important sources of both risk and resilience, thereby limiting the development of equitable and culturally responsive interventions (Joshi et al., 2024).

Future researchers can improve upon this literature review by expanding its scope, enhancing methodological rigor, and incorporating more diverse and intersectional perspectives.

While this review provides a synthesis of current knowledge on loneliness among older adults through a biopsychosocial lens, it is limited by the availability and variability of the current research (Cacioppo & Cacioppo, 2018). Many of the studies included such as Fierloos et al. (2021), Kalata et al. (2025), and Newall & Menec (2020) rely heavily on Western populations, which restricts the generalizability of the findings to culturally diverse or marginalized communities (Hatcher & Padrón, 2023). Further reviews should therefore integrate more cross-cultural and international research to examine how sociocultural norms, collectivist vs. individualist perspectives, and community structures shape the experience of loneliness in later life.

Another key area for improvement lies in the integration of policy and practice implications. This review identified how systemic and legislative factors such as Canada's *National Seniors Strategy* and age-friendly policy frameworks, may influence loneliness outcomes (Government of Canada, 2024). Future research should expand on how effectively these policies translate into practice and what could be changed or added in order to adequately address the complex biopsychosocial dimensions of loneliness among older adults. Furthermore, integrating policy analysis within loneliness research can bridge the gap between theoretical understanding and applied social change, ensuring that interventions are both evidence-informed and aligned with the broader goals of aging policy in Canada.

Based on the identified gaps, potential research questions emerge on the biopsychosocial dimensions of loneliness in older adults:

1. How do biological, psychological, and social factors interact over time to influence the persistence and severity of loneliness among older adults?

2. In what ways do cultural identity, language, and access to culturally appropriate services shape experiences of loneliness and social connectedness among Canada's diverse aging population?
3. What interventions effectively target the full range of biopsychosocial factors contributing to loneliness and their interactions in older adults?

By pursuing these questions, future research can contribute to a more nuanced and informed understanding of loneliness in later life. This will support the development of interventions and policies aligned with the lived realities of older adults in Canada.

Reflections of Learning

Engaging with this topic has reinforced the importance of integrating research and practice to improve mental health and social outcomes for older adults. Throughout the capstone process, I developed a deeper appreciation for how empirical research informs ethical, effective, and responsive clinical decision-making, while also recognizing the limitations of applying research findings without careful consideration of individual, cultural, and systemic contexts. This process significantly strengthened my research literacy, particularly my ability to critically evaluate empirical evidence and find methodological flaws and gaps in the research. Reviewing the literature highlighted the complexity of loneliness as a biopsychosocial phenomenon and underscored the risks of relying on single-domain or overly standardized interventions when working with older adults whose experiences are shaped by health status, life transitions, social inequities, and cumulative loss. Overall, this process has significantly enhanced my critical thinking as I move to begin my career.

Clinical Learnings

From a clinical perspective, this work has illuminated the need for a nuanced understanding of loneliness that respects the individual experience of each client and avoids one-size-fits-all approaches. I have learned that effective interventions for loneliness should go beyond social prescription or the consideration of loneliness as a social deficit (Spithoven et al., 2019). This knowledge will directly guide my future clinical decision making by shaping how I assess loneliness, conceptualize presenting problems, and develop comprehensive treatment plans that are responsive to each client's biopsychosocial and cultural context. My learning emphasized the importance of collaborative goal setting, cultural humility, and ongoing reassessment, particularly when working with older adults whose needs and capacities may change over time. This has contributed to a more reflective clinical stance that prioritizes meaning, connection, and dignity alongside symptom reduction.

Importantly, this capstone strengthened my ability to bridge research and practice. Engaging critically with the literature enhanced my capacity to translate empirical findings into practical, ethically grounded interventions while remaining mindful of the limitations and contextual boundaries of the evidence base. This integrative learning experience has reinforced my commitment to evidence-informed practice that is both clinically responsive and socially attuned, shaping how I will approach assessment, intervention, and professional development moving forward.

Research Learnings

From a research perspective the literature review process has highlighted the challenges of studying complex biopsychosocial phenomena. The research process itself required patience, reflection, and critical discernment, particularly when engaging with findings drawn from

multiple disciplines, theoretical orientations, and methodological approaches. Synthesizing diverse findings across multiple disciplines revealed gaps and limitations within the literature. Notably, I encountered inconsistent findings across studies, variability in how key constructs such as loneliness were defined and measured, and a lack of representation of culturally diverse or marginalized populations (Cacioppo and Cacioppo, 2018; Lykes & Kemmelmeier, 2014). These challenges highlight the complexity of the research process and how definitional ambiguity, sampling bias, and design limitations can shape both research outcomes and their applicability to practice. Navigating this strengthened my analytical skills and reinforced the need for conceptual clarity and rigorous methodology in future research.

Applications to Practice

Engaging deeply with the research literature and clinical applications of loneliness in older adults has reinforced my understanding of the reciprocal relationship between scientific literature and ethical, effective practice. Work on this capstone has highlighted that understanding complex biopsychosocial phenomena requires not only familiarity with the research but also the ability to interpret and apply findings within the nuanced contexts of individual clients. As a result, my future decision making will be guided by a more integrative approach to assessment, conceptualization, and treatment planning. In particular, my work with lonely older adults will consider the multidimensional nature of loneliness, including physical, psychological, social, and cultural factors. In the future I will continue to engage with the literature from a critical lens to ensure that that I am grounding my clinical work in evidence that is current, methodologically sound, and applicable to the diverse and evolving needs of the clients I serve, while remaining attentive to the limitations and contextual boundaries of the research.

Conclusion

This review has examined the complex and multidimensional experience of loneliness among older adults from a biopsychosocial lens, emphasizing that loneliness cannot be understood or addressed fully through social factors alone (Hoang et al., 2022; Walsh et al., 2025). Despite the popularity of social prescription interventions, loneliness persists. This highlights the need for holistic approaches that account for the interplay of biological, psychological, and social dimensions. By synthesizing the current literature, this capstone reinforces that effective assessment and intervention requires individualized, ethically grounded, and contextually sensitive interventions that go beyond the narrow focus of objective isolation (Cacioppo & Cacioppo, 2018; Newell & Menec, 2019).

The findings accentuate that loneliness in later life is a deeply personal experience, shaped not only by the aging process but also by cultural identity, life history, and access to resources. Addressing it directly demands integrated frameworks that recognize the diverse lived experiences of older adults. Researchers and clinicians alike must work to bridge the gaps between research, policy, and practice, ensuring that interventions are evidence-based and contextually meaningful. A comprehensive, multidimensional and biopsychosocial approach offers a promising path forward for understanding and mitigating loneliness in older adulthood (Engel, 1977; Walsh et al., 2025).

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