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Loneliness

The Ultimate Suffering in Modern Society

Edited by Md Zahir Ahmed



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Meet the editor



Born and raised in Bangladesh, Dr. Md Zahir Ahmed pursued an academic career in psychology, driven by a passion for understanding human behavior in the context of adversity. He pursued a Ph.D. in Developmental and Educational Psychology, specializing in Disaster Psychology. He conducted his post-doctoral research to explore the complex factors contributing to suicidal ideation among young adults. He aimed to identify protective factors and develop targeted interventions to enhance mental health outcomes for this vulnerable population. With extensive experience in mental health promotion and youth development gained from his work with various government and nongovernmental organizations worldwide, Dr. Ahmed brings a unique perspective to his research. He is currently teaching at the School of Psychology, Zhejiang Normal University, China, and dedicates his efforts to advancing research on suicide ideation and prevention. His work aims to make meaningful contributions to global mental health initiatives. Dr. Ahmed has garnered widespread recognition for his contributions to the mental health field, boasting an impressive array of international publications and receiving attention from esteemed media outlets worldwide.

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Preface

Loneliness is an inescapable state of mind that even looms to date, yet is hard to comprehend. Being alone and loneliness are not the same; solitude is a firm refusal, whereas loneliness is a void that seeks emotional connection.

During the rise of the Roman period, pioneer philosophers and thinkers often celebrated loneliness; modern society suffers from it, where the ultimate suffering is not in the loneliness, but in not feeling connected, even when surrounded by many. The hyperconnectivity, the pride, the convenience of the modern era, ironically, submerge the human being into a deep feeling of loneliness. Moreover, it transcended a personal matter into a global concern.

Loneliness – The Ultimate Suffering in Modern Society sheds light on this modern-day scourge, delving deeply into the stranded elderly, youth caught in a whirlpool of digital noise, and the personal suffering that resonates with thousands in modern society. Through this academic odyssey, we uncover the psychophysiological consequences and societal implications of profound loneliness. We urge real action and collective awareness to promote a humanity free from the suffering of loneliness.

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Section 1

Introduction

Introductory Chapter: Loneliness – The Silent Epidemic of Modern World

Md Zahir Ahmed

1. Introduction

Loneliness is often a neglected emotional state that might be misinterpreted and confused with the state of being alone simply. In the practical sense, loneliness is the state when an individual perceives disconnection with the surroundings both physically and mentally but mostly mentally. Someone might be present physically; however, loneliness force them not to belong into it [1]. Loneliness emerged at an unprecedented speed due to the technological characteristic, and urbanization and evolution of modern technology in the modern time. Before understanding loneliness deeply, it already reaches the most pervasive and overwhelming magnitude that transcends the unique form of solitude and jeopardizes the peace and presence of life. Loneliness is not confined into the isolated individuals or community exclusively; rather, it has the power to affect people in all walks. It is very much important to address that many of us perceive loneliness despite being connected and surrounded by the crowd in both physical and virtual means [2]. This paradoxical shift warrants an in-depth understanding of loneliness as a global well-being concern, rather than just a temporary negativity in mind that will be erased or replaced over time. This chapter aims at exploring the nature and complexities of loneliness and its daily implications for individual and social levels and how it emerged subtly in our lives.

2. Loneliness in the twenty-first century

Undoubtedly, technological advancements have paved the way of billions to connect instantly. Yet, so many setbacks surfaced apart from the strength of enabling through the rapid connectivity. The way of interaction altered with the popularity of social media platforms, once the easy way to stay connected become the source of physical and emotional distance with utmost negligence disguised as the developmental pace. The human race is highly technology and artificial intelligence driven nowadays; however, at the end of the day human crave for the deep, meaningful physical proximity, which decreased with the rise of virtual platforms [3]. Deep emotional presence is often discarded in the virtual mode despite of its convenient connectivity, leading to a sense of loneliness among many. Additionally, people are submerged in celebrating personal achievements and self-reliance rather than focusing on the meaningful relationships. The peer pressure, fear of missing out, pursuing the so-called successful career, thrive with personal growth, societal recognition—all

these left a little or no room for the genuine emotional connections [4]. All these “hustle cultures” do nothing but create an environment of prioritizing personal growth over collective bonds—frequently at the cost of mental health well-being. Rapid urbanization also contributes to the loneliness as the migration to the mega cities leads to the discontinuation of physical connectivity network [5]. Although the mega city dwellers are surrounded by millions, it is easy to fail to connect with others due to the same personal pressure and race that everyone else facing. A paradoxical effect surfaces where lot of people dwell together, however, disconnected when the meaningful connection is the concern.

3. The psychological toll of loneliness

What we often confuse about loneliness—a feeling of boredom or dissatisfaction, however, is a profound and long-term mental health impact. Existing literature demonstrates that perceived loneliness can induce chronic stress, anxiety, depression, sleep problems, substance use, and a wide range of other mental health issues and disorders [6]. The emotional toll of loneliness can turn into a devastating form when it turns into physical pain and leads to the feeling of hopelessness, perceived burdensomeness, and even the capability for attempting and committing suicide in the extreme cases [7]. Aside from the extreme form of risk behavior, loneliness has physiological implications as well, for example, cardiovascular diseases [8], dysregulation in the immune system, and impairment in cognitive functioning [9]. Primarily, perceived loneliness induces sleep problems, high blood pressure, and subsequent heart disease [10]. The underlying mechanism of loneliness on the body is through the elevated levels of cortisol hormones that ultimately trigger the “fight-or-flight” response and affect physical health negatively [11]. Additionally, loneliness affects self-esteem through perceived inadequacy and a feeling of self-unworthiness to be loved by others. It is necessary to establish meaningful connections at both personal and social levels. However, the negative self-perception triggered by loneliness hinders the establishment of meaningful relationships, and this vicious cycle continues [12].

4. Loneliness in the setting of social media

In the digital era of communication, social media platforms are the primary means of connecting with friends and family. Undoubtedly, these platforms enable us to connect conveniently but often exacerbate the perceived loneliness. The primary source of inadequacy comes from the unrealistic presentation of others who act like the idealized version of life and living. This cycle in social media creates a self-image where the comparison with others leaves a feeling of inferiority and the unmet desires isolate individuals ultimately. Additionally, the continuous communication in social media through superficial exchanges of feelings through likes, comments, or sharing mostly does not offer any authentic engagement where depth is unimaginable. This sort of the so-called connectedness creates nothing but loneliness and disconnects humans more than ever before and leaves a desperate feeling without any genuine human bonds to nourish and connect the soul. Besides, the behavioral addiction through social media also triggers the extreme form of loneliness among many [13]. Real meaningful connections are often neglected since the short span of gratification

through checking constant notifications leaves no room for physical interactions. As these digital trends grow, the face-to-face interaction is fading away, which was the primary tool to combat loneliness.

5. Loneliness across different demographics

The perception of loneliness never hurts in the same way for everyone, and ironically, no particular socio-demographic group; for example, age, gender, or cultural settings transcends the grief impact of loneliness. For the age-wise comparison, young people often perceive loneliness from the constant pressure of not fitting in, navigating the interpersonal relationships to establish their identity and self. Loneliness hits hard for children and adolescents through primarily academic and peer pressure, and the projection of the idealized version of self-heightens the fear of missing out and exacerbates the feeling of isolation further [14]. The elderly population, who have limited mobility due to physical limitations, are often characterized by the loss of loved ones and reduced mobility [15]. Cultural differences also leave a long scar on loneliness—people in collective societies, where families foster tight-knit relationships, often consider loneliness a stigma [16]. In collective societies, the perceived loneliness turns into an acute form when societal expectations remain unmet. In contrast, individualistic cultures often consider loneliness a normal phenomenon with no real combat strategies [17].

6. Combating loneliness in the modern era

In the modern hyper-connected societies, loneliness needs a multidirectional approach to cope with. At the individual level, it is very much anticipated to prioritize meaningful relationships. Long-lasting meaningful relationships provide authentic emotional support and help to strengthen the sense of belonging and boost well-being [17]. On a broad level (both family and societal), it is necessary to create an environment prioritizing awareness and effective actions against loneliness. Healthcare professionals must consider loneliness as a serious health concern, which needs early intervention. Additionally, community initiatives prioritizing social engagement and effective mental health support have also shown widespread effectiveness in combating loneliness. Most importantly, it is humans who need to know how to navigate the rise of loneliness and use digital tools to combat it effectively. It should always be kept in mind that digital technology can help to connect, but effective and mindful face-to-face connections are also needed to foster in the same setting. The ultimate goal should be a clear balance between the benefits of technology without letting it to humans and the vivid presence of meaningful connections to fulfill life [18].

7. Conclusion

So in the modern hyper-connected societies, loneliness needs a multidirectional approach to cope with. At the individual level, it is very much anticipated to prioritize meaningful relationships. Long-lasting meaningful relationships provide authentic emotional support and help to strengthen the sense of belonging and boost well-being [17]. On a broad level (both family and societal), it is necessary to create

an environment prioritizing awareness and effective actions against loneliness. Healthcare professionals must consider loneliness as a serious health concern, which needs early intervention. Additionally, community initiatives prioritizing social engagement and effective mental health support have also shown widespread effectiveness in combating loneliness. Most importantly, it is humans who need to know how to navigate the rise of loneliness and use digital tools to combat it effectively. It should always be kept in mind that digital technology can help to connect, but effective and mindful face-to-face connections are also needed to foster in the same setting. The ultimate goal should be a clear balance between the benefits of technology without letting it to humans and the vivid presence of meaningful connections to fulfill life [18].

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Section 2

Loneliness in Aging

Chapter 2

Elderly Loneliness: A Growing Public Health Challenge

MD. Abu Bashar, Nazia Begam and Sridevi Gnansekaran

Abstract

Loneliness among the elderly is emerging as a major public health challenge worldwide. Defined as the subjective feeling of being socially disconnected, loneliness disproportionately affects older adults due to a confluence of biological, psychological, social, and environmental factors. Globally, 20–40% of the elderly population report moderate to severe loneliness, a figure that is steadily increasing in both high-income and low- to middle-income countries. In India, the elderly population—currently over 138 million—is projected to double by 2050, posing new social and healthcare challenges. Using global and Indian data, the chapter links loneliness to elevated risks of dementia, cardiovascular disease, elder abuse, and even mortality. A case study of Kerala illustrates that even high-development states are not immune to elderly isolation, especially due to migration and family fragmentation. Frameworks for prevention such as the WHO Age-Friendly Cities Model, NICE guidelines, and India-specific programs like NPHCE and HelpAge outreach are discussed. The chapter argues for an integrated, culturally responsive approach combining traditional family-based support with innovative policy and digital solutions. Addressing elderly loneliness requires urgent multi-sectoral engagement to foster social connection and dignity in aging societies.

Keywords: elderly loneliness, social isolation, aging population, geriatric mental health, cognitive decline and aging

1. Introduction

Loneliness among the elderly has become a significant public health concern globally, with prevalence rates ranging from 10–28% [1]. Demographic shifts toward aging populations are exacerbating this issue, with projections indicating a tripling of lonely adults aged 50 and above from 104.9 million in 1990 to 333.5 million by 2050 [2]. Factors contributing to loneliness include female gender, unmarried status, older age, poor income, lower education, living alone, and poor health [1, 3]. The health impacts of loneliness are severe, comparable to high blood pressure, smoking, or obesity, and include increased risks of dementia, depression, and cardiovascular diseases [1]. Addressing this complex issue

requires further research to understand how older adults experience loneliness and to develop effective interventions, including health education by nurses and technicians to promote social inclusion [1, 3].

The World Health Organization (WHO) defines loneliness as the subjective distressing experience resulting from a gap between desired and actual social relationships [1]. Distinct from social isolation, which is an objective lack of social connections, loneliness is internal and deeply personal. Evidence increasingly links chronic loneliness to adverse health outcomes, including depression, anxiety, cognitive decline, cardiovascular disease, weakened immunity, and even premature mortality [4, 5]. Some public health experts equate the mortality impact of prolonged loneliness to smoking 15 cigarettes per day [6]. A meta-analysis by Holt-Lunstad et al. found that social isolation increases mortality risk by 29%, while loneliness independently increases mortality risk by 26% [7]. While the global trends illustrate the scale and urgency of elderly loneliness, India reflects this crisis in unique ways—through rapid demographic shifts, disintegration of joint families, and an expanding digital divide. The interplay of these factors underscores the need to contextualize global insights within India's socio-cultural fabric.

In India, these global patterns are becoming alarmingly visible. According to Census 2021 estimates, India is home to approximately 138 million elderly individuals (aged 60 years and above), accounting for nearly 10% of the population [8]. The United Nations Population Fund (UNFPA) projects that this proportion will double to about 20% by 2050 [9]. Parallely, the HelpAge India report (2022) found that 47% of elderly individuals reported feeling lonely, with higher prevalence among widowed, female, and urban elders [10]. Thus, elderly loneliness in India, though often underrecognized, represents an urgent and growing public health challenge.

The world is aging at an unprecedented pace. Improved healthcare, better living standards, and advances in technology have led to significant increases in longevity. According to the WHO, global life expectancy increased from 66.8 years in 2000 to 73.4 years in 2019 [5]. However, fertility declines mean fewer younger individuals to support the burgeoning elderly population. Consequently, many societies face a dual challenge: ensuring financial security for seniors while preventing social disconnection and marginalization.

India, while still a relatively young nation demographically, is witnessing a rapid aging shift. Between 2011 and 2021, India's elderly population grew by 41%, compared to an overall population growth of 17% [8]. States like Kerala, Tamil Nadu, and Goa already report elderly populations exceeding 12% [9]. Furthermore, urbanization has led to increased migration of younger populations to cities, leaving elderly parents behind, particularly in rural areas. The emergence of “empty nests” has significantly altered traditional family-based elder care systems.

Globally, similar dynamics are visible. In Europe and North America, the aging phenomenon is more advanced, but emerging economies in Asia and Latin America are aging at much faster rates without comparable economic resources for elder support [11]. This chapter critically examines the causes, consequences, and patterns of elderly loneliness globally and in India. It contextualizes loneliness within demographic transitions, explores its multifaceted health impacts, analyzes socio-cultural determinants, and offers comparative insights across countries. Finally, it underscores the need for integrated policy and community interventions to address this mounting crisis.

2. Understanding elderly loneliness

Loneliness has been increasingly recognized as a significant public health issue, particularly among the elderly. It is defined as “the subjective feeling of being socially isolated, even when surrounded by others” [1]. Importantly, loneliness is distinct from social isolation. While social isolation refers to an objective state characterized by a lack of social contacts or interactions, loneliness pertains to an individual’s subjective emotional experience. In other words, a person can feel lonely even when they are not physically alone, or conversely, not feel lonely despite having few social interactions.

Factor	Sub-factors	Description and examples
Biological factors	1. Sensory impairments	• Hearing and vision loss impair communication [3]
	2. Chronic illnesses and disabilities	• Arthritis, CVD, stroke reduce mobility [4]
	3. Pain and fatigue	• Chronic pain leads to social withdrawal
	4. Inflammation and immune dysfunction	• Loneliness triggers physiological stress and inflammation [5]
Psychological factors	1. Depression and anxiety	• Depression causes apathy and withdrawal [6]
	2. Cognitive decline	• Dementia disrupts relationship maintenance [6]
	3. Identity loss (post-retirement, widowhood)	• Loss of purpose after life transitions [6]
	4. Reduced self-esteem	• Negative self-perception deters social contact [7]
	5. Coping mechanisms	• Poor coping worsens loneliness [8]
Social factors	1. Family structure changes	• Shift to nuclear families, children migrating [9]
	2. Widowhood and bereavement	• Over 55% elderly Indian women are widowed [9]
	3. Retirement	• Retirement ends daily interaction [10]
	4. Ageism and social exclusion	• Elderly viewed as unproductive [11]
	5. Lack of peer support	• Peer deaths reduce social networks
Environmental factors	1. Housing and neighborhood design	• High-rise buildings without lifts limit mobility
	2. Transport barriers	• No safe sidewalks or elder-friendly public transport
	3. Urban safety concerns	• Unsafe areas restrict outdoor activity
	4. Digital exclusion	• Only 6% of the Indian elderly use internet [12]
	5. Community fragmentation	• Low neighborhood cohesion isolates elders

Table 1.
Multifactorial causes of elderly loneliness.

The subjective nature of loneliness makes it deeply personal and variable across individuals. It reflects a discrepancy between a person's desired and actual social relationships. Thus, loneliness encompasses emotional components—feelings of sadness, emptiness, and abandonment—that are not necessarily captured by quantitative measures of social contact [2].

Understanding why elderly individuals are particularly vulnerable to loneliness requires examining a complex interplay of biological, psychological, social, and environmental factors. In older adults, life transitions, health deterioration, shrinking social networks, and societal changes collectively elevate the risk of experiencing loneliness.

Table 1 presents a comprehensive overview of the multifactorial causes of elderly loneliness, organized into biological, psychological, social, and environmental domains. Biologically, sensory impairments like hearing and vision loss hinder communication, while chronic illnesses, fatigue, and pain reduce mobility and independence, limiting social participation. Poor coping mechanisms and low self-esteem further deepen isolation. Socially, transitions such as the decline of joint families, migration of children, widowhood (which affects over 55% of elderly Indian women), and retirement sever long-standing social ties. Ageism and lack of peer support contribute to marginalization, as elderly individuals are often perceived as unproductive. Environmental factors compound these issues—many older adults face housing that is not elder-friendly, inadequate transport, unsafe neighborhoods, and minimal digital access (only 6% of Indian elderly use the internet). These conditions, especially in urbanizing and fragmented communities, reduce opportunities for engagement and interaction. Together, these interrelated factors reveal that elderly loneliness is not just a personal or emotional problem but a complex public health challenge requiring comprehensive, multi-sectoral solutions.

3. Global perspective on elderly loneliness

3.1 Global prevalence of elderly loneliness

Studies across Europe consistently show that loneliness among older adults varies significantly between countries, with higher rates in Southern and Eastern Europe compared to Northern Europe [13, 14]. The prevalence of loneliness ranges from 25% in Denmark to over 60% in Greece for those aged 65 and over [14]. This pattern persists despite Southern countries having a more familistic orientation, possibly due to higher expectations of social connectedness [15]. Factors associated with lower loneliness include being married, having good health, frequent family contacts, and social participation [13, 14]. The combination of living alone and poor health significantly increases the odds of feeling lonely [14]. These findings suggest that both cultural context and individual circumstances play crucial roles in determining loneliness among older Europeans [13, 16].

Recent research highlights the growing concern of loneliness and social isolation among older adults in the United States. A 2018 survey by the University of Michigan found that one-third of adults aged 50–80 reported feeling a lack of companionship, with higher rates among those with poor health [17]. The U.S. Surgeon General has declared this issue a “public health epidemic,” affecting approximately 50% of U.S. adults in recent years [18, 19]. Loneliness is associated with increased risks of various health conditions, including heart disease,

dementia, and stroke, with effects comparable to smoking [19]. To address this crisis, the Surgeon General has proposed a national strategy to improve social connection, emphasizing the role of healthcare, community programs, and social services [19, 20]. Primary care is identified as crucial in implementing these recommendations and combating the epidemic [20].

In Australia, the Australian Institute of Health and Welfare (AIHW) reports that 19% of people aged 75 years and older experience chronic loneliness [21]. The COVID-19 pandemic further intensified this issue, especially among seniors in aged-care facilities who were cut off from family visits and community engagement for extended periods.

Emerging evidence from low- and middle-income countries (LMICs) also suggests growing concerns. A cross-national study involving older adults from India, China, Ghana, Mexico, Russia, and South Africa found loneliness prevalence ranging from 10–33%, often highest in urbanizing regions with rapidly changing family dynamics [22].

3.2 Health impact across nations

See **Table 2**.

3.3 Economic implications

The financial burden of elderly loneliness is profound. Healthcare systems in high-income countries have begun quantifying the cost of unaddressed loneliness. In the United Kingdom, for instance, lonely individuals are estimated to have a 68% increased likelihood of visiting a general practitioner and a 57% higher likelihood of using emergency services [28]. These patterns translate to significant healthcare expenditure.

The U.S. Medicare program spends an estimated \$6.7 billion more annually on socially isolated older adults compared to their socially connected counterparts [29]. Similar trends are observed in Australia and Canada, where loneliness has been linked to more frequent hospital admissions, longer lengths of stay, and delayed discharges [1].

In LMICs, while direct cost estimates are scarce, indirect burdens—such as increased dependency, caregiving strain, and reduced productivity among younger

Health impact	Estimated prevalence/risk increase	Common assessment tools
Depression and anxiety	Up to 40% of lonely older adults exhibit depressive symptoms [23]	Geriatric Depression Scale (GDS), UCLA Loneliness Scale
Cognitive decline/dementia	26% increased risk of dementia over 10 years [24]	Mini-Mental State Examination (MMSE), De Jong Scale
Cardiovascular disease	16% higher risk of incident CVD due to social isolation [25]	ECG, blood pressure, biomarkers
Stroke	32% higher risk in socially isolated seniors [26]	Clinical stroke scoring systems
Sleep disturbances	Lonely seniors are 1.57x more likely to report poor sleep quality [27]	Pittsburgh Sleep Quality Index (PSQI)
Immunosuppression/inflammation	Loneliness elevates CRP and IL-6 levels, weakening immunity [1]	Blood tests: CRP, IL-6

Table 2.
Health impacts across nations.

family members—are believed to be substantial and growing, especially as traditional caregiving models erode.

3.4 Global policy and intervention responses

Several countries have launched national strategies to address elderly loneliness:

- **United Kingdom:** The UK became the first country to appoint a Minister for Loneliness in 2018. The government’s “Let’s Talk Loneliness” campaign promotes awareness and funds grassroots initiatives to connect older people [28].
- **Japan:** In response to increasing *kodokushi*, *that is*, lonely death where elderly individuals die alone and their deaths go unnoticed for extended periods, Japan initiated community “watch programs” where volunteers check in on elderly neighbors, and local governments expanded day-care centers focused on social interaction [30].
- **Australia:** The Australian Government funds programs like the Community Visitors Scheme and supports digital inclusion initiatives targeting older adults [1].
- **United States:** The U.S. Surgeon General’s 2023 Framework for Social Connection outlines six pillars to rebuild social infrastructure and reduce isolation across age groups, with specific provisions for older Americans [31].

While high-income countries are leading structured national efforts, LMICs like India and Brazil are seeing growing involvement from NGOs and civil society in tackling senior loneliness. Programs such as intergenerational engagement, senior clubs, and mobile health outreach offer contextually appropriate solutions with significant promise.

4. Methodology and conceptual framework

This chapter adopts a narrative review approach supported by a conceptual model (**Figure 1**) to explore causes, consequences, and interventions for elderly loneliness in India. Sources include peer-reviewed journals, WHO and NPHCE guidelines, HelpAge India reports, and large-scale surveys such as LASI and the Census of India.

Figure 1 presents a conceptual model integrating four domains—biological, psychological, social, and environmental—identified as root determinants of loneliness. Each domain is mapped to risk outcomes and intervention strategies. For instance, sensory impairments (biological) link to reduced communication, addressed via assistive technologies and screening.

Social risk factors like widowhood or migration-induced separation are mitigated through community clubs and digital literacy programs. Environmental enablers include urban planning and digital connectivity. The framework guides a systems-based response aligning with WHO’s Age-Friendly domains and India’s public health priorities under NPHCE.

This approach ensures contextual relevance, especially for policy, clinical, and grassroots-level applications.

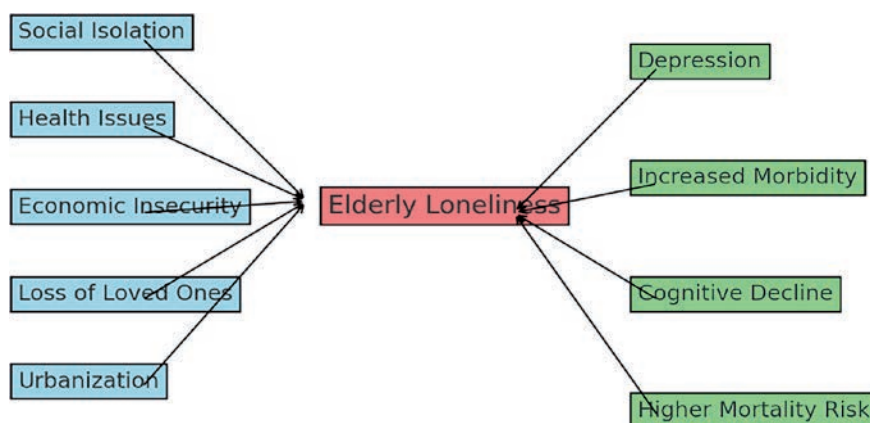


Figure 1.
 Conceptual model of elderly loneliness showing determinants and outcomes of elderly loneliness.

5. Public health consequences of elderly loneliness

Loneliness in older adults is not a benign emotional state—it is a critical determinant of both individual health and public health systems. Evidence from across disciplines has established that chronic loneliness affects mental and physical well-being, increases healthcare burden, and undermines the social fabric necessary for successful aging. As global and Indian populations continue to age rapidly, understanding the public health ramifications of elderly loneliness is essential for designing effective interventions and health policies.

5.1 Mental health issues

One of the most immediate and profound consequences of loneliness in older adults is its impact on mental health. Numerous longitudinal studies have shown strong associations between loneliness and increased risk of *depression*, *generalized anxiety*, and *cognitive decline* [32]. The lack of meaningful social interaction reduces emotional support, which in turn exacerbates psychological distress.

Lonely older adults are more prone to persistent negative thinking, feelings of worthlessness, and suicidal ideation. A study from the English Longitudinal Study of Aging (ELSA) found that older adults who frequently experienced loneliness were twice as likely to develop depressive symptoms compared to their socially connected peers [33]. Furthermore, loneliness has been linked to accelerated cognitive decline. In particular, socially isolated elderly individuals demonstrate poorer performance in memory, executive function, and processing speed. A found that lonely older adults were 64% more likely to develop dementia over a 3-year period [24].

5.2 Physical health problems

Beyond mental health, loneliness has been associated with a range of *adverse physical health outcomes*. It contributes to physiological stress, activates the hypothalamic-pituitary-adrenal (HPA) axis, and elevates levels of cortisol and pro-inflammatory cytokines [2]. These responses increase the risk of *cardiovascular diseases*, including hypertension, atherosclerosis, and myocardial infarction.

A meta-analysis involving over 180,000 participants found that loneliness and social isolation increased the risk of coronary heart disease by 29% and stroke by 32% [26]. Additionally, lonely individuals exhibit weaker immune responses and slower wound healing, increasing vulnerability to infections and delayed recovery from illness. Perhaps most alarmingly, loneliness is a significant predictor of *all-cause mortality*. A landmark meta-analysis of 70 studies concluded that the effect of loneliness on mortality is comparable to that of obesity or smoking 15 cigarettes a day [26]. This underscores the seriousness with which public health systems must treat the issue.

5.3 Higher healthcare utilization

Elderly individuals experiencing chronic loneliness are more likely to have *frequent interactions with healthcare services*, not necessarily due to acute conditions, but often stemming from somatic symptoms, anxiety, or the need for human contact.

In the United Kingdom, the Campaign to End Loneliness reported that lonely older adults are 68% more likely to visit their general practitioners and 57% more likely to use emergency services than those who are socially engaged [34]. In the United States, Medicare spends an estimated USD 6.7 billion more annually on socially isolated older adults [35].

In India, while such cost analyses are limited, anecdotal reports and small-scale studies indicate that socially isolated seniors often make repetitive healthcare visits for minor complaints, driven by unmet emotional needs and lack of familial support [36]. These interactions add burden to already stretched primary care services. Chronic loneliness also leads to *longer hospital stays*, delayed recovery, and greater likelihood of discharge to institutional care instead of home, further driving up public health expenditure [37].

5.4 Elder abuse and neglect

Loneliness and social isolation are known *risk factors for elder abuse*. Isolated seniors are often disconnected from networks that can detect, report, or intervene in cases of mistreatment. Abusers—whether family members, caregivers, or outsiders—may take advantage of this vulnerability.

Studies show that socially isolated older adults are significantly more likely to suffer *financial exploitation, physical abuse, neglect, or emotional abuse* [38]. In India, where elder abuse often goes underreported due to stigma or fear of retaliation, isolation exacerbates the invisibility of abuse victims. HelpAge India's 2022 report noted that 71% of elderly abuse victims did not report the abuse, and a large proportion lived alone or with minimal family contact [39]. Moreover, digital illiteracy and cognitive decline in isolated seniors may lead to *online fraud or scams*, further compounding financial insecurity and emotional distress.

5.5 Reduced quality of life

Perhaps the most pervasive yet underappreciated consequence of loneliness is its effect on the *overall quality of life*. Older adults who are lonely report lower scores across all well-being domains—physical functioning, emotional status, social participation, and perceived life satisfaction [40]. A lack of daily interaction, affection, and purpose leads to *hopelessness, apathy*, and disengagement from previously enjoyed

activities. Over time, these patterns solidify, creating a self-reinforcing cycle of withdrawal and psychological distress.

In community-dwelling elders, loneliness is a major barrier to health-promoting behaviors such as exercise, good nutrition, medication adherence, and preventive care utilization. For instance, studies show that lonely seniors are less likely to attend medical screenings or follow up on prescriptions [41]. Even when physical health is relatively preserved, loneliness can create a state of “*social pain*” that mirrors physical pain in its neurobiological impact, affecting the brain’s reward systems and undermining emotional regulation [42].

6. The Indian scenario: Unique dimensions of elderly loneliness

India, home to over 138 million people aged 60 years and above, presents a distinct socio-cultural landscape where traditional norms of family care are increasingly being replaced by nuclear family living, urban migration, and socio-economic vulnerabilities. While loneliness among the elderly is a growing global concern, the Indian context adds unique demographic, social, and policy dimensions to the issue.

6.1 Demographic shifts

India is experiencing a profound demographic transition. By 2050, the elderly are projected to constitute nearly 20% of the total population, up from 10.1% in 2021. This implies that over 320 million people will be aged 60 and above, marking a doubling of the elderly population in less than three decades [43].

Urbanization is a major contributing factor. As younger generations move to cities for education and employment, older adults are often left behind in rural settings or find themselves living alone in urban apartments, physically near but socially distant from their families. Traditional joint family setups are giving way to nuclear households, eroding the protective fabric of intergenerational care and interaction [44].

6.2 Social and cultural factors

Cultural shifts are accelerating the erosion of India’s age-old social safety net. Once integral to Indian family life, *joint families* are now rare in urban India. A combination of housing constraints, changing values, and migration patterns has resulted in elderly individuals often living by themselves or with only a spouse. This shift leads to a decline in routine social interactions, companionship, and emotional security [45].

Widowhood is another key factor, disproportionately affecting elderly women. As per the 2011 Census, nearly 50% of women aged 60 and above are widowed, compared to around 15% of men [46]. In patriarchal and conservative settings, widowhood is accompanied by social exclusion, limited mobility, and economic dependence, heightening the risk of loneliness.

Additionally, *migration of adult children*—both domestic and international—leaves parents in emotional isolation, particularly in states like Kerala, Punjab, and Gujarat. While financial support through remittances may continue, the absence of everyday emotional presence and digital unfamiliarity leads to disengagement and a deep sense of abandonment [47].

6.3 Economic insecurity

Unlike many Western countries, *financial independence among Indian elderly is limited*. The Longitudinal Aging Study in India (LASI) reports that *about 65% of elderly individuals depend on family* for their financial needs, and this figure is even higher among elderly women [48]. Only a minority are covered by pensions or retirement schemes, mostly those who retired from formal sector jobs.

This lack of income limits access to healthcare, mobility, and participation in social or recreational activities. Financial dependency can also lead to strained intra-household relationships, neglect, and, in some cases, abuse—further compounding feelings of worthlessness and loneliness.

6.4 Health-related issues

Chronic illness and functional limitations are widely prevalent among India's elderly. Conditions such as *hypertension, diabetes, arthritis, and vision or hearing impairments* are common and restrict social mobility. Over 55% of Indian elderly report at least one chronic condition [49].

Mental health support remains inadequate. According to the National Mental Health Survey (2015–2016), *depression affects 13–15% of older adults in India*, yet awareness, access, and utilization of services remain abysmally low [44]. Social stigma, coupled with a lack of geriatric mental health services—particularly in rural and underserved regions—creates a blind spot in the healthcare system.

Digital exclusion is another barrier. Less than 10% of India's elderly use the internet, preventing them from staying connected with distant family or accessing online platforms for recreation or telemedicine [12]. This technological gap has become especially evident in the post-pandemic era, where social connectivity is often mediated through digital tools.

6.5 Rural-Urban contrast in elderly loneliness

The experience and drivers of loneliness among elderly populations in India differ significantly between rural and urban settings. In rural areas, loneliness is often rooted in geographic isolation, limited transportation, and poor access to healthcare and social infrastructure. According to LASI Wave 1, approximately 21% of rural elderly live alone or with only their spouse, often in villages where children have migrated away for work [48]. Public transport is sparse, and healthcare services are often distant and under-resourced, limiting routine check-ups and psychosocial interaction.

In contrast, urban elderly individuals, despite being surrounded by people, often experience emotional and psychological loneliness. LASI data show that in urban areas, 28% of elderly live alone or only with their spouse, with this figure rising to over 40% among elderly women in metro cities [48]. Fast-paced urban lifestyles, shrinking living spaces, and migration have weakened intergenerational cohabitation, leading to social exclusion even in populated settings.

Digital exclusion also reveals a stark divide: only 3.5% of rural elderly use the internet compared to 12.5% of urban elderly, making rural seniors especially vulnerable to digital isolation [12]. Even in urban areas, the lack of digital literacy, especially among women and the oldest old, limits engagement with family or virtual social platforms.

Support systems also differ—rural elders may benefit from closer-knit community familiarity, yet formal support services are lacking. Urban elders, on the other hand, have greater access to health facilities and senior citizen centers but often lack meaningful community bonds or time investment from family. These distinctions underscore the need for tailored strategies: mobility services, home-based care, community visits in rural areas, digital literacy, neighborhood clubs, and intergenerational bonding initiatives in urban contexts.

7. Case study: Elderly loneliness in Kerala

Kerala is often lauded for its advanced health indicators, high literacy rates, and progressive social development. However, the state also provides a critical lens into the challenges of elderly loneliness in India. Despite strong public health infrastructure, Kerala has one of the highest proportions of elderly in the country—about 16.5% of the population is aged 60 years or more, significantly higher than the national average of 10.1% [50].

A community-based study in central Kerala found that *over 25% of senior citizens reported frequent feelings of loneliness*, even in households where they were not living alone [26]. This paradox highlights that proximity to others does not necessarily translate to emotional connection.

The primary contributing factors include:

- *Outmigration of younger family members*, especially to Gulf countries and other Indian metros;
- *Widowhood*, particularly among women, limiting emotional and financial security;
- *Reduced participation in community events*, especially after retirement or physical decline;
- *Digital exclusion*, preventing contact through video calls or social platforms.

In response, several *grassroots interventions* have emerged. Notably, neighborhood support groups such as *Elder Self-Help Groups (ESHGs)* and *Kudumbashree-linked Senior Forums* provide structured social interaction, group activities, and volunteerism opportunities for older adults. These groups have helped reduce feelings of loneliness and encouraged elderly individuals to contribute meaningfully to society again [51].

The Kerala model carries important lessons for other Indian states and South Asian countries facing similar transitions. Regions like Goa, Himachal Pradesh, Sri Lanka, and Bangladesh share features like rising life expectancy, migration of working-age adults, and weakening intergenerational bonds. Implementing Kerala-inspired neighborhood elder care models and SHG-based engagement frameworks can help other regions address loneliness in a culturally appropriate, scalable manner.

This case highlights that even in high-performing states, loneliness among older adults can silently escalate without targeted interventions. Community-led support, local government involvement, and integration with primary healthcare remain key to tackling the epidemic of elderly loneliness across South Asia.

8. Strategies to address elderly loneliness

Tackling elderly loneliness requires a comprehensive, multisectoral approach. Interventions must span policy-level reforms, healthcare innovations, community involvement, and the use of technology. India's unique socio-cultural landscape demands that traditional support systems be blended with modern solutions to address loneliness sustainably.

8.1 Policy and structural reforms

Governments have a key role in creating enabling environments for aging with dignity. Policy-driven initiatives should focus on social security, age-inclusive urban design, and access to services (**Figure 2**).

- *Social support programs*: Expansion of schemes like IGNOAPS with increased coverage and better targeting for urban poor and widowed elderly. Some states, like Tamil Nadu and Odisha, have piloted schemes combining financial aid with community outreach [27].
- *Geriatric healthcare policies*: Inclusion of mental health screening in programs like the National Program for Health Care of the Elderly (NPHCE) can improve early detection of loneliness-related depression and anxiety.
- *Public awareness campaigns*: Sensitization drives aimed at reducing ageism and promoting intergenerational solidarity can play a pivotal role in addressing social stigma around eldercare and loneliness.

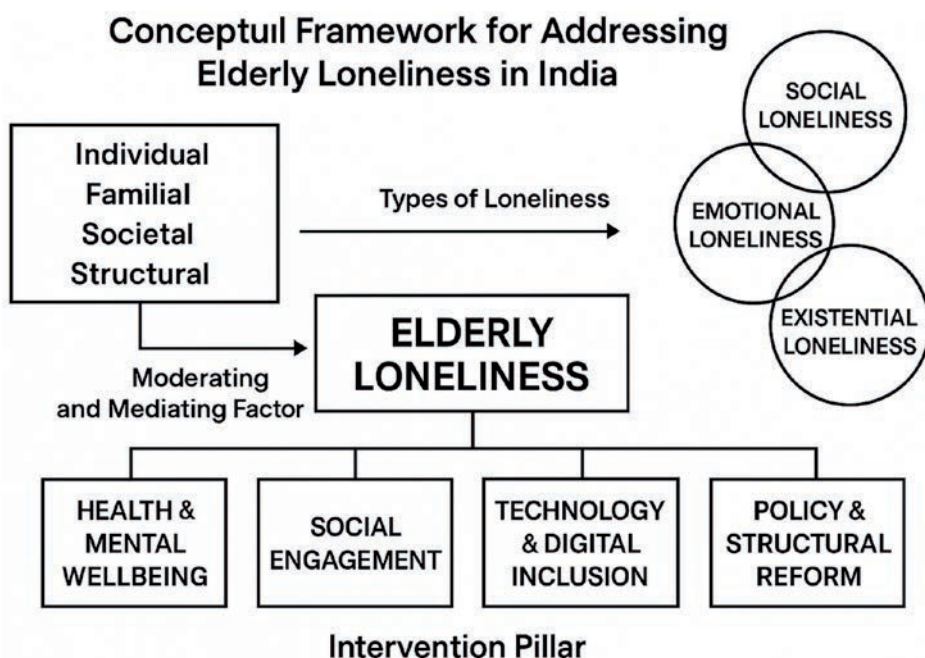


Figure 2.
Conceptual framework for addressing elderly loneliness in India.

8.2 Social engagement/community-based solutions

Social engagement remains one of the most effective buffers against loneliness. A sense of belonging and shared identity contributes significantly to emotional well-being (**Figure 2**).

- *Senior citizen clubs*: Recreational centers offering cultural events, games, yoga, and counseling, especially at the ward or panchayat level, foster regular interaction.
- *Intergenerational programs*: Schools and colleges can adopt ‘buddy systems’ with elderly homes, promoting emotional exchange and mentorship. The Anubhav Shiksha initiative in Gujarat is a noteworthy model [51].
- *Volunteer and mentorship platforms*: Involving elderly citizens in school reading programs, local history documentation, or as health volunteers (e.g., *Elder Health Ambassadors*) restores purpose and societal relevance.

8.3 Healthcare interventions

The healthcare system offers both preventive and curative entry points for tackling loneliness (**Figure 1**).

- *Routine loneliness screening*: Tools like the UCLA loneliness scale or De Jong Gierveld Loneliness Scale can be integrated into geriatric check-ups at PHCs and outreach camps.
- *Mental health support*: Expanding counseling services at wellness centers and training ASHA/ANM workers in basic mental health first aid can create a decentralized support system.
- *Home-based care models*: For immobile or severely ill elderly, mobile health units and home visits by geriatric teams can offer medical care and emotional companionship.

8.4 Technological and digital solutions

Technology can be a potent enabler of social connection, especially where physical interaction is limited (**Figure 1**).

- *Digital literacy training*: Community IT volunteers can train seniors in using smartphones, WhatsApp, or video calls. Initiatives like Digital India Senior Training and Cyber Seniors have shown promise.
- *Telemedicine and virtual counseling*: The eSanjeevani platform, currently underused by the elderly, can be made more age-friendly through simplified interfaces and assisted usage.
- *AI and robotic companions*: While nascent in India, low-cost AI solutions or ‘digital companions’ such as voice-activated assistants (e.g., Alexa in regional languages) may eventually bridge companionship gaps for the technologically inclined elderly.

9. Conclusion

Elderly loneliness is no longer a peripheral concern but a central public health issue, particularly in aging societies such as India. As this chapter demonstrates, loneliness in older adults arises from a complex interplay of biological impairments, psychological vulnerability, social disconnection, and environmental inadequacies. It is not merely a reflection of being alone but a deeper sense of emotional isolation, loss of identity, and societal disengagement.

India's socio-cultural landscape presents unique challenges. The erosion of joint family systems, increasing urban migration, and the digital divide have rendered many elderly individuals physically present in communities, yet emotionally and socially excluded. Despite the nation's strong cultural emphasis on family care, the reality is shifting toward individualistic and nuclear patterns that reduce the frequency and quality of elderly interactions.

The consequences of loneliness are profound, including higher risks of depression, dementia, cardiovascular diseases, elder abuse, healthcare overuse, and even premature mortality. The health and economic burden imposed by loneliness warrants immediate policy recognition at par with other non-communicable conditions.

To address this, a multi-sectoral strategy is essential—one that combines traditional values with modern approaches. Programs like the National Program for Health Care of the Elderly (NPHCE) offer a useful platform but need to be complemented with community-based initiatives, digital literacy training, and age-friendly infrastructure. Case studies such as Kerala demonstrate that neighborhood support groups, elder self-help collectives, and intergenerational engagement can be effective models for replication across other states and South Asia.

Moving forward, India must develop a national-level framework that incorporates loneliness screening in routine health checkups, integrates social prescribing, and establishes clear roles for local governance, NGOs, and healthcare providers. Above all, the solutions must center around restoring dignity, voice, and companionship for our aging population. Loneliness may be silent, but the response must be systemic, loud, and compassionate.

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Source of finding

Nil

Conflicts of interests

The authors declare no conflict of interest.

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Chapter 3

Gray Horizons and the Solitude of Aging

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Abstract

Growing older is not simply about living longer, it is about ensuring that those years are lived with good health, purpose, and dignity. Yet, for many older adults, the hidden realities of loneliness and social isolation, often silenced by stigma or a lack of public awareness, pose profound threats to well-being. As global life expectancy rises, extended lifespans are increasingly accompanied by shrinking social networks, fragile family and community ties, and unmet psychosocial needs. There is growing evidence that social connection is as critical to health as nutrition or physical activity; yet healthcare systems and policies still focus predominantly on disease management. The health consequences of loneliness and social isolation are well-established, but their intersections with broader social determinants of health and culture-specific realities remain poorly understood, particularly in regions, such as the Caribbean. Existing interventions remain fragmented, underfunded, and rarely embedded within age-friendly communities or policy frameworks. This chapter highlights these gaps and offers a distinctive focus on the Caribbean context, drawing attention to an area that is often overlooked in global discourse. This chapter aims to: (i) Raise awareness about the global population shifts associated with loneliness and social isolation among older adults, (ii) Examine how these experiences intersect with other determinants of health, and (iii) Highlight opportunities for multilevel, sustainable initiatives, including social prescribing, community-based programs, and digital tools that foster healthier, happier, and more socially connected older adults.

Keywords: loneliness, social isolation, older adults, social determinants, socioecological model, Caribbean, interventions

1. Introduction

1.1 Core definitions

The German American philosopher Paul Tillich famously stated in his *Loneliness and Solitude Sermon*, “*Man is alone because he is man! In some way, every creature is alone... He is not only alone; he also knows that he is alone... [Our language] has created*

the word “loneliness” to express the pain of being alone. And it has created the word “solitude” to express the glory of being alone” [1]. This timeless distinction captures the paradox of aging in the twenty-first century: as lifespan extends, the social networks of older adults are shrinking, often leaving them with longer lives but fewer social connections.

Global life expectancy has increased significantly over the last century, and combined with declining fertility rates, this has led to a higher proportion of older adults in the population [2, 3]. While living longer, to an average of 73 years, may be seen as a celebrated achievement, the period of healthy, disease-free living, or health-span, remains considerably shorter, at around 63 years [2, 4]. The growing gap between lifespan and health-span creates pressure not only on healthcare systems but also on social support structures (**Figure 1**) [3, 5].

Among the emerging challenges are the psychosocial experiences of loneliness and social isolation. These terms are often conflated but are described as distinct phenomena. Loneliness is a subjective emotional state experienced when individuals perceive a gap between their desired and actual social relationships [6, 7]. In contrast, social isolation is an objective measure of limited social contact, whether voluntary or involuntary [6]. While either can occur independently, they frequently overlap and exacerbate each other. An individual can experience loneliness or social isolation independently or both simultaneously. For example, someone with regular but superficial social contact may still feel lonely, while another person with little social contact may not perceive themselves as being lonely.

Robert Weiss first described loneliness as a “gnawing, chronic disease...and a strong sense of social pain” characterized by emotional distress from the absence of meaningful social relationships [7]. This was further expanded upon into the three dimensions of loneliness (**Table 1**) [7].

The table above illustrates the three dimensions of loneliness, highlighting the absence of a close confidant, friends, family, or community support [7].

Social isolation, in contrast, reflects the objective absence of social contact or the disengagement from social relationships [6]. This isolation may be voluntary for those seeking privacy, and they have actively distanced themselves from others. However, social isolation is distressing and problematic when it is involuntary, and the individual’s need for social connection surpasses the available human connections [8].

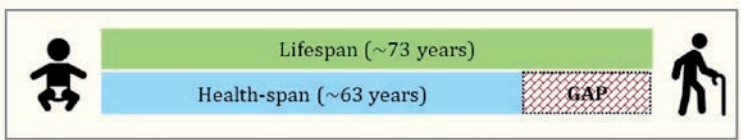


Figure 1.
The widening gap between lifespan and health-span. Adapted from: Garmany et al. [4].

Dimensions of loneliness	Description
Emotional loneliness	Absence of a nurturing and supportive confidant (e.g., a partner or spouse)
Social loneliness	Lack of meaningful friendships or strong connections with family members
Collective loneliness	Lack of connection with a group or community (e.g., religious or cultural group)

Table 1.
Dimensions of loneliness.

Levels of social connection	Description	Examples of impacting factors
Macro-level “community”	Integration into a larger community and feeling part of the wider social group	Systemic inequities (racism, classism, and ageism)
Meso-level “organizational”	Involvement in institutions, such as churches, clubs, volunteer groups, and workplaces	Retirement, lack of age-friendly infrastructure, and services
Micro-level “confidants”	Having supportive and trusted interpersonal relationships, such as family, friends, and partners	Migration, bereavement
Intrapersonal “individual”	The individual’s capacity to socially connect with others, interpret, understand, and appreciate relationships	Cognitive decline, physical impairment, and digital literacy

Table 2.
Levels of social connectivity.

Social isolation can be examined at multiple levels of social connectivity, from the individual’s capacity to broader community and societal structures (**Table 2**) [8].

The table above illustrates the levels of social connectivity framed as intrapersonal, micro-level, meso-level, and macro-level [8].

While the core definitions of loneliness and social isolation remain consistent, sociocultural differences can influence how they are experienced or expressed. In “*individualistic cultures*” (e.g., North America, Europe), there is a greater emphasis on autonomy and independence, which may increase the risk of loneliness when health or mobility declines [9]. Engaging in brief visits, remaining unmarried, being separated or divorced, relocating farther from home, and infrequent visits to family members are socially acceptable in these regions and may contribute to a higher risk of loneliness and social isolation, especially among older adults. In “*collective cultures*” (e.g., Africa, India, Latin America, and the Caribbean), stronger family ties and community bonds have traditionally buffered against loneliness, although migration, changing family structures, and declining birth rates are eroding these supports [9]. In these regions, a cultural norm of intergenerational cohabitation and greater engagement of older adults within their community exists, resulting in a lower likelihood of loneliness and social isolation. Understanding these cultural variations is important for developing context-appropriate interventions.

1.2 Chapter roadmap

This chapter examines the scope and implications of loneliness and social isolation among older adults. It begins with an analysis of global demographic trends and reviews the prevalence of loneliness and social isolation across various regions, highlighting sociocultural differences. It then explores major determinants of loneliness and social isolation, including bereavement, declining physical and cognitive abilities, retirement, migration, and limited access to digital technology. This chapter also addresses their consequences on physical, psychosocial, and emotional well-being.

As shown in **Figure 2**, demographic and sociocultural shifts, such as aging populations, urban migration, and changing family structures, can increase the risk of loneliness and social isolation. These, in turn, are closely linked to adverse health outcomes. Loneliness and social isolation increase the risk of premature death and contribute to the development of chronic health conditions, such as cardiovascular

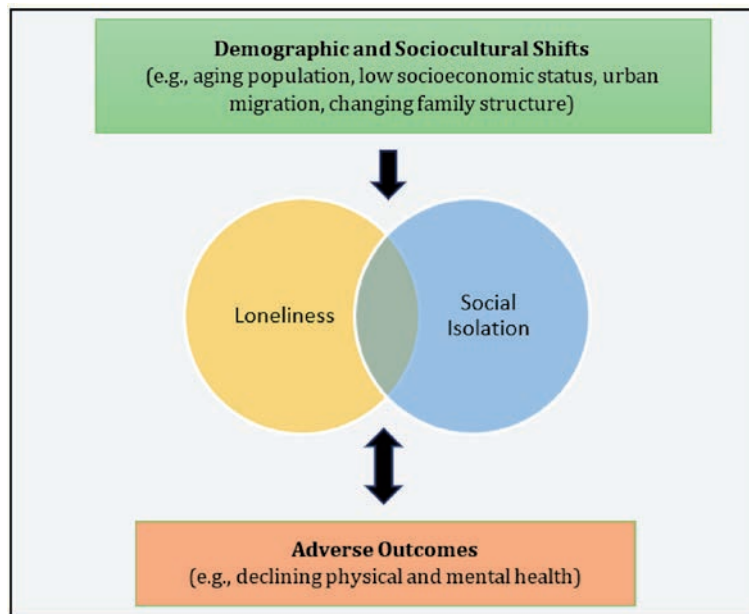


Figure 2.

Intersection of changing trends, loneliness, social isolation, and adverse outcomes. Changing demographic and sociocultural trends increase the risk of loneliness and social isolation, especially among older adults, which in turn have a bidirectional causal relationship with adverse health outcomes.

disease, cognitive decline, depression, and anxiety, while also worsening overall well-being and quality of life [10, 11]. However, traditional models of healthcare continue to prioritize physical health, overlooking psychosocial and emotional needs. Rarely is screening conducted for loneliness, and in some developing regions, such as the Caribbean, there are few social support services or programs available to address this growing issue [12].

A dedicated section in the chapter addresses the Caribbean context, where demographic shifts, migration, and changing family structures present unique challenges. Finally, the chapter concludes by discussing multilevel strategies, from individual resilience to policy-level reforms that can foster age-friendly environments and promote healthier, more socially connected aging.

2. Background

2.1 Global shifts in the aging population

2.1.1 The aging world

Within just a few generations, global life expectancy has leapt from barely 45 years in 1950 to 73.6 years in 2022, with projections of 78.2 years by 2050 [13–15]. This unprecedented shift represents one of the humanity's greatest public health achievements, including improved sanitation, vaccination, antibiotics, maternal and child health, and modern medical care [15]. These shifts also bring profound social and economic challenges. At the same time, fertility rates have sharply declined. By 2050, 70% of high-income countries are expected to fall below replacement fertility levels,

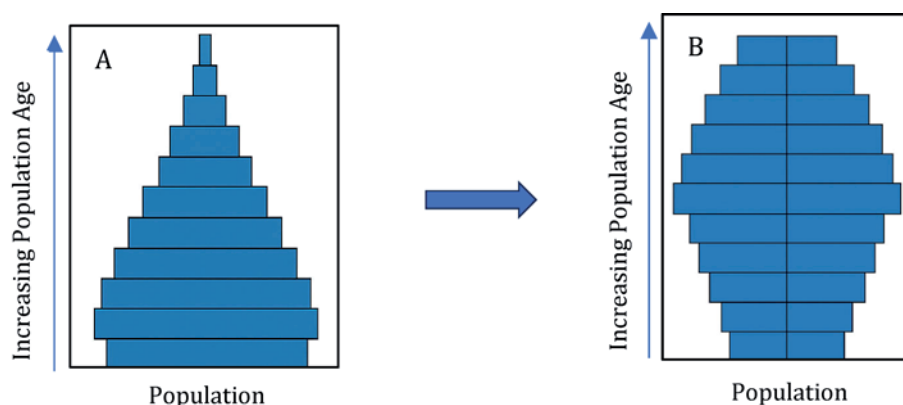


Figure 3.
 Changing population distribution from a pyramid shape reflecting a youthful population to a more rectangular or columnar shape reflecting an increasingly aging population. Adapted from He W et al. [18].

and by 2100, almost 93% of all nations are projected to reach this level, with some populations shrinking by as much as half [16, 17]. The combined effect of *increasing longevity* and *declining fertility* is shifting the global population structure from a youthful pyramid to a more rectangular or columnar shape, as the number of older adults rapidly surpasses that of the younger age groups (**Figure 3**) [18, 19]. This transition signals the restructuring of societies, where older adults are becoming a rapidly growing share of the population.

2.1.2 Regional differences in aging

The global population is aging, but at an uneven rate across different regions, reflecting disparities in healthcare systems, economic and social support infrastructure, and social determinants of health. In 2023, approximately 1.1 billion people were aged 60 or older, projected to increase to 1.4 billion by 2030 [18]. The oldest populations are found in Asia, followed by Europe and North America, while areas such as sub-Saharan Africa are considered the most youthful [19].

In 2020, China, India, Japan, and Indonesia had the largest proportion of older persons, with Japan leading in life expectancy [19]. Approximately 30% of Japan's population was aged 65 or older, with a considerable proportion living alone [20, 21]. Similarly, in Europe, one-fifth of the population was aged 65 years or older, with a projected increase to one-third by 2050 [22]. However, the rate at which the proportion of older adults increased in these regions has been gradual, allowing societies to adapt and make infrastructural adjustments. Yet, despite this, they continue to face the challenge of meeting the demands placed on healthcare and social support services.

In North America, aging is shaped by the retirement of the baby boomer generation and buffered by the presence of a youthful immigrant population. As the baby boomers (born between 1946 and 1964) enter retirement around 2030, they are projected to become the “young old,” while those born prior to 1946 will be the “oldest old” [23]. The expected growth in the proportion of older adults is expected to rise from 16.3% in 2016 to 25.4% in 2060 for Canada, and from 15.3 to 23.6% for the United States [24].

The Latin America and the Caribbean region, with a relatively young population (11.2% aged 60 and above), is projected to be among the fastest aging regions, with one in three individuals aged 65 and above by 2085 [25, 26]. While it will take Europe ~56 years for 10–20% of its population to reach the age of 65 or older, the United States will take about 62 years, and Asia will take about 31 years. In contrast, Latin America and the Caribbean are expected to see this growth in about 29 years [26]. The combination of youthful migration, the return of expat retirees, and a rapid increase in life expectancy and decline in fertility rates means the infrastructure will not have sufficient time to adapt.

The sub-Saharan region has the youngest population overall but is expected to experience one of the most drastic increases in life expectancy as healthcare services and quality of life improve [27]. There is a projected 218% growth in the older population between 2019 and 2050 [27]. Similarly, as in the Latin American and Caribbean region, this rapid increase in the aging population will place significant systemic pressures on already limited resources.

These variations in aging highlight a common challenge that, regardless of the rate, societies worldwide must prepare for a future where the needs of older adults shape healthcare and social support policies.

2.1.3 The call for healthy aging

Living longer does not automatically mean living better. Older adults often face shrinking social networks, limited mobility, and fewer opportunities for intergenerational interactions. Geographic mobility, urbanization, and smaller family units weaken the traditional social support systems. Although living longer was once a celebrated goal, it no longer necessarily ensures a more socially connected, happier, or healthier life.

In response, the United Nations (UN), in collaboration with the World Health Organization (WHO), launched the Decade of Healthy Aging (2021–2030), calling for a global effort to close the gap between lifespan and health-span. The initiative identifies four pillars: creating age-friendly environments, changing perceptions of aging, delivering integrated and long-term care, and promoting person-centered approaches (**Figure 4**). It aims to enhance the lives of older adults, their families, and communities by promoting healthy aging and reshaping societal perceptions of aging [28, 29].

Importantly, the WHO emphasizes that “*social isolation and loneliness are increasingly being recognized as priority public health concerns across all age groups*” [18, 28]. If longevity is to be a triumph rather than a burden, policies must move beyond traditional disease management to integrate psychosocial well-being as a core pillar of healthy aging [30].

2.2 Prevalence of loneliness and social isolation

Understanding loneliness and social isolation is important for assessing their impact on population health and for designing effective interventions. However, the prevalence varies widely depending on region, cultural context, and socioeconomic conditions. A recent meta-analysis estimated that 27.6% of older adults worldwide experience loneliness, a figure significantly higher than the WHO’s estimate of 11.8% [31, 32]. Regional patterns show substantial variations, with the highest prevalence in North America (30.5%), followed by Asia (27.9%), Europe (27.2%), Oceania (25.7%), and Africa (15.3%) [31].

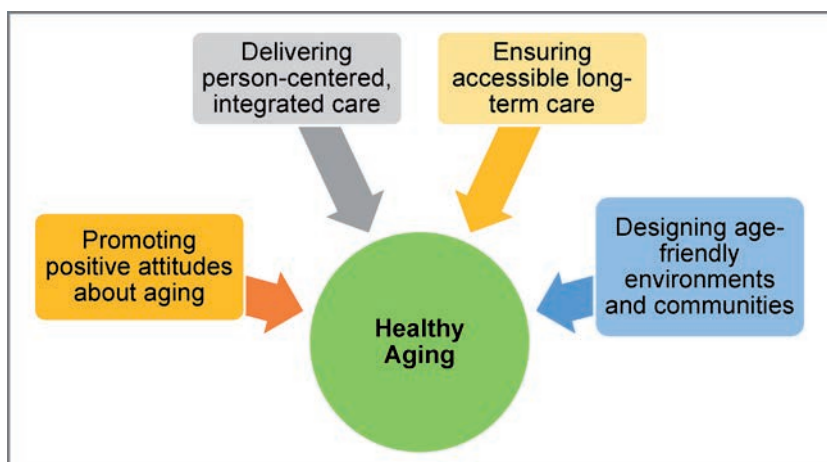


Figure 4. Key pillars of healthy aging. In the UN Decade of Healthy Aging (2021–2030), the four goals are to design age-friendly environments, change perceptions and attitudes about aging, deliver integrated, accessible, and long-term care, and promote person-centered approaches. Adapted from the World Health Organization. UN Decade of Healthy Aging (2021–2030) [29].

In the United States, 25–40% of older adults report feeling lonely at least some of the time, while one in four have limited social interactions [33, 34]. Although much of the available data comes from higher-income regions, awareness is increasing in developing areas, and more comprehensive data collection is anticipated.

Beyond regional differences, specific subgroups of older adults are disproportionately affected. Women, individuals living alone, or those residing in long-term care facilities are especially vulnerable [31]. Older adults living in rural areas often face geographic isolation, limited access to transportation, and fewer community services that provide social support [35]. In contrast, older adults in urban communities may be surrounded by people yet remain disconnected because of weaker community ties.

Other vulnerable groups include migrants and low-income older adults, who may lack the resources to sustain social networks, even in densely populated urban areas [36]. Members of the LGBTQ+ community face compounded risks, often due to stigma and discrimination, smaller or fragmented social networks, and reduced access to familial and community-based social support [37, 38]. Similarly, ethnic minority elders and older immigrants may encounter language barriers, discrimination, or cultural displacement that limit social participation. The “oldest-old” (aged 85 years and older) face the additional burden of having outlived partners, spouses, siblings, and friends, leaving them with diminished social support networks and a higher risk of loneliness and social isolation.

Taken together, these findings demonstrate that loneliness and social isolation are not evenly distributed; rather, they are shaped by cultural context, geography, and social identity. They also show the need for targeted strategies to address the unique vulnerabilities of different subpopulations within the aging population.

3. Determinants of loneliness and social isolation in older adults

Loneliness and social isolation among older adults rarely arise by chance; they are the cumulative product of complex, interwoven factors that accumulate across the

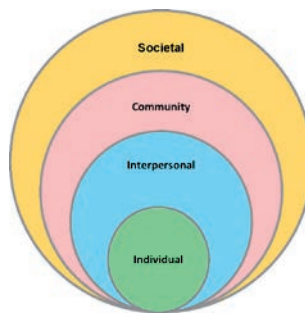


Figure 5. *Using the socioecological model to identify the determinants of loneliness and social isolation among older adults at the individual, interpersonal, community, organizational, and societal levels.*

lifespan. The socioecological model provides a useful framework for understanding these determinants across multiple levels: individual, interpersonal, community, and societal (**Figure 5**). By identifying these factors, the model also highlights where interventions can be applied, from personal coping strategies to policy-level reforms.

3.1 Individual determinants

A range of individual-level characteristics influence the risk of loneliness and social isolation in older adults, including low socioeconomic status, minimal formal education, living in institutional care homes or alone, and physical and cognitive decline with age.

3.1.1 Age-related decline in physical and mental health

Normal aging is associated with changes in physical and cognitive abilities; however, the extent of these impairments can significantly impact autonomy. Older adults with chronic diseases, frailty, sensory impairments such as hearing or vision loss, and cognitive decline may experience limited mobility, reduced independence, and opportunities for social participation [39]. Older adults with frailty are twice as likely to experience loneliness [20]. Furthermore, there is a bidirectional relationship between mental health and perceived isolation. Depression and anxiety can worsen feelings of loneliness and social isolation, while loneliness and social isolation can also trigger symptoms of depression and anxiety [40].

3.1.2 Living arrangements

Older adults are increasingly living alone, whether because of widowhood, divorce, separation, or childlessness. Living alone does not always result in feelings of loneliness and social isolation; however, the overlap between these factors increases the likelihood of negative outcomes [41]. The protective effect of living with a partner depends on the quality of the relationship, as conflicts or neglect may increase loneliness [42].

Loneliness and social isolation also occur among older adults living in institutions or nursing homes. If relationships with other residents are superficial, if institutionalization is involuntary, or if frequent staff turnover reduces opportunities for consistent, emotionally supportive caregiving, the risk of loneliness and social isolation increases [43].

3.1.3 Socioeconomic status

Older adults with limited household income and lower educational level are more likely to have diminished access to affordable housing, their own transportation, and the necessary technology to help them maintain their community engagement and social support networks. Having a lower socioeconomic status is also associated with an increased risk of depression, an effect that is exacerbated when loneliness and social isolation are also present [44].

3.2 Loss of interpersonal relationships

Becoming lonely or socially isolated is intricately linked to an individual's sense of purpose within the community and the quality of meaningful relationships maintained in later life.

3.2.1 Retirement and loss of social roles

In some regions, retirement is closely tied to one's age, and this often prematurely transitions people out of the workforce, removing a source of daily interaction, structure, and social identity for many older adults. If social networks are not maintained, retirees are more likely to experience a decline in physical health and an increase in depressive symptoms [45]. Similarly, when adult children leave home, their older parents may experience a loss of purpose, a disruption to their daily routine, and a decline in their ability to remain socially engaged [33].

3.2.2 Bereavement and loss of close relationships

The death of a partner, spouse, close friend, or sibling reduces emotional support and shrinks one's social network. For many, not only the loss of a long-term partner results in emotional grief but also the loss of daily companionship and mutual caregiving. The impact of bereavement is often compounded by declining physical capacity, making it more difficult to seek out new social connections. Widows and widowers are among the most vulnerable to loneliness, especially when combined with declining health [46].

3.3 Loss of community structure and declining neighborhood support

Communities that integrate and support older adults create environments that foster healthy aging. However, when community bonds weaken, roles diminish, and dispersal or infrastructural barriers arise, older adults become increasingly excluded.

3.3.1 Migration and family dispersal

Geographic mobility, whether rural dispersion or urban anonymity, can limit access to social support networks [20]. In areas where there is a geographic distance between neighbors, friends, and family, social contact and connectivity can be difficult. This can be worsened by the absence of reliable transportation or digital communication tools and systems [20]. In more populated, urbanized areas, it is possible to be surrounded by people without having any social connection with them. This reflects an individualistic culture, with a focus on privacy and individual needs.

In many families, intergenerational conflicts, estrangements, or the relocation of adult children for education or work can leave older adults without nearby kin. Changing family dynamics, such as divorce and fragile unions, are further weakening traditional caregiving roles, particularly those that involve the nurturing and socialization of older adults [47].

3.3.2 Environmental and economic barriers

Unsafe neighborhoods, a lack of affordable or accessible transportation, and limited age-friendly infrastructure can reduce opportunities for social engagement. Environments without appropriate access, such as sidewalks with rails, ramps, elevators, or accessible parking spaces, can make it difficult for older adults to navigate their surroundings. Communities without parks and age-friendly community centers often fail to provide safe spaces for older adults to create and build social connections. In rural communities, there is often a “triple jeopardy” of aging, poverty, and service scarcity, which further compounds the risk of experiencing loneliness and social isolation [20, 48].

3.4 Systemic barriers and inequitable policies

At the systemic level, the presence or absence of policies that prioritize healthy aging determines whether older adults thrive or languish. Age-friendly environments and robust social support systems are not luxuries but rather necessities.

3.4.1 Cultural norms and ageism

Negative stereotypes portraying older adults as dependent, unproductive, or burdensome marginalize their contributions. Ageism prevents participation in economic, cultural, and social activities. It is particularly harmful for older adults in the LGBTQ+ community, who face added layers of discrimination and marginalization. They may experience exclusion from their biological families, religious communities, or institutions, resulting in weaker support networks. Additionally, in certain regions, legal and social barriers prevent persons in the LGBTQ+ community from living openly in committed relationships. As a result, LGBTQ+ elders are more likely to live alone, depend on limited chosen families, and avoid mainstream care services because of fear of discrimination, factors that increase loneliness and social isolation [49].

3.4.2 Digital divide

Digital technology has the potential to reduce loneliness and social isolation among older adults. However, many older adults, especially those in rural or low-income regions, face socioeconomic barriers that limit their access to the internet, the availability of smart devices, or digital literacy. As more services and social interactions shift to digital platforms, these gaps risk deepening existing disparities in social connectedness [50].

4. Consequences for physical, cognitive, and mental health

Loneliness and social isolation extend far beyond emotional suffering; they are profound public health risks with measurable consequences for physical, cognitive,

and mental health. A growing body of evidence shows that they are predictors of premature mortality, poorer quality of life, and their impact is comparable to established risk factors, such as obesity and smoking.

4.1 Mental and emotional well-being

Loneliness and social isolation are major predictors of mental health decline and faster cognitive deterioration among older adults. Persistent loneliness and social isolation are associated with depression, anxiety, psychological distress, feelings of hopelessness, and suicidal ideation [31, 34, 51]. In socially isolated older adults, these experiences often coexist with poorer quality of life and heightened psychological distress [52].

4.2 Physiological changes

Loneliness activates stress-related biological pathways, such as the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic nervous system, which trigger harmful downstream effects on the cardiovascular, immune, and metabolic systems. The American Heart Association reports that loneliness and social isolation increase the risk of myocardial infarction, stroke, and cardiovascular mortality by approximately 30% [53]. Biomarker studies also link loneliness to elevated systemic inflammation, impaired immune function, and accelerated biological aging, all of which contribute to frailty and reduced resilience in later life [53].

4.3 Physical consequences

Both loneliness and social isolation are strong predictors of premature mortality, increasing the all-cause mortality risk by 26–29% [20]. The US Surgeon General compares the health impact of severe loneliness to smoking 15 cigarettes per day, underscoring the urgency of addressing this issue [10].

The impact on healthcare systems is considerable. Lonely and socially isolated older adults often use healthcare services more frequently, with increased emergency department visits, higher hospital admission rates, and longer hospital stays. One study found that older adults experiencing both loneliness and social isolation incur significantly higher healthcare costs than their socially connected peers [54]. Programs that use social prescribing to connect patients with community-based social support have demonstrated a 20–21% reduction in hospital admissions among participants who self-identify as lonely [33].

Importantly, loneliness and social isolation rarely occur independently of other social determinants of health. They intersect poverty, housing insecurity, food scarcity, and unsafe living conditions, creating compounded risks that magnify vulnerabilities in the most disadvantaged older adults.

5. Regional perspectives: Loneliness and social isolation in the Caribbean

Although the consequences of loneliness and social isolation are well-documented, there is a lack of understanding about their expression and meaning in the Caribbean. One important consideration is that the definitions of loneliness and social isolation may not align with the cultural realities of the Caribbean.

5.1 Redefining loneliness and social isolation in the Caribbean context

The Caribbean stands at the forefront of global demographic change, experiencing one of the fastest shifts toward an older population. The proportion of individuals aged 60 and older increased from 10% in 2000 to 13% in 2015 and is projected to reach 25% by 2050 [55]. As this aging trend accelerates, public health agencies and policymakers must broaden their focus beyond managing physical health and include the psychosocial and emotional well-being of older adults. While parallels can be drawn with rapid aging in sub-Saharan Africa and Asia, the Caribbean faces unique challenges due to its small-island context and high migration rates.

The Caribbean is highly diverse, with variations in culture, ethnicities, economy, and social customs that shape the aging experience across the region. Amid these sociodemographic changes, the experience of loneliness and social isolation remains closely linked to the Caribbean's strong traditions of kinship, faith, and community life. Yet empirical data are still scarce. One study found that 33% of older adults in the region reported feeling lonely, while another study showed that one-fifth of older adults in Barbados and 16–18% in Trinidad lived alone [56]. Many older adults felt their family and friends were “too busy” to spend time with them, and that eating alone felt like a form of punishment [56].

In the Caribbean, loneliness often reflects unmet expectations of care and companionship, not only from family members nearby or abroad but also from neighbors, faith groups, and community activities. By contrast, social isolation reflects the tangible lack of both face-to-face interactions and digital communications. Importantly, social connectivity in the region often depends on culturally rooted practices, such as liming or “*ole talk*,” church gatherings, and neighborhood corner or “*blocko*” events. However, these social connections are fragile. Chronic disease, disability, mobility limitations, financial hardships, safety concerns, or bereavement can limit participation in social life, leaving older adults feeling lonely and socially isolated even when surrounded by relatives or peers. Migration adds a distinctive Caribbean dimension. Although transnational families maintain bonds through WhatsApp and similar tools, many “*left-behind*” older adults may experience heightened feelings of absence and longing.

The determinants of loneliness and social isolation in the Caribbean, therefore, arise from both individual vulnerabilities and wider systemic challenges. Many small-island developing states in the Caribbean struggle with high costs, unreliable transportation, unsafe pedestrian infrastructure, and storm-related damage to public spaces. These barriers, combined with chronic illness or disability, intensify the risk of isolation. At the same time, the cultural premium placed on family ties and community closeness increases the expectations of what counts as “*enough*” connection. When these expectations go unmet, whether because of widowhood, reduced participation in church or community activities, or migration that scatters families across continents, the resulting gap between desired and actual support is often acutely felt.

5.2 Drivers of loneliness and social isolation in the Caribbean

While kinship, faith, and community traditions remain strong, daily realities such as mobility constraints, economic precarity, shifting family structures, and migration are eroding opportunities for social connection. The drivers below often co-occur, worsening the risk for older adults in the Caribbean.

5.2.1 Environmental and infrastructural limitations

Public transportation is pivotal for older adults who no longer drive or who live on limited incomes, yet age-friendly, reliable options are scarce across many islands, affecting opportunities for socialization [57, 58]. On most Caribbean islands, the primary transportation options include state-owned busses, private minibusses, and taxis, with minibusses being the most common mode of transportation overall [59]. These services are frequently overcrowded, with irregular schedules and a lack of accessible entry points or priority seating for older adults.

While hotels and tourist sites in the Caribbean generally meet strict accessibility standards, many residential areas have poor road networks leading in and out of villages, making them inaccessible to public transportation. As a result, alternative modes of travel, such as bicycles or motorbikes, are often required but unsuitable for most older adults. Some regions lack proper pedestrian infrastructure, including designated sidewalks, adequately marked pedestrian crossings, and well-maintained road surfaces, which create safety risks for pedestrians. When sidewalks are available, they are often obstructed by vendors or parked vehicles, making them unsafe or uneven.

Besides the lack of pedestrian safety measures and transportation services, other environmental factors further limit the mobility of older adults. Sanitation facilities are often centralized in the city, and either require payment or are inaccessible in some areas. Older adults with chronic health conditions who need to use the restroom or other amenities outside the home are greatly impacted by the limited availability of these services. Moreover, public spaces such as community centers within villages often focus on youth-oriented activities and are typically equipped with basketball courts and running tracks. They may lack inclusive features, such as wheelchair ramps or other facilities, that would encourage older adults to participate in social activities in these venues. These environmental barriers reduce the ability of older adults to participate in and engage with the broader society. Moving toward more age-friendly infrastructure will ensure safety, accessibility, and proper use, thereby fostering opportunities for social interaction and reducing the risks of loneliness and social isolation, particularly among older adults.

5.2.2 Financial and economic insecurity

Rapid population aging in resource-limited regions places additional strain on already overextended health and social services. Older adults require affordable healthcare tailored to their needs, long-term care, social support services, and accessible housing [55, 60]. However, as the population rapidly ages, the rate of change surpasses the ability of communities to meet these needs.

One major source of financial support for older adults is the pension system [26, 55]. However, contributory pension schemes often provide benefits too small to ensure security, and many older adults, especially those in informal work, do not qualify for contributory pensions at all, leaving them without a consistent income [55, 61, 62]. Additionally, the average salary of the working class in the Caribbean makes it difficult to afford private pension plans or accumulate significant savings.

With the older, non-working population growing faster than the working-age base, pension sustainability is challenged. Retirement typically occurs between the ages of 60 and 65, yet low lifetime earnings often limit private savings. These factors

contribute to older adults in the Caribbean being financially vulnerable and at risk for loneliness and social isolation, with limited means to access community support services.

5.2.3 Changing family structures

Historically, multigenerational households supported older adults within the community. However, this family structure has undergone considerable changes over the years. Trends include fewer and later marriages, more unstable cohabiting and visiting unions, and complex step- and half-kin networks, which diffuse caregiving responsibilities. With these fragile, short-lived, and serial unions, it becomes unclear who is responsible for caring for older relatives, increasing the likelihood that no one will visit frequently.

Women are shouldering a disproportionate care burden within female-led households, often with limited time and resources for the care of older adults. Filial responsibilities are also evolving, resulting in fewer visits and check-ins with older relatives. Additionally, intergenerational caregiving between older adults and grandchildren is declining. Falling fertility rates further shrink family networks, leaving increasing numbers of older adults living alone or with minimal daily contact.

5.2.4 Emigration and the “left-behind” elders

There is a high rate of emigration to the United States, the United Kingdom, Canada, and other destinations, reshaping family life across the Caribbean [63]. In some cases, emigration exceeds immigration [63]. While transnational ties are maintained digitally, the lack of nearby family can leave older adults with fewer practical support systems and less daily companionship.

Social support, both given and received through intergenerational activities, helps protect well-being in later life [64, 65]. When migration disrupts households and community networks, older adults are often left to care for themselves without enough social support, increasing their risk of negative outcomes related to loneliness and social isolation [66]. Importantly, many emigrants also return to their home countries after retirement, further increasing the aging population. Since they have spent most of their working years abroad, returnees often lack established networks and connections in their homeland. This can lead to loneliness and social isolation, as they struggle to navigate new environments without sufficient support systems.

6. Addressing loneliness and social isolation: Multilevel solutions and interventions

The determinants for loneliness and social isolation outlined in the earlier sections highlight the need for multifaceted solutions. These experiences are shaped by individual, interpersonal, community, organizational, and systemic factors; therefore, interventions must also operate at these levels. No single approach can address the diverse and intersecting factors that contribute to loneliness and social isolation. The socioecological model provides a framework for designing and implementing multilevel strategies (**Figure 6**).

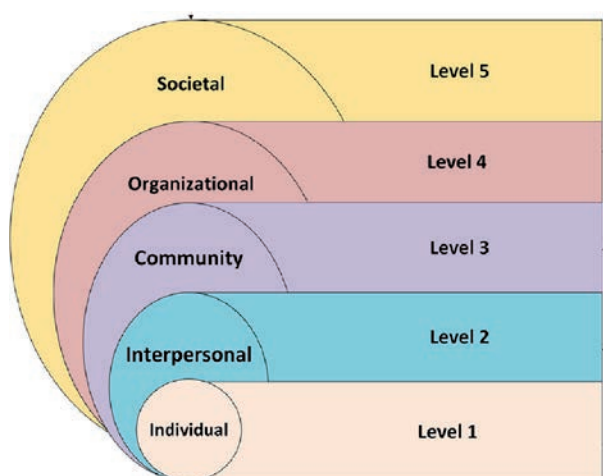


Figure 6.
Applying the socioecological model to propose multilevel, integrated solutions that address individual, interpersonal, community, organizational, and societal level determinants of health and well-being.

6.1 Individual level

At the individual level, interventions focus on building resilience, enhancing coping skills, and supporting the capacity of the older adult to maintain meaningful social connections.

6.1.1 Technology-based interventions with individualized support

Digital tools, including smartphones, messaging apps, and smart speakers, help reduce social isolation by facilitating communication with family, friends, and peers. Voice-assisted devices, such as Alexa, Google Assistant, and Siri, have become increasingly valuable for accessing information, maintaining contact, sharing experiences, and seeking support [67]. Smart speakers also provide virtual companionship and serve as a safety check for older adults living alone [67]. While some older adults may be hesitant, they can be supported in learning how technology enhances daily life, whether through connecting with distant relatives, accessing health information, or enjoying entertainment in their native language [68].

Organizations such as Older Adults Technology Services (OATS) offer tailored digital literacy training to help older adults use video calls, email, online communities, and telehealth consultations effectively [33]. Older adults can receive subsidized devices, technical support, and one-on-one training, while also being given autonomy and alternatives for those who choose not to use technology [67, 69]. These programs help bridge the digital divide and enhance social connections. However, in the Caribbean, barriers include limited broadband coverage, high costs of devices and data, and significant gaps in digital literacy.

6.1.2 Mental health support

Peer mentorship programs, in which older adults are trained to use motivational interviewing, conduct needs assessments, and promote health and well-being, enable participants to provide companionship and support to their peers [70, 71].

As mentors, they can form friendships, offer companionship, and provide both emotional and information support [72, 73]. Mentors who have faced their own mental health struggles can also share strategies for self-care and coping, while empowering others to strengthen problem-solving abilities and overall quality of life [72–74].

6.1.3 Education and skills-building interventions

Cognitive restructuring and behavioral activation approaches help older adults challenge negative thought patterns and re-engage in meaningful activities [75]. Homebound older adults can be encouraged to identify positive areas of focus, set goals, and engage in activities that promote healthy behaviors while reducing unhealthy ones [76]. Telehealth-based behavioral activation programs connect participants with peer mentors and volunteers, who provide ongoing support as they work toward their goals [76].

6.2 Interpersonal level

It is essential to create opportunities for older adults to remain socially connected with others, particularly in an era of geographic and intergenerational distance.

6.2.1 Intergenerational programs

Intergenerational programs help foster connections between older adults and younger generations by promoting social engagement and overall well-being [77]. Initiatives such as volunteer visitor programs, school collaborations, community gardening projects, and mentorship programs can enhance mental health and reduce loneliness in older adults.

6.2.2 Telephone befriending services

Telephone-based befriending is a highly effective way to keep individuals connected. It is particularly useful for older adults, especially when mobility or other physical limitations restrict social interaction [78]. Telephone-based befriending provides a cost-effective and straightforward way for older adults to stay connected.

6.2.3 Peer support groups

Support groups and home-visiting initiatives provide trusted spaces for sharing experiences. These programs offer opportunities to connect, form meaningful relationships, and build social support networks. Trained peer volunteers can assume non-clinical roles that facilitate shared experiences and common interests, fostering environments of trust and empathy [72]. The “Helping Alleviate Loneliness in Hong Kong Older Adults” (HEAL-HOA) project trained older adults to deliver telephone-based psychosocial interventions, such as mindfulness, befriending, and behavioral activation, as a beneficial means of addressing loneliness and social isolation [76]. An additional program is the “AgeWell Visitors,” which provides companionship through regular visits and telephone calls [73]. Social networks can be centered around group learning, such as the “Seniors CAN” program [71]. Volunteers and older adults may organize outings, such as visiting friends, going for walks, shopping at the market, and attending cultural events [79]. In the Caribbean, reliance on family caregivers is

common; however, migration and changing household structures weaken these supports, thereby increasing the need for formal interpersonal interventions.

6.3 Community level

It is important to create age-friendly public spaces and develop community-based programs that foster social connections, active engagement, and a sense of belonging among older adults. These environments should be physically safe, easily accessible, and inclusive, encouraging interactions among all generations and across all age groups.

6.3.1 Community centers and senior hubs

Accessible community hubs, such as senior centers, libraries, recreational facilities, and places of worship, offer structured venues for interaction, routine, and a sense of belonging. Programs that combine physical activity with social engagement, such as the *SilverSneakers* initiative in the United States, have shown improvements in both physical health and social well-being [33]. Group activities such as community meals, cultural events, and hobby-based clubs foster sustained opportunities for building relationships and reducing the risk of social isolation. In the Caribbean, churches, cultural centers, and neighborhood spaces serve similar roles, anchoring older adults in familiar environments.

6.3.2 Volunteering opportunities

Volunteer initiatives, such as the senior companion program, provide stipends for older adults to support low-income peers within their community [80]. This program provides social interaction and companionship, as well as assistance with daily living, and can help reduce anxiety while improving overall well-being [80]. The stipend also helps participants meet their own financial needs [80].

6.3.3 Age-friendly transportation

Safe, reliable, and age-friendly transportation expands access to community life, fostering a sense of belonging and inclusion. It allows older adults to attend social events, interact with friends, and develop new support systems. They can also use these systems to visit parks, community centers, churches, and healthcare centers. It creates an opportunity for mobile older adults to visit friends and family, keeping them connected. In many Caribbean islands, limited accessible transportation and unsafe pedestrian environments remain significant barriers.

6.3.4 Faith-based and cultural organizations

Engaging with faith-based and cultural organizations can lessen loneliness and social isolation among older adults. It fosters community spirit, encourages engagement, instills a sense of belonging, and creates an environment where older adults can interact and develop support networks. Such organizations also provide older adults with opportunities to share their culture and heritage with others. Activities, such as communal meals, art projects, or cultural events, have been shown to enhance interaction among older adults. Faith-based institutions and cultural traditions, such

as liming or “*ole talking*,” and neighborhood gatherings, such as “*blocko*” events and “*Saraka*,” remain central to Caribbean community life, sustaining identity and reducing isolation. “*Saraka*” are ancestral thanksgiving festivals held in some Caribbean communities, involving communal meals accompanied by dancing and musical performances. These festivals are held over several days and are deeply rooted in ancient traditions of giving thanks, seeking guidance, and making offerings to ancestors. On the other hand, “*blocko*” events are more modern outdoor community parties with music, food, and opportunities for celebration and social connection.

6.4 Organizational level

6.4.1 Social prescribing

Healthcare professionals play a crucial role in identifying and addressing loneliness and social isolation among older adults. Primary healthcare providers and community health workers can incorporate brief, validated screening tools into routine assessments to identify patients at risk of loneliness and social isolation. The practice of social prescribing, linking patients with non-clinical community resources, has gained traction, particularly in the United Kingdom. Social prescribing has been associated with emergency department visits and improved overall well-being by connecting patients with volunteer networks, art programs, and peer support groups [81]. Caribbean primary care systems could adapt to this model, especially given the strong ties between community clinics and local populations.

6.4.2 Workplace and retirement planning

Retirement, especially when imposed solely because of age, can lead to disenfranchised grief, a loss of purpose, and contribute to loneliness and social isolation. To avoid this, organizations can offer a phased retirement approach with flexible or remote working hours. This allows older adults to gradually reduce their working hours while staying connected and forming new ties outside of work. Organizations could assist with social network mapping through onsite partnerships and volunteering opportunities, and promote intergenerational mentoring between retirees and early-career individuals. Human resource divisions could develop “social portfolios” that include group activities (e.g., choir, walking, faith-based, or community groups), financial benefits, and planning sessions. For Caribbean workers, where pension and retirement systems are uneven, structured transition planning could buffer against abrupt social withdrawal.

6.5 Societal level

While individuals, families, and their communities can work to address loneliness and social isolation among older adults, doing so also requires a broader, systemic investment in safe, accessible neighborhoods and transportation services, affordable housing, and political commitment to policies that support age-friendly infrastructure and services.

6.5.1 National Loneliness Strategies

Effective strategies often stem from locally adapted, culturally sensitive approaches. The United Kingdom has appointed a Minister for Loneliness to

underscore the importance of addressing this public health issue. In many regions, extended family networks continue to serve as vital sources of care and companionship. Developing age-friendly communities by encouraging inclusive urban design, accessible transportation, and safe neighborhoods is essential for sustainable growth. It is also important to incorporate such determinants into national policies and frameworks. National budgets should allocate funding for community-based grants to support interventions, promote age-friendly services, and encourage community programs. Additionally, funding is also needed for volunteer programs that conduct home visits, participate in social prescribing initiatives, and operate helplines.

6.5.2 Housing policies

Certain subgroups of older adults, such as those in rural and LGBTQ+ communities face increased risk of loneliness and social isolation; therefore, they require a more targeted approach. Older adults living in rural communities could benefit from mobile outreach programs, transportation assistance, and tele-social services. LGBTQ+ seniors, who may face historical or ongoing stigma and discrimination, require safe and inclusive spaces that promote trust and affirm their identity. In Japan, the Nagaya communal housing model exemplifies an innovative approach, offering shared living environments that strike a balance between independence, daily social interaction, and mutual support [20].

These combined strategies aim to create environments where loneliness and social isolation among older adults are not inevitable outcomes of aging. Instead, by implementing intentional designs, inclusive policies, and coordinated community efforts, societies can create environments where older adults can stay connected, valued, and supported as they age. However, it is essential to recognize that implementing these strategies presents challenges for many societies, especially in the Caribbean.

6.6 Implementation challenges for the Caribbean

In the Caribbean, research and public awareness of loneliness and social isolation among older adults are still limited. Addressing these issues first requires developing a clearer understanding of their prevalence and impact on health and well-being within the region. However, structural and resource constraints often hinder the implementation of comprehensive age-friendly strategies.

Small island developing states in the region rely on a narrow set of industries and are especially vulnerable to global economic shifts. Many islands face financial limitations that restrict investment in supportive environments for older adults, such as redesigning public facilities, expanding accessible transportation and pedestrian walkways, providing age-friendly housing, and strengthening healthcare systems. Weak monitoring and evaluation frameworks further reduce accountability in policy implementation, while budget restrictions and gaps in technical expertise limit governments' capacity to sustain age-friendly initiatives.

Access to advanced technology also remains inequitably distributed. Even where infrastructure exists, older adults may face barriers related to digital literacy, affordability, and trust in new technologies. These challenges exacerbate social isolation, particularly as health and social services increasingly rely on digital platforms.

The Caribbean is also highly vulnerable to climate change. Hurricanes, floods, and other natural disasters frequently demand urgent recovery efforts, diverting funds and attention away from long-term investments in age-friendly infrastructure. For

instance, rebuilding homes, hospitals, and public spaces after a major hurricane often takes precedence over expanding accessible housing and transportation systems for older adults.

These realities highlight the need to design interventions that are sensitive to the Caribbean's unique socioeconomic and environmental context. Effective and sustainable strategies must anticipate these implementation challenges while leveraging the region's strengths in family and community networks to address loneliness and social isolation among older adults.

7. Future implications

Loneliness and social isolation are increasingly recognized as major public health concerns with serious implications for the global aging population, including the Caribbean. Older adults who experience loneliness and social isolation face higher risks of premature mortality, cardiovascular disease, cognitive decline, and diminished overall well-being. The relationship is bidirectional: poor health exacerbates loneliness and social isolation, and these in turn worsen health outcomes. These dynamics place an increasingly heavy strain on healthcare and social support systems, which are already under pressure.

Addressing these issues requires a coordinated, multilevel approach. At the individual level, older adults can prepare by maintaining healthy lifestyles, building financial security, and nurturing strong social connections. Families and intergenerational ties remain essential for fostering a sense of belonging and continuity. Communities can strengthen resilience through support groups, age-friendly programs, and inclusive spaces that encourage participation. Infrastructure and urban design should prioritize accessibility, mobility, and safety. At the policy level, governments must identify vulnerable populations, promote opportunities for older adults to remain active in the workforce, and implement public education campaigns about healthy aging.

Proactive investment in these strategies is not optional, but essential, as it will mitigate the health and economic costs of loneliness and social isolation, while creating societies where older adults remain valued, engaged, and supported. This transforms aging from a period of decline into one of continued contribution and connection.

8. Conclusion

Loneliness and social isolation are increasingly recognized as important determinants of health in aging populations. As global life expectancy increases, the widening gap between lifespan and health-span highlights the urgent need to address not only physical health but also the psychosocial dimensions of aging. Meaningful social connections are crucial for bridging this gap; however, demographic and sociocultural shifts, including migration, fragmented family structures, and change in community dynamics, increase susceptibility to loneliness and social isolation.

In the Caribbean, these challenges are compounded by resource limitations, emigration, and the heightened vulnerability of small island states to climate change. Nonetheless, the region's strong traditions of kinship and community provide a foundation for culturally relevant solutions. Building on these strengths requires

coordinated, equity-focused strategies, including training healthcare workers to screen for and address loneliness, incorporating social prescribing into routine care, investing in age-friendly infrastructure, and promoting intergenerational and community-based programs that respect and honor cultural norms.

Ultimately, addressing loneliness and social isolation is not only a public health priority but also a moral imperative. Failure to act risks consigning millions of older adults to longer lives marked by disconnection and decline, whereas meaningful action can transform aging into a stage defined by connection, dignity, and fulfillment. Through collaboration among governments, healthcare systems, communities, and families, societies can reimagine the “*gray horizons*” of aging as opportunities for engagement and purpose. By narrowing the gap between lifespan and health-span, and by affirming the value of older adults as essential members of our communities, we can build environments where aging is not endured in solitude but celebrated as a connected and purposeful chapter of life.

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Conflict of interest

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Section 3

Loneliness in Digital Setting

Chapter 4

Loneliness and Solitude in the Digital Age

Yau Tsang and Sammy Ho

Abstract

The digital world, encompassing social media and data-driven applications, has revolutionized how people connect with one another. While some argue that these technologies contribute to increased loneliness by diverting attention away from in-person relationships, this chapter posits that digital platforms can, in fact, mitigate loneliness by removing traditional barriers to social interaction. If digital tools facilitate easier connections, why then do some individuals report heightened feelings of isolation? This paradox invites deeper exploration. Beyond the convenience of digital connectivity, the chapter argues that the true antidote to loneliness lies in the *capacity to be alone*, a psychological concept articulated by Donald Winnicott. By examining the interplay between digital socialization and the ability to find solace in solitude, this discussion challenges prevailing assumptions about technology and loneliness, offering a more nuanced perspective on human connection in the digital age.

Keywords: loneliness, solitude, capacity to be alone, digital age, social media

1. Introduction

In 2023, the World Health Organization (WHO) launched an international commission on social connection, formally highlighting a long-overlooked issue. Echoing its urgency, US Surgeon General Dr. Vivek Murthy declared, “*Loneliness is an underappreciated public health crisis*” [1]. This official recognition marked a pivotal moment, elevating loneliness from a subjective emotional experience to a critical item on the global health agenda. While this designation may seem recent, it confirms what a multitude of scholars had long argued: that pervasive loneliness poses a severe threat to population health, akin to traditional epidemics.

The rationale for classifying loneliness as an epidemic is robustly grounded in its profound impact on physical and mental health. Loneliness is not merely a feeling of sadness; it is a significant risk factor for a constellation of adverse health outcomes, including clinical depression, anxiety disorders, stroke, and addictive behaviors [2–7]. The most alarming evidence lies in its association with mortality. A seminal meta-analysis by Holt-Lunstad et al. concluded that perceived social isolation is associated with a *50% increased risk of premature mortality*, a hazard comparable to smoking 15 cigarettes daily [8]. Moreover, extensive research establishes a robust and alarming link between loneliness and an increased risk of suicide and self-harm.

A comprehensive overview of systematic reviews by Leigh-Hunt et al. confirmed that social isolation and loneliness are significant predictors of suicidal ideation, attempts, and death by suicide [4]. This relationship between loneliness and suicidal thought and behavior is well-proven [9, 10]. Loneliness is a core component of thwarted belongingness, creating a profound sense of alienation and disconnection that fuels suicidal ideation.

The burden of this epidemic is not distributed equally; it disproportionately impacts marginalized communities. Research consistently shows that sexual minorities experience significantly higher levels of loneliness compared to their heterosexual counterparts [11, 12]. Scholars attribute this disparity to the chronic experience of *minority stress*, which includes experiences of rejection, discrimination, internalized homophobia, and the consequent erosion of social support networks [13, 14]. The constant negotiation of one's identity in a sometimes-hostile environment can fracture a sense of belonging, making LGBTQ+ individuals uniquely susceptible to the health detriments of chronic loneliness. Research studies have also demonstrated that loneliness is more frequently reported among ethnic minority groups. For example, in their study investigating emotional and social loneliness among Moroccan, Turkish, Surinamese, and Dutch adults in the Netherlands, Visser et al. found that the loneliness levels are higher among all three ethnic minority groups than the natives, and the former also reported feeling less healthy and experiencing more discrimination [15].

The COVID-19 pandemic acted as a potent catalyst, exacerbating this pre-existing crisis of disconnection. Government-mandated lockdowns and social distancing measures, while necessary for physical health, had profound unintended consequences for mental well-being [16, 17]. Studies documented a sharp rise in feelings of social isolation, helplessness, abandonment, and generalized anxiety across the general population [17, 18]. For those already prone to loneliness, the pandemic intensified their distress. Research indicated that lonelier individuals exhibited heightened worry about isolation and greater risk perception regarding financial instability, further compounding their psychological burden [19]. As Holt-Lunstad et al. predict, this acute spike in loneliness likely provoked deeper disconnection, creating a deleterious long-term impact on global mental and physical health [8].

The transition to a digital age has been greatly accelerated by the COVID-19 pandemic. Technology has revolutionized how we connect with others. Yet, as social media and online communication become ubiquitous, a critical debate emerges: Does digital technology alleviate loneliness or exacerbate it? While some argue that constant connectivity fosters superficial relationships, others believe it provides vital social support.

One of the most significant criticisms of digital communication is that it prioritizes quantity over quality, which indirectly contributes to the phenomenon of loneliness. Studies suggest that passive social media use, such as mindlessly scrolling through feeds, creates a sense of connection without emotional fulfillment [20, 21]. Unlike face-to-face interactions, which involve deeper emotional exchanges, online engagements often remain transactional, focusing on routine actions and exchanges. Psychologist Sherry Turkle argues that while we are more connected than ever, we are also experiencing “alone together” syndrome [22]. Additionally, social media platforms often present curated and idealized portrayals of life, particularly among celebrities and influencers, which can prompt users to engage in unfavorable self-comparisons. The highly selective nature of shared content, such as social events and gatherings, creates an illusion that others are constantly engaged in fulfilling social interactions. In reality, people rarely post about moments of solitude or loneliness,

skewing perceptions of social connectedness. This phenomenon is supported by the research from Vogel et al., which demonstrates that frequent social media use is associated with increased envy and dissatisfaction, fueled by unrealistic upward social comparisons [23]. Studies revealed that individuals who spent more time daily on social media reported greater feelings of loneliness and lower self-esteem than those who used it moderately [24, 25]. The constant exposure to others' highlight reels fosters a sense of social inadequacy, making users feel left out rather than connected. Another concern is that excessive screen time displaces real-world socialization. Twenge, Spitzberg, and Campbell found that teenagers who spend more than 5 hours a day on screens are twice as likely to report loneliness as those who limit usage [24]. Digital communication also lacks nonverbal cues (e.g., tone and facial expressions), which are crucial for emotional bonding [26]. Without these subtle signals, online interactions can feel hollow, thereby deepening feelings of isolation [27]. Using social media to alleviate loneliness can paradoxically foster a cycle of addiction. This occurs because the very design of these platforms exploits psychological vulnerabilities through a reinforcement schedule that is powerfully addictive, especially for those seeking connection.

It is worth noting that social media platforms are designed like digital slot machines: users never know when they will receive a rewarding social stimulus, such as a like, a positive comment, or a new follower [28, 29]. This unpredictability makes the compulsive checking of platforms highly reinforcing, which could be explained by the concept of ratio-variable schedule in the theory of reinforcement schedules [30]. For the lonely individual, each notification provides a temporary hit of dopamine—a neurotransmitter associated with pleasure and reward—which momentarily alleviates feelings of isolation. However, this relief is fleeting, creating a cycle where the user must constantly return to the platform to regain that sense of validation and connection [29, 31]. This pattern transforms social media from a tool into a maladaptive coping strategy. Instead of addressing the root cause of loneliness—often a lack of deep, meaningful connections—the individual becomes dependent on the shallow, quantifiable, and often performative validation offered online [32, 33]. Over time, this cycle can develop into a behavioral addiction, characterized by an inability to reduce usage despite negative consequences, preoccupation with the platform, and mood regulation difficulties [33, 34].

On the other hand, the counterargument suggests that digital technology and social platforms can contribute to reducing loneliness. For many, digital tools and apps help maintain relationships across distances and time. Video calls, messaging apps, and social networks allow families, friends, and couples to stay connected despite geographical and time barriers [35–38]. Except that, rather than replacing in-person interaction, digital tools can enhance real-world connections. Many people use social media to organize meetups, join local events, or maintain friendships beyond physical gatherings [39]. Studies indicate that when used intentionally and in moderation, digital communication can strengthen existing relationships [40, 41].

Older adults, in particular, benefit from digital communication, as it helps them combat isolation when physical mobility is limited [36, 42]. It is worth to discuss that the internet offers niche communities where people with shared interests or identities can connect. Research by Scott, Stuart, and Barber found that socially anxious young adults often form stronger, more authentic relationships online than in offline settings [43]. For marginalized groups such as LGBTQ+ youth, online spaces often serve as a critical lifeline, providing essential emotional support and significantly reducing feelings of isolation and loneliness [14, 43–48]. Research consistently demonstrates

that online social connectedness within LGBTQ+ communities is strongly associated with enhanced psychological well-being. A review by Gorczynski and Fasoli found that engagement with these digital communities correlates with higher levels of self-esteem, self-acceptance, and a greater sense of self-worth [14]. This is largely because these platforms facilitate access to identity-safe spaces—environments, both physical and digital, where individuals can express their authentic selves without fear of prejudice.

In today's hyper-connected world, digital and social media serve as powerful tools for communication, yet many people report feeling lonelier than ever. The key question is: Is technology the problem, or how do we use it wisely? While critics argue that digital interactions erode genuine connection, the deeper issue may lie in underdeveloped social skills rather than the platforms themselves. This phenomenon reveals a crucial distinction between connection and meaningful connection [49]. Digital platforms provide countless ways to interact, but without the necessary social competencies, these interactions often remain shallow and unfulfilling. For example, Nowland et al. argue that passive social media use (e.g., mindless scrolling) exacerbates loneliness by displacing meaningful interactions with superficial engagement [50]. Their findings demonstrated that digital tools alleviate loneliness only when used actively for purposeful connection, such as voice calls or direct messaging with close friends, rather than through passive consumption. It was also found that individuals who struggle with loneliness in digital spaces frequently lack the skills to transform online engagements into substantive relationships. Just as one would not expect to play piano without practice, we cannot expect to build fulfilling digital relationships without developing the appropriate communication skills. The digital landscape demands new forms of literacy – the ability to express empathy through text, interpret tone in the absence of vocal cues, and maintain attention in an environment designed for distraction. Those who master these skills often find digital tools enhance rather than diminish their social lives, using technology to strengthen existing bonds and create new ones. The challenge lies not in abandoning digital spaces, but in adapting our interpersonal skills to thrive within them.

2. Loneliness: A social narrative

Individuals with average social skills might still experience loneliness, prompting the question: Why does this occur despite their ability to interact socially? To address this doubt, we must examine its historical evolution and the role of mass media in shaping modern attitudes in order to have a full understanding of contemporary perceptions of loneliness. During the eighteenth-century Enlightenment period, solitude was often romanticized as a means of self-discovery and spiritual enrichment. Philosophers such as Jean-Jacques Rousseau celebrated aloneness as a way to connect with nature, nurture one's mental well-being, and cultivate a deeper passion for life [51]. This perspective frames solitude as a deliberate, positive choice – an opportunity for introspection rather than a state of deprivation. Similarly, psychoanalyst and pediatrician Donald Winnicott developed the concept of “capacity to be alone”, which describes the ability to be content and at ease with oneself in solitude [52]. It is not about loneliness or isolation, but rather about the strength to access an internal sense of companionship and security without relying on external stimulation or validation from others. This capacity is a sign of emotional maturity, as it indicates

a well-developed sense of self that can remain whole and engaged even when not in interaction with others.

However, the modern interpretation of loneliness has shifted dramatically, with cultural narratives increasingly emphasizing its negative psychological and social implications. For example, a recent longitudinal study critically analyzing 144 news articles from leading US newspapers over a 2-year period between 2020 and 2022 found that depictions of solitude were overwhelmingly negative, potentially leading individuals to perceive being alone as harmful than beneficial, and contributing to feelings of loneliness [53]. This study highlights the widespread public discourse of the “loneliness paradox”, shaping people’s beliefs about being alone inadvertently. This shift is particularly evident in popular media representations of relationships. As Alberti demonstrates in *A Biography of Loneliness*, classic and contemporary love stories like *Wuthering Heights* and *Twilight* reinforce the notion that finding the “soulmate”, the form of romantic love with passion, is the only antidote to loneliness [54]. These narratives consistently portray male protagonists as saviors who rescue female characters from their miserable, lonely existences, perpetuating the belief that women’s fulfillment depends entirely on securing such romantic bonds.

The extraordinary popularity of these stories across generations suggests they reflect and reinforce widespread cultural assumptions. They promote several problematic ideas: (1) passionate love is the only valid form of true love; (2) romantic relationship is the sole solution to loneliness; (3) singlehood equates to incompleteness; and (4) women in particular must achieve marital status to escape loneliness. These narratives also intersect with the concept of sexual capital – the idea that romantic and sexual desirability determines social value. For women, this often manifests as pressure to conform to traditional beauty and relationship standards, while for men, it contributes to phenomena like involuntary celibacy (“incel” culture), where inability to attract partners leads to profound alienation [54].

This media-driven construction of loneliness creates a self-perpetuating cycle. As these narratives dominate popular culture, they shape societal expectations, which in turn influence individual experiences of solitude. Those who do not conform to the prescribed relationship model, whether by choice or circumstance, often face stigmatization, with their single status interpreted as personal failure rather than a legitimate life choice [55]. Also, the rise of digital dating platforms has intensified these pressures by commercializing mate selection and creating the illusion that romantic partners are commodities to be acquired through proper market participation [22].

Despite growing movements advocating for the de-commercialization of dating and broader acceptance of diverse relationship structures, traditional narratives about loneliness and partnership remain remarkably persistent. This persistence speaks to the deep internalization of these beliefs across generations. Even as more voices challenge these conventions, the fundamental association between singlehood and loneliness, particularly for women, continues to shape social attitudes and personal self-perceptions.

The consequences of these cultural constructions are significant. By equating romantic love with the sole solution to loneliness, society neglects other important forms of human connection and personal fulfillment. It also fails to recognize the value of solitude as a state that can foster creativity, self-knowledge, and emotional resilience [55]. Furthermore, this narrow framing of relationships contributes to mental health challenges among those who do not find or desire traditional partnerships, reinforcing feelings of inadequacy and social exclusion.

Ultimately, understanding loneliness requires examining both its historical transformations and its contemporary cultural representations. While Enlightenment thinkers viewed solitude as an opportunity for growth, modern media often portrays it as a pathological state requiring romantic resolution [55–57]. This shift reflects broader changes in how we conceptualize individuality, relationships, and social belonging. Moving forward, a more balanced perspective – one that acknowledges both the human need for connection and the potential benefits of healthy solitude – could help create a society less bound by restrictive relationship norms and more accepting of diverse ways of living.

3. The commercialization of intimacy: Dating apps and the commodification of relationships in the digital age

The increase in the development of dating apps and platforms is a significant piece of evidence of how the modern population adopted the concept mentioned above. The rise of consumer culture has fundamentally transformed how individuals seek companionship, with dating apps and matchmaking services becoming increasingly prevalent in modern society. These platforms represent not just technological innovations but also reflect deeper cultural shifts in how we conceptualize relationships and combat loneliness. The online dating industry has grown exponentially. According to Statista, user penetration for the product/service category is projected to reach 5.2% in 2025, growing to 5.7% by 2029 [58]. The market revenue is expected to grow at a compound annual growth rate (CAGR) of 2.14% from 2025 to 2029, reaching a projected market volume of US\$3.45 billion by the end of this period. This rapid commercialization of romance reveals how intimacy has become another domain subject to market forces and capitalist logic.

Contemporary dating platforms have revolutionized social interactions through their algorithmic matchmaking systems. Anderson, Vogels and Turner found that 30% of US adults have used dating apps, with adoption rates highest (53%) among those under 30 [59]. Industry leaders like Tinder (75 million monthly active users) and Bumble (50 million users) dominate the market by offering efficient, gamified experiences that cater to time-poor, digitally native generations [60, 61]. These apps employ psychological principles - such as variable reward schedules through the “swipe” mechanism – to keep users engaged, effectively turning relationship-seeking into a consumption behavior [62, 63]. While these platforms offer unprecedented convenience and access to potential partners, they also raise significant concerns. Critics argue they promote superficial judgments based on curated profiles, exacerbate commitment phobia through endless choice, and commodify human connection [64]. Despite these critics, the industry continues expanding through innovations like video dating and AI-powered matchmaking, sustaining its influence in an increasingly digitized world. The proliferation of dating apps and platforms reveals two prevalent societal characteristics: a widespread fear of being alone and the persistent belief that romantic relationships are the ultimate solution to loneliness.

The proliferation of these e-dating services reinforces a troubling cultural equation: that romantic partnership is both the solution to loneliness and a commodity to be acquired. This reflects what Sociologist Illouz terms the “commodification of intimacy”, where emotional needs become subject to market logic [65]. Dating apps operationalize this worldview by encouraging users to “market” themselves – optimizing profiles, strategically presenting their best attributes, and continuously

“shopping” for better options. Philosopher Sherry Turkle warns that this transactional approach to relationships may actually deepen loneliness rather than alleviate it [22]. By framing connection as something to be efficiently obtained through proper participation in the dating market, these platforms obscure more meaningful understandings of intimacy and selfhood. This commercialized approach to relationships stands in stark contrast to alternative perspectives on addressing loneliness. As scholar Rae André argued, the fundamental question should not be “how to find the right person”, but rather “how to be with oneself” [66]. This distinction is crucial – it shifts the focus from external solutions to internal development, suggesting that true fulfillment comes from self-acceptance rather than romantic acquisition.

The limitations of the mainstream approach are becoming increasingly apparent. The cultural emphasis on finding a “soulmate” as the sole solution to loneliness has created what sociologists call “relationship status anxiety” – a pervasive fear that being single reflects personal inadequacy [67]. This anxiety is particularly acute for women, who face greater social pressure to secure relationships, but it also affects men through phenomena like involuntary celibacy – being unable to find a sexual partner despite desiring one [68–71]. This phenomenon serves as indirect evidence of two widely shared societal traits: a pervasive fear of solitude and the common belief that romantic relationships are the ultimate solution to loneliness.

4. Toward a more nuanced understanding of solitude and loneliness

As we envisage this evolving landscape, it becomes essential to distinguish between healthy and unhealthy solitude. For solitude to be a fulfilling experience, one has to choose to be alone rather than being forced to do so, including circumstances in which people voluntarily choose to spend time alone, such as taking a walk in nature or working on their computer [72]. Positive solitude is thus a state of being alone that is characterized by positive feelings of peace, contentment, and relaxation [73]. Psychological research demonstrates that the ability to be comfortably alone correlates with greater emotional maturity, life and relationship satisfaction, and relationship quality [54, 74–77]. Individuals who are comfortable being alone tend to form healthier attachments, as they engage with others from wholeness rather than neediness [54, 78]. This suggests that the cultural panic around singlehood may be misguided – what we require is not more efficient ways to find partners, but better frameworks for understanding human connection that value both relationships and individual wholeness. The challenge moving forward is to develop approaches to intimacy that resist pure commercialization while acknowledging the realities of digital socialization. This might involve more mindful use of dating technologies, greater societal acceptance of diverse relationship models, and renewed emphasis on developing the “capacity to be alone” as a foundation for healthier connections with others.

4.1 The real solution of loneliness: The capacity of being alone

The capacity to be alone represents a fundamental psychological achievement, encompassing the ability to experience solitude without loneliness. First conceptualized by Donald Winnicott, this capacity signifies emotional maturity, self-awareness, and inner security [52]. Rather than viewing isolation with fear, individuals who cultivate this capacity find solitude to be a source of peace, creativity, and

self-reflection. Winnicott introduced the concept as a developmental milestone, arguing that the capacity emerges when individuals experience fulfillment and joy in solitude while in the presence of others (e.g., a child playing alone while a caregiver is nearby). This “alone in the presence of others” dynamic creates a safe space for self-exploration free from external judgment. Winnicott theorized that such experiences allow individuals to discover their authentic desires and life meanings without social pressures. Psychoanalyst Anthony Storr provided clinical evidence in supporting this theory [55]. In therapeutic settings, clients often demonstrate psychological growth when given non-judgmental space for solitary self-expression. One case study highlighted a client who achieved breakthroughs by verbalizing thoughts and desires during sessions – a process Storr attributed to the therapeutic environment replicating Winnicott’s “holding space” for solitary reflection. This demonstrates how the capacity to be alone serves as an indicator of psychological security, highlighting its therapeutic benefit and potential for personal development.

4.2 Importance of solitude

Solitude, in fact, is being seen as essential for personal growth and other fundamental mental processing. The relationship between solitude and creative achievement has been extensively documented. Storr emphasized that childhood opportunities for solitary play are essential for creative development [55]. During alone time, children connect with their inner emotional and cognitive processes, forming the foundation for original thinking. This aligns with contemporary educational research showing that unstructured solitary time enhances problem-solving skills and imaginative capacity [54]. Creative professionals across disciplines – from writers to scientists – consistently report relying on solitude for their most innovative work. The common thread is solitude’s role in allowing undistracted engagement with one’s inner world, where novel connections and ideas emerge. As Storr noted, creativity requires touching “the base of one’s thought and emotion”, a process most readily accessible in solitary states [55]. From the philosophical perspective, German philosopher, Martin Heidegger, extended this understanding, arguing that self-knowledge and authentic being emerge primarily in solitude [53, 78, 79]. Philosophical traditions across cultures have similarly valued solitude as essential for meaningful existence [75, 78, 80]. Storr observed that history’s greatest thinkers shared both an introverted disposition and a cultivated capacity for productive solitude [55]. These philosophical traditions suggest that confronting life’s fundamental questions requires withdrawing from social distractions. While not everyone engages in formal philosophy, the underlying principle remains universally relevant: discovering personal meaning necessitates periods of solitary reflection. In an era of constant connectivity, this insight becomes increasingly vital.

5. Implications of the study

The capacity to be alone is a cultivatable psychological strength, central to which is the firsthand experience of solitude’s intrinsic value. This ability develops not through avoidance of social interaction, but through intentional engagement with, and appreciation of, time spent alone.

Crucial to this developmental process is the active challenging and reframing of pervasive socio-cultural narratives that pathologize solitude, such as the belief that

being alone is inherently undesirable or that lasting happiness can only be achieved within a romantic partnership. By consciously resisting these normative assumptions, individuals can gradually dismantle internalized stigmas attached to solitude and reinterpret being alone not as a state of lack, but as an opportunity for self-attunement, reflection, and authentic presence.

Thus, the ability to be comfortably alone arises from a dual process: positive personal experiences of solitude that reinforce its benefits, and the critical unlearning of societal messages that equate solitude with loneliness or social failure. Only through this integrative approach can one truly develop what Winnicott termed the “capacity to be alone”. Here are three ways to implicate it to daily life and help us to gradually develop the capacity to be alone.

5.1 Observe and challenge unhealthy belief of being alone

To challenge unhealthy beliefs about solitude, such as the assumption that “being alone is negative” or that “being with others is the only remedy for loneliness”, one effective approach is to actively seek counterevidence. For instance, consider individuals in long-term relationships who remain unhappy, or observe people in cafes reading or working alone with evident contentment. The more counterexamples one collects, the easier it becomes to reevaluate these deeply held beliefs. This method draws on *behavioral experiments*, a technique from Cognitive Behavioral Therapy (CBT), which encourages individuals to empirically test the validity of their negative thoughts in real-life situations. The goal is to replace unhelpful assumptions with adaptive, evidence-based beliefs through structured reality-testing [81].

5.2 Start to spend time alone

You may start by selecting an activity you genuinely enjoy or are curious about, and commit to doing it by yourself. It is crucial to understand that the activity itself does not need to be overtly “productive” or “educational”; its primary value lies in its ability to capture your interest and engagement. Whether it is visiting a museum, attending a cinema screening, hiking a nature trail, reading in a café, or simply window shopping, the key is that the experience is intrinsically motivated. During this time, consciously redirect your focus from the fact that you are alone to the sensory and experiential qualities of the activity itself. Pay attention to the details: the rhythm of your breath during a run, the narrative of a book, the esthetics of a store display, or the flavors in your meal. This practice of directed attention is a form of mindfulness, pulling you into the present moment and away from self-conscious or anxious thoughts about solitude. Through this sustained focus, you may progress beyond mere mindfulness into a more profound state of flow – a concept pioneered by psychologist Mihaly Csikszentmihalyi [82]. Flow is characterized by a complete immersion in a task, where challenges perfectly match skills, leading to a loss of self-awareness and a distortion of time. In this state, the need for external validation or companionship dissipates; the activity becomes its own reward. By repeatedly creating these positive, absorbing solo experiences, you actively gather counterevidence to the belief that being alone is boring or negative. You are not merely passing time; you are training your mind to find contentment and vitality within your own company, building a sustainable and rewarding relationship with yourself.

5.3 Refrain from using digital devices and being aware of your social media footprint

The digital environment, particularly social media, can be profoundly overwhelming due to four key factors: information overload from endless streams of content; heightened emotional sensitivity from constant public scrutiny and curated displays of success; the internalization of unrealistic standards of life, body, and achievement; and constant upward social comparison, which fuels feelings of inadequacy and envy [83]. This state of cognitive and emotional exhaustion can be relieved by a conscious and temporary refraining from using electronic devices such as smartphones or computers. Research has shown that such “digital detox” is an effective strategy to significantly reduce stress and anxiety, improve sleep quality, enhance real-world social connections, and restore focus [84].

However, given that social media remains a vital conduit for information and connection, permanent disconnection is neither practical nor desirable for most. Instead, we can become aware of our passive consumption patterns, particularly our unconscious interactions like liking, saving, and sharing. Since algorithms curate our feeds based precisely on these engagements, we wield significant influence over our digital environment. Therefore, we can strategically “train the algorithm” to serve our well-being. By intentionally liking, saving, and following content related to self-understanding, growth, and insightful knowledge, we actively shape a more enriching and supportive digital ecosystem. Then, even during moments of tired, passive scrolling, we are offered “healthier digital snacks”.

6. Conclusion: Contemporary relevance

This chapter challenges the cultural narratives that equate being alone with loneliness or deficiency. The digital age makes cultivating the capacity of being alone particularly urgent. With social media fostering constant external connection, individuals risk losing touch with their inner selves. Reclaiming solitude becomes an act of psychological self-preservation – a way to maintain authenticity amidst cultural noise. The capacity to be alone represents far more than mere tolerance of solitude. As Winnicott recognized, it constitutes a developmental achievement with far-reaching benefits for creativity, self-knowledge, and emotional well-being [52]. In our hyper-connected world, intentionally cultivating this capacity may be essential for maintaining psychological health and authentic living. Rather than pathologizing alone time, we might better view it as Winnicott did – as a vital space for becoming most fully ourselves.

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Chapter 5

Fear of Missing out (F.o.M.O.) and Digital Malaise: Loneliness in the Age of Performance

Paola dos Santos Martins Ladário and Edna Petters Kahhale

Abstract

This chapter investigates the psychic and cultural effects of hyperconnectivity in contemporary times, taking as its starting point the phenomenon of F.o.M.O.—Fear of Missing Out. By examining how the digital environment reorganizes our presence in the world, the text offers a critical review of the means by which the promise of belonging and visibility is transformed into subjective suffering. The virtual space, far from merely connecting, imposes a logic of performance and surveillance that fuels paradoxical affects: being everywhere, yet truly inhabiting nowhere. In this context, loneliness is not merely the absence of contact, but excess stimuli that obscure self-listening. From a psychoanalytic perspective, the chapter explores how desire, lack, and the experience of incompleteness are captured by a culture based on image and consumption, and invites reflection on the possible modes of existence and bonding in digital times.

Keywords: fear of missing out (F.o.M.O.), contemporary subjectivity, capitalist discourse, digital environment, Lacanian psychoanalysis

1. Introduction

In the twenty-first century, digital technologies have become a key part of human experience. Social media, smartphones, and online platforms are no longer only tools for communication; they are now formatting the views human beings hold of themselves, how they relate to each other, and the means by which they make sense of their daily lives. In this scenario, a phenomenon known as Fear of Missing Out (F.o.M.O.) [1]—fear of missing something—has gained prominence, especially among younger generations. This phenomenon refers to an anxiety or discomfort in view of the possibility of being excluded from experiences that are perceived as desirable or socially meaningful.

Within the scope of this investigation, Fear of Missing Out is conceptualized as a psychological condition marked by the individual's difficulty to deal with negative emotions stemming from a perceived dissatisfaction with one's own life, and exacerbated by incessant comparison with others' digital performances. More specifically, it denotes a fear of exclusion that is deeply intertwined with the contemporary subject's relationship to lack, desire, and the gaze of the Other.

Although Fear of Missing Out is usually associated with the use of social media, this chapter suggests that the phenomenon reveals something deeper: a symptom of broader psychic and cultural transformations in the digital era. What kind of subjectivity is being formed in such context? To what extent is the promise of constant connection relating to the experience of lack, of desire, and of suffering?

To deal with these matters, I am basing the discussion on Lacanian psychoanalysis, which is perspective that sees the subject as constituted by language, by what they lack, and by desire. Contrary to psychological models that focus on individual features or behavior, this approach allows for the investigation of the means by which cultural structures—especially those that emerge from the digital environment—cross the boundaries of subjective constitution and the modes of relationship with the Other.

From a methodological standpoint, this chapter is aligned with the theoretical-investigative research method [2], based on an empirical foundation drawn from a literature review conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [3]. This database supported the analysis of both conceptual and clinical issues (including expressions found on social media platforms such as feeds and stories, as well as the empirical literature review) by articulating reflections derived from psychoanalytic listening with cultural discussions that are central to understanding contemporary malaise. Theoretical references include Lacan's classical works (1969–1970) [4] and those of contemporary Lacanian scholars [5], who analyze the phenomena of postmodernity.

I argue that Fear of Missing Out can be understood as a contemporary symptom resulting from the intersection between digital logic, the neoliberal ideology, and the dominance of the imaginary in the construction of the self. In order to discuss this argument, I introduce key concepts from the field of psychoanalysis, such as Symbolic records, Imaginary and Real, the capitalist discourse (Lacan, 1969–1970) [4] and the notion of *jouissance* (Lacan, 1972–1973) [6]. From these concepts, one can understand the psychic mechanisms that support the compulsive presence of the digital life and the distress that derives from them.

To achieve the objective, by using the method proposed, the chapter is thus organized: first, I introduce the historical and cultural context in which Fear of Missing Out (F.o.M.O.) is seen, emphasizing the fragmentation of modern subjectivity. Then, I discuss how digital technologies operate as new symbolic and imaginary loci, reorganizing the desire and social bonds. Lastly, I analyze Fear of Missing Out (F.o.M.O.) as a clinical and cultural symptom, articulated in relation to the subject with the Other in a hyperconnected society that is oriented by the logic of image.

2. Subjectivity in digital times: Social bonds under the scope of the capitalist discourse

2.1 Lacanian psychoanalysis and the digital logic

I consider Lacanian theory to stand out from other psychoanalytic approaches insofar as it establishes a psychic structure based on three instances: the Real, the Symbolic, and the Imaginary. Moving beyond the duality present in other schools, these three elements make it possible to shift away from a perspective focused predominantly on intrapsychic dynamics and offer categories for the discussion of social bonds in relation to culture. Therefore, this chapter will explore how the category

of the Capitalist Discourse (Lacan, 1969–1970) [4] can help us to understand the promises of postmodernity, as well as the category of *Jouissance* (Lacan, 1972–1973) [6], which contributes to understanding the new forms that emerge in response to the virtual reality commonness.

This environment uniquely challenges us, as it blurs the boundaries between what is concretely experienced in reality and that which is confined to virtuality. This provocation becomes especially relevant when we consider the advances in technological devices, which increasingly gain new features, which represent the capacity to camouflage real life. In this sense, technological progress for the sake of progress becomes a major catalyst for new psychic arrangements, posing a significant challenge to the promotion of mental health.

2.2 From modernity to postmodernity: Fragmentation as a condition and a symptom

Contemporary societies bear, in their very constitution, the mark of fragmentation. This mark not only permeates knowledge and culture, but also affects the formation of the subject and their social bonds. Far from being an anomaly or isolated pathology, fragmentation is a historical condition—the result of a process that began in modernity and was intensified in postmodernity. As Ferreira [5] suggests, certain historical moments of modernity constitute the foundation of what we now call postmodernity. The aim here is not to delve deeply into each of these milestones, but rather to reflect with the reader on how these moments have impacted the relationship between the subject and society.

Two central historical events illustrate this shift: the French Revolution and the Industrial Revolution. The former, in 1789, put an end to absolutism and marked the rise of the bourgeoisie as a dominant force, replacing the relationship between the crown and the nobility. The latter, which took place in England, brought about a transformation in labor processes and gave rise to a new class—the proletariat ([5], p. 29). These events ushered in not only new social organizations but also new subjectivity processes.

Modernity promises emancipation: liberty, equality, and fraternity. However, these promises soon reveal themselves to be selective and conditioned by the access to capital. The illusion of equality, inherited from the French Revolution, becomes increasingly associated with consumption and purchasing power. As Ferreira states, “the worker is increasingly seduced by consumption and material goods” ([5], p. 30). Thus emerges a fascination with objects, laying the groundwork for the consumer-subject who will come to occupy the center of the postmodern experience.

This shift leads to the transition from a social structure marked by the capitalist versus proletarian duality to a one-dimensional logic, in which the subject is reduced to the condition of a consumer. The idea of a dominant class fades away from the scene, and in its place, the commodity takes center stage. What are now desired are objects; and we are left with consumption. The relationship between subjects—mediated by class conflict—is replaced by the relationship between subject and object, erasing alterity and impoverishing symbolic bonds.

This one-dimensional change goes hand in hand with the collapse of the foundations that once upheld modernity: Enlightenment ideals, the primacy of universal reason, and the belief in linear progress (Fortes, 2002/2004) [7]. With the fall of these shared reference topics, the multiplication of truths gains space—subjective

perspectives that no longer belong to a common field of meaning. When these “truths” are elevated to the status of ultimate reason, what emerges is a human being devoid of authority, incapable of sustaining collective logic. Fortes ([7], p. 73) names this effect the “affective desert,” characteristic of postmodern times: a feeling of structural loneliness produced by the dissolution of shared symbolic references.

In view of this cultural conformation, the subject tends to seek communal bonds as an attempt to reestablish psychic unity and alleviate a sense of abandonment. However, while this dynamic is not new in human development, it takes on new contours in postmodernity: the established bonds no longer necessarily relate to an Other that symbolically supports the subject, but often remain within the imaginary register, further intensifying alienation.

The culture that we construct today offers more fragmentation than shared meaning. Lacking a common foundational point, we create a diseased illusion as a way of life. A radical example of this intensification of fragmentation is the belief in the flat Earth discourse, which has gained momentum in recent years. This denial of objective reality, in its most extreme form, exposes the risk embedded in the postmodern potential: by questioning traditional (and at times oppressive) authorities, it gives way to the appearance of new forms of existence. However, if that potential turns into omnipotence—the belief that any reality can simply be created—we risk losing the symbolic ground that anchors the subject in the shared world.

This is the issue that postmodernity imposes upon us: it is not a matter of judging fragmentation as positive or negative, but of recognizing that it presents us with a clinical, ethical, and political provocation. As with all that is alive, we are faced with the task of working through discomfort, not of avoiding it. Fragmentation is both a historical condition and a subjective symptom, and the way we confront it will be decisive for what we can still call social bond.

2.3 Fear of missing out (F.o.M.O.'s) empirical setting: Contemporary data and research

Although Fear of Missing Out (F.o.M.O.) can be understood as a symptom that is intertwined with historical, economic, and cultural transformations, its relevance has been widely documented by empirical research that highlights the magnitude of this phenomenon in contemporary society. The seminal study by Przybylski et al. [1] established F.o.M.O. as a measurable construct, revealing that high levels of this phenomenon are associated with lower life satisfaction, greater use of social media, and increased psychological distress.

In a more recent analysis, Perlis et al. [8] conducted a longitudinal study with over 5000 adults in the United States and found that intensive use of platforms such as TikTok, Facebook, and Snapchat was significantly associated with the worsening of depressive symptoms over time. Although this is not a direct causal relationship, the data indicate how the digital environment—intensified by the fear of exclusion—is related to psychological suffering.

Complementing this scenario, the meta-analysis by Faelens et al. [9] highlighted that the impact of screen time and the use of social media on mental health is often mediated by subjective factors, such as self-esteem, social comparison, and emotional regulation strategies. These findings support the hypothesis that Fear of Missing Out (F.o.M.O.) is not merely an individual whim or a passing trend, but rather a malady marker that emerges at the intersection between the demands of the digital environment and the psychological vulnerability of the contemporary subject.

2.4 Subjective constitution in the digital era: Between the symbolic and the imaginary

The constitution of a new unit of human existence involves an evolutionary factor that distinguishes it from other animal species. Upon birth, the human baby is absolutely vulnerable, completely dependent on an Other to ensure its survival. This biological fact marks a decisive passage: The shift from a natural order to an entry into the language realm.

By recognizing that, at the beginning of life, the subject emerges without any autonomy for self-regulation or for the preservation of his/her physiological integrity, we appreciate the importance of an environment that can represent its needs. It is in this interplay between demand and response that language is established. It appears as a symbolic attempt to give shape and meaning to affections.

To understand the psychic effects of the digital age, especially concerning the phenomenon of Fear of Missing Out (F.o.M.O.), it is necessary to have another look at how human subjectivity is constituted. This subtopic proposes to do exactly this, by connecting the fundamental records of the psyche to the impact of contemporary technologies. Human existence, since its origins, is organized around arrangements of meaning and processes of identification.

At this initial stage, Lacan (1953–1954) [10] points to the category of lack as a constitutive marker of human life. The subject, as conceived by Lacanian psychoanalysis, is always obstructed. They are marked by a foundational loss, that of a state of alleged completeness or absolute pleasure. It is this primordial absence that Lacan designates as object: a lost object that structures the psyche.

From this symbolic emptiness, subjectivity is constituted in a continuous movement. There is a permanent attempt to safeguard the original discomfort. In such context, language emerges to shape the demands that are developed throughout life. In the early moments of childhood, for example, the baby's cry requires the caregiver to establish an interpretative relationship. It is the caregiver who attributes sense to this gesture and thus names the baby's needs.

Subjectivity is therefore formed from this mediation. The baby is crossed by the signifier that the Other offers. It is through this principle that important processes in the way the psyche develops and functions are established. Although different concepts—such as the insertion of language and the constitution of desire—are here interwoven, this subtopic will focus solely on the role played by language. The matter of desire will be discussed in the section following this subtopic.

In this perspective, the subject is constituted from three inseparable registers—the Real, the Symbolic, and the Imaginary—which, as illustrated in **Figure 1**, intertwine interdependently to sustain the psychic structure.

Over time, this alienation needs to be broken. This is what allows the subject to self-reconstruct throughout life, developing new identifications and new positions within the social bond. As the subject evolves and moves into new relationships and spaces, they encounter other relationships that become integrated into this instance that is understood as the Other. These relationships become representative of this intrapsychic movement—regardless of whether they are social groups, communities, or new relationships.

It is within these dynamics that demands from the digital environment take form. This is even stronger among younger generations, known as “digital natives,” and introduced to the digital world at a very early age. The digital environment becomes significant in the subject's relation to the Other. Nevertheless, regardless of

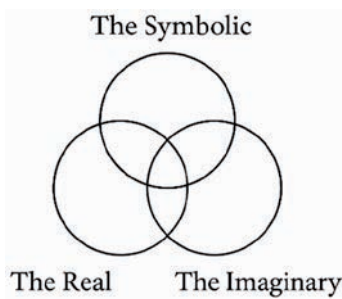


Figure 1.
Borromean knot.

generational differences, the seductive power of digital promises can affect anyone who allows themselves to be charmed. Some individuals possess a more consolidated repertoire rooted outside the internet. Even so, everyone with access to the digital environment remains susceptible.

The Symbolic is the domain of language, of social codes, of that which can be named. It is within this order that the subject inscribes themselves and organizes their experience of the world. The Imaginary, in turn, is the realm of images, of mirror identifications, and of one's illusory cohesion of themselves. Its function is structural, but it can also imprison the subject within ideals of completeness that are never fully achieved.

Therefore, it is necessary to acknowledge that contemporary culture introduces a new element in this scenario: the cyberspace. It is not merely a technological tool. It is a symbolic and imaginary territory of considerable potency. The digital becomes early inscribed in the process of subjective constitution, functioning both as a language and as a stage for socialization. Instantaneous, inexhaustible, and hyperactive, the cyberspace offers a type of existence that transcends time and space. It connects subjects, affects, and routines with a mere finger swipe. Its seduction lies precisely in the promise to simplify life and expand the scope of human experience.

However, as Ferreira [5] points out, this promise is far from neutral. Postmodernity no longer operates through subject binary relations of explicit exploitation, as in the classical dominator-dominated model. On the contrary, we exist in a one-dimensional society in which consumption supplants the subject as the operative agent of power. It is no longer a matter of one subject subjugating another. It is the market logic that seizes each one of us and subjugates us through desire.

The postmodern subject finds themselves seduced by objects that are offered by the consumer industry, engaged in a continuous pursuit for completeness by means of acquisition. This transformation is also evident in the intimate relationship between consumption and digital language. The symbolic milestone of this fusion can be identified in 2007, with the launch of the first smartphone with no physical key by Steve Jobs. The multitouch screen, equipped with full web browser, inaugurated a new experiential regime. It radically promoted the integration between body and machine. The cell phone was no longer a mere tool. It became an imaginary extension of the body.

Over time, the smartphone began to mediate the subject's perception of themselves and world. It is through the smartphone that they see, present, and desire themselves. The cyberspace is, therefore, no longer solely a product of its industry, but becomes integrated into the very way that the contemporary economic logic

works. It is not simply a medium, but a new means for organizing subjective experience, affect, and social bonds.

The fragmentation of experience, as Ferreira [5] emphasizes, is not merely a side effect of late modernity. It is also an active mode of subjectivity production. The subject becomes multiple, dispersed, and permanently engaged in narratives offered by the market and digital platforms as promises for completeness.

The questions that arise, then, are: what are the effects of this new symbolic-imaginary regime for the constitution of the subject? In what ways does this technological and market-driven seizure impact psychic health, the experience of lack, and desire? These are the questions that will guide the theoretical articulations that follow.

In the attempt to address the questions above, it is noteworthy that the image that constitutes something also plays a fundamental role in the formation of psychic narratives that may or may not nourish us, thereby shaping our symbolic universe. These are stories created from realities that are supported by concrete technological advancement, but these stories are only maintained because they are sustained as the realities that the subject wishes to perceive.

It is precisely at this juncture that the articulation with the phenomenon of F.o.M.O. becomes evident as a means to produce subjectivity. The individual, ensnared by this logic of images that promise wholeness, feels compelled to remain within the circuit of visibility. The fear of exclusion—Fear of Missing Out (F.o.M.O.)—is not only a concern regarding being left out from a concrete experience. It is the distress generated by the possibility of not participating in this gaze economy. What is feared is the loss of the chance to *be perceived* within the imaginary framework of capitalist discourse. And with this, the fear of also losing one's place within the social bond.

The Fear of Missing Out (F.o.M.O.) dynamics is therefore revealed as a symptom of how the Master's discourse functions in its capitalist form. The subject experiences distress in face of exclusion from a scene where value is not only monetary, but also symbolic and affective. Being “inside” the digital reality means being part of a network of gazes, exchanges, and imaginary validations. Being “outside” is synonymous to being cast into what eludes representation, into that which lacks name and image. Fear of Missing Out (F.o.M.O.) operates, therefore, as a marker of distress in terms of the lack that the discourse about the capital aims to mitigate.

Despite technological advances enabling enhanced capacities for connection, access, and participation, what is observed is an increase in psychological malaise. The multitude of possibilities, stories to live, and experiences to consume, far from promoting freedom, intensifies subjective capture.

The individual finds themselves increasingly glued to the image. And the image, as pointed out by Lacan (1953–1954) [10], is the realm of deception, estrangement, alienation. Just as in the experiment of the concave mirror, perception of wholeness is only achieved from a specific position. In the case of digital reality, this position is presented as a promise of fullness, but charges a high price: adherence to the imperative of constant exposure.

No, digital reality is not a universal structuring premise—it is important that this be emphasized. However, it is undeniable that it imposes itself as a norm in contemporary modes of subjectivation. Even though not all individuals are constituted by this reality, it is increasingly difficult to escape its effects. We are in a time in which distancing oneself from the digital has become the exception. This is the new domain of the Master's discourse: no longer the master who imposes authority through language, but the invisible logic of algorithms that ensnares the subject through image, through the desire to be seen, liked, and desired.

In this sense, Fear of Missing Out (F.o.M.O.) can be understood as one of the central psychic effects of this operation. It exposes the failure of the promise of completeness and well-being offered by liberal capitalism, which is now presented by digital means. At the same time, it reveals the role that the image occupies as a new operator of social bonds.

The subject experiencing Fear of Missing Out (F.o.M.O.) is one who, blocked, distressed, and divided, attempts—through the medium of the image—to sustain a fantasy of inclusion, belonging, and satisfaction. Yet, this fantasy is sustained precisely by the object that is never fully attained. It is an object that incites desire, but whose total presence remains impossible. This operation demonstrates that F.o.M.O. is not merely an effect of social media. It is a symptom structured at the intersection of desire, image, and subjective capture, as will be further discussed in the next section, by means of the category of scopic pleasure.

2.5 Between necessity and demand: Fear of missing out (F.o.M.O.) as an effect of “desire” structured by the other

The spaces of prominence that digital performance has acquired—and continues to acquire—are difficult to measure, given their symbolic and subjective breadth, as well as its global reach. Fear of Missing Out (F.O.M.O.) emerges, in this sense, as one of several indicators of an intensified demand sustained by the dynamics of social media. In order to understand what affectively mobilizes this profound insertion into the digital space, it is necessary to formulate hypotheses that allow us to reflect on why the consumption of content and digital interaction is experienced as a *necessity*.

What we know so far about Fear of Missing Out (F.O.M.O.)—as contemporary research indicates—is that the technological resource has been intensely requested as a form of psychological relief in the face of daily tensions. This momentary relief operates as a kind of discharge that creates, in the individual’s imagination, the illusion that it is a *real necessity*. The notion of “not being able to go without *it*” or “being unable to stop looking at it” establishes the structure of an urgency that ultimately masks what is at stake: the desire for recognition, belonging, and presence in the realm of the Other.

To deepen this distinction, it is essential to invoke the concept of *necessity* as formulated by Quinet [11], who emphasizes that necessity, for the speaking subject, has never existed in the pure biological sense. Unlike animals, human beings, upon entering the language realm, break with the natural order of instinctual necessity and position themselves in the symbolic order of *demand*. The only occasion when the subject is propelled by necessity is prior to the offering of the object of satisfaction by the primordial Other—when physiology cries out for sustenance or care, and the Other, attentive, responds with an offer that transcends mere biological function and simultaneously initiates the entry into language.

This foundational instant, which we could refer to as *the first experience of fulfillment*, also marks the irreversible loss of the direct relationship with necessity. From the moment the Other offers more than what responds to necessity—by naming, interpreting, and including the body in language—demand is born. Thus, there is no return to “pure” necessity: everything the subject asks for, desires, or seeks becomes mediated by the field of the signifier, the symbolic, and the Other.

This distinction is crucial when discussing Fear of Missing Out (F.o.M.O.) and the means by which it is treated in mental health research. The dominant tendency, characterized by a biologizing approach, interprets the phenomenon as a dysfunction

of emotional regulation, keeping the explanation centered on the subject's supposed difficulty to manage personal emotions [12]. Treatment or health care, from this perspective, proposes individual strategies for emotional control and management. However, this interpretation overlooks the symbolic and social context in which suffering is constituted—thus reducing the complexity of Fear of Missing Out (F.O.M.O.) to a problem of self emotional regulation, removing it from the realm of relationships with the Other and with culture.

By revisiting Quinet [11], a more fruitful avenue of interpretation emerges: if we understand that the speaking subject is subjected to demand—rather than necessity—we shall turn to Fear of Missing Out (F.o.M.O.) as an effect of a desire articulated with the position of the Other in contemporary culture. The demand is constituted in the moment when the Other names the affects experienced in the body and transforms them into discourse, marking the subject with significations that are not their own but inherited. This naming occurs through the Other's chain of signifiers, which arbitrarily designates the subject, placing them in a field of expectation, interpretation, and desire.

At first, this relationship with the Other may appear dual—between a baby and a caregiver, for example—but it soon expands: the subject is constituted in a triangulation, in which culture enters as a third element, providing the contours of their subjective experience. Throughout life, this subject identifies with beliefs, ideologies, values, and practices that shape their demand and guide their desire. Demand, in this sense, is an effect of language and of the cultural context in which one is situated—and thus cannot be reduced to an individualized expression of will or need.

By applying this logic to Fear of Missing Out (F.o.M.O.), we can assert that what is at stake is not the “need” to be online, but rather a *demand* articulated with the position that the subject desires to occupy in the gaze of the digital Other. The subject seeks to respond to a silent and diffuse expectation, though persistently in existence, to be *present*, *updated*, and *seen*. The relationship with social networks, therefore, is not a mere practice of leisure or communication: it is a mode of subjective sustenance within culture, especially when this culture is permeated by ideals of productivity, visibility, and self-exposure.

Technological devices amplify this experience by introducing a logic of asynchronicity: the subject can follow, in real-time or otherwise, events, stories, and experiences that lie beyond the immediate reach of their body. This excess of presence, paradoxically, produces a constitutive absence: the more the subject attempts to be everywhere, the more distressing becomes the perception that there is always something to be lost—an event, an image, a chance, a gaze. Fear of Missing Out (F.o.M.O.) thus emerges as a symptom of an excess of demand: it clearly shows the failure of the promise of imaginary completeness sustained by the logic of the digital.

2.6 Desire: To whom does it matter after all?

There is a third decisive factor in the libidinal investment dynamics discussed thus far—and perhaps the most important one when it comes to minimally healthy psychic functions: i.e., desire. From the Lacanian psychoanalysis perspective, desire is structurally linked to lack. It does not arise from the presence of the object, but from its absence; it does not emerge from satiety, but from the void that provokes distress. It is in the recognition of this lack—which can never be completely fulfilled—that the possibility of an authentic, singular subjective movement is initiated, bearing no link to the logic of the imperative.

For this reason, desire is the most vulnerable point in the face of the Fear of Missing Out (F.o.M.O.) apparatus—it is desire that, within the logic of the digital environment, undergoes an imaginary hijacking that reduces structural lack to a demand for presence, for performance, for being seen. The distress surrounding absence is transformed into a compulsion for presence; the necessary interval for subjective elaboration is replaced by a continuous demand for visibility.

This displacement occurs in the articulation between demand and desire. As we have seen, demand is a product of the field of the Other: it is the Other who names, interprets, and assigns sense to the subject's affects, shaping their symbolic initiation. Desire, in turn, is what escapes demand—that which cannot be fully articulated or satisfied. As Quinet [11] reminds us, desire is the vector that traverses demand, sustained by the imaginary illusion of recovering the lost object of original satisfaction. This object, however, has never been given; it has been, from the very beginning, an effect of the constitutive loss of symbolic life.

To be a desiring subject means precisely to accept that satisfaction will always be partial, temporary, and that absolute fulfillment will never be achieved. In this sense, psychic health is not measured by the presence of the desired object, but by the capacity to sustain the lack, to not yield to the call for immediate fulfillment. The capitalist discourse, however, organizes its promises around the denial of this structure: it operates by continuously offering objects that promise to fill the void of desire, promoting the illusion that completeness is within reach of a click, a new experience, or a new post.

It is at this point that the digital environment reveals its hooking power: it offers images, narratives, and performances that simulate the possibility of a full, total life, without gaps. It is within this simulacrum that desire is converted into demand—a demand shaped by the gaze of the digital Other, which requires constant presence, continuous updates, and performative display. The subject, in this process, does not desire from within themselves, but rather from what the Other expects them to desire.

The illusion that it may be possible to reinstate the experience of fulfillment—even if for short moments, *likes* or *stories*—supports the Fear of Missing Out (F.o.M.O.) in place, as a symptom of captured desire. The subject feels compelled to be present, to respond to the logic of visibility, to occupy a position in the social digital scene. Nonetheless, this position, as desire itself, is always slippery. Satisfaction is never definitely fulfilled. And precisely because of this the circuit repeats itself: the subject surrenders to the imperative of the Other, performs, exposes him/herself, consumes—and remains with a sense of lack.

Thus, to say that Fear of Missing Out (F.o.M.O.) is anchored in the logic of desire is to recognize that it is more than just a fear of exclusion. It is the expression of distress in face of what is void, which, instead of being symbolized, is masked by objects offered as solutions—objects that merely strengthen the cycle of repetition. In this cycle, desire is hijacked and replaced by an alienated demand, shaped by an Other that promises complete enjoyment, but always delivers a new lack.

2.7 The big other: The modulation of desire - between law, language, and digital seizure

So far, there have been recurring references to the instance of the Big Other. To understand how the modulation of desire operates from this element, it is necessary to delve into what it represents.

Lacan [13] provocatively and unconventionally introduces this idea with an intriguing question: “Why do not planets speak?” ([13], p. 296). The image of the planet emerges here as a metaphor for everything that is *non-human*: celestial bodies that are self-contained, spherical, without openings, without flaws, and without language. The absence of a mouth in planets is not merely the absence of speech—it signifies the absence of a fissure, of castration, of entry into the symbolic order.

It is precisely this opening—the speaking mouth—that introduces the human subject into language and, with it, into the realm of desire, law, and lack. The mouth, in this context, transcends its physiological function; it becomes a mark of what renders us incomplete. The human is constituted not as a closed, self-sufficient sphere, but as a body marked by its openness to the Other. And it is at this point that the Big Other emerges as a structuring instance of subjectivity.

The Other, in Lacanian theory, is a fundamental structure and not a concrete person—the language locus, the law, and unconscious knowledge. It represents the symbolic instance that breaks the immediate duality of human experience, inscribing the subject in a field of significations. The function of the Other is to prohibit full enjoyment, organize senses, and enable entry into the social bond. By the application of these functions, the human experience ceases to be merely sensory, becoming a discursive experience that can be named and interpreted.

This process of interdiction begins in the infant’s earliest experiences. The Other is initially represented by the maternal function. Through mirroring with this Other, the subject is named and interpreted, inserted into a chain of signifiers that shape them. The desire that arises in this context is not something spontaneous; it is always a desire of the Other, or more precisely, the desire to be what the Other desires one to be.

As the subject develops, this Other ceases to occupy a singular and embodied position as that of primary caregiver. They become more complex. They change into culture, environment, norms, and shared language. The Other comes to encompass the laws, beliefs, values, and discourses that organize social life. Each subject then constructs a unique relationship with this symbolic field, forming their own “fragment of the Other”—a subjective way of organizing life based on the symbolic possibilities that are offered.

This movement is essential for the understanding of how desire is always mediated, never pure or instinctive. The subject desires what the Other desires or what they believe the Other wants them to desire. It is precisely this structure that is instrumentalized by contemporary digital dynamics.

Social media, in this sense, are not merely communication tools. They function as devices for the constant updating of the Other. There, the presence or absence of the subject is measured by performance: whatever is posted, commented on, or shared. The digital gaze of the Other becomes omnipresent, fostering a field of infinite expectation. It is within this context that the subject’s desire becomes spellbound by an alienated demand. It is shaped by the rules of the algorithm, by dynamics of approval and rejection, and by the promise of symbolic inclusion.

Distress, then, returns as an effect. It does not originate from biological necessity, but as a result of the modulation of desire by an Other that never ceases to desire more. The gaze of the Other in the digital age not only observes us. It demands, calls forth, and dictates the terms of symbolic belonging. As Lacan demonstrates, the desire that is structured within this field is always at the mercy of the lack that the Other itself sustains.

Fear of Missing Out (F.o.M.O.) is inscribed precisely at this point of tension. It arises from the place where desire is hijacked by the imperative of presence and

visibility. Desiring to be desired by the Other, the subject finds in the digital sphere a scene that incessantly summons them to occupy a place. But this place is shifting, unstable, and impossible to fix.

Anguish returns as an effect. It does not stem from a biological need, but from the way desire is modulated by an Other—that never ceases to desire more. F.o.M.O., therefore, is more than fear of exclusion. It is the anguish of failing to correspond to the desire of the Other—the fear of falling short of the symbolic place that guarantees recognition, belonging, and meaning.

3. Conclusions

Throughout this chapter, we sought to understand the phenomenon of Fear of Missing Out (F.o.M.O.), not merely as a side effect of social media use, but as a structuring symptom of subjectivity in the neoliberal and digital age. By drawing on categories from Lacanian psychoanalysis—such as desire, demand, the Big Other, and the discourse of capital—we highlighted how the virtual environment functions as a new operator of social bonds, promoting a logic of visibility, constant updating, and performative presence that hooks the subject through the gaze and keeps them in a perpetual state of distress in the face of lack.

Fear of Missing Out (F.o.M.O.) thus reveals the collapse of modern promises of emancipation, replaced by the fantasy of completeness through consumption and digital exposure. The postmodern subject, in search of belonging, attempts to patch the constitutive absence of human experience with images, *likes*, and fleeting narratives, reaffirming the seizure of desire by the demands of the digital Other. This represents a symptomatic shaping that, while offering a promise of satisfaction, deepens psychological discomfort and the fragility of symbolic ties.

From this perspective, the clinical value of this analysis lies in repositioning lack as a central element of subjectivity, reclaiming the importance of sustaining desire as a vector of singularity rather than alienation. Politically, it highlights the need to denaturalize contemporary imperatives of presence and productivity, opening space for forms of existence less colonized by the logic of capital. Fear of Missing Out (F.o.M.O.), as a symptom, can be read as a warning: not about what we are losing out there, but about what we have already lost within, as we distance ourselves from what constitutes us as desiring subjects.

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Section 4

Youth Mental Health in Loneliness

Chapter 6

The Consequences of Loneliness for Young People

Sue Roffey

Abstract

Being alone is not the same as loneliness. Loneliness is a subjective state that can incorporate feelings of isolation, rejection, marginalisation and poor self-worth. Now widespread among young people, this has far-reaching consequences for both individuals and communities. These may include deteriorating mental health, being vulnerable to exploitation and taking revenge on those seen as responsible. This chapter explores the role of social media in the lives of adolescents, and ways in which it fosters belonging but also has the potential to undermine healthy relationships and a positive sense of self. We look at the difference between inclusive belonging, that welcomes all and values diversity, and exclusive belonging, which rejects those who do not share the same ideologies. The latter risks marginalisation of certain groups and raises the potential for positioning others inhumanely. School closures due to Covid-19 highlighted the importance of school belonging for adolescents, who develop their identity in social groups. We therefore address ways in which education may enhance belonging and reduce loneliness for young people. This includes a welcoming and inclusive school culture, and the value of social-emotional learning for building positive relationships, resilience and self-worth.

Keywords: belonging, inclusion, adolescents, mental health, relationships, rejection, social media, gangs, radicalisation, education, social-emotional learning

1. Introduction

Feeling you belong is now considered to be fundamental for psychological wellbeing and is particularly important for young people, whose identity is often refined in the company of friends during adolescence. This chapter makes a distinction between being alone and loneliness, and explores the extent of chronic loneliness for young people and the potential impact this has for their mental health, safety and behaviour. Those who are isolated and do not feel they belong are more at risk, not only from feeling rejected, depressed and possibly angry, but also of being bullied and developing a negative sense of self. Some individuals, desperately needing to feel they matter, may align themselves with those who offer the desired connection but exploit this situation for their own ends and demand behaviours that may be cruel, dangerous or criminal. The role of social media is of increasing concern in this regard.

We identify how loneliness might be addressed in education. This includes promoting the value of inclusive belonging in school, and the role of social-emotional learning in breaking down barriers between young people, giving them opportunities to learn the skills of healthy relationships and talk with each other in a safe, solution-focused space about issues that matter.

2. Methodology and theoretical constructions on loneliness

Loneliness is both multi-dimensional and dynamic [1] so one theoretical construction is rarely applicable to all adolescents. Loneliness can be transient, chronic, circumstantial or perceptual. Some young people would feel lonely in situations that others would not, some have more and some less resilience and coping strategies. Loneliness has been considered from a mental health perspective, specifically an outcome of Covid 19 [2], a social constructionist perspective [3], or developmental trajectories [4]. Many focus on the causes of loneliness rather than the consequences, although it is clear that some are interactive and accumulative. However, much research concerns older people rather than adolescents. The underlying theoretical model of this chapter is linked to the fundamental importance of belonging for psychological wellbeing [5, 6] not just for individuals but for the wider, societal implications for consequences.

In constructing this chapter the author has drawn on her own experiences of working with adolescents over many years and research for numerous publications related to wellbeing, including relationships [7, 8] and belonging [9–12].

In order to ensure that the chapter is up to date and includes seminal studies, the author has, where indicated, searched relevant keywords on Google Scholar, Research Gate and Academia.com. This is particularly relevant for research that has explored severe consequences for the safety and wellbeing of communities where individuals have experienced loneliness, due to rejection, marginalisation or social isolation.

3. The difference between being alone and loneliness

Being alone and being lonely are very different [13]. You can be alone because you are physically separated from others. Not being surrounded by people can be a choice, and perceived as beneficial to wellbeing. In the Loneliness experiment [14], four out of five respondents said they enjoyed spending time on their own, indicating that social contact is a subjective experience, depending on the discrepancy between an individual's desire for engagement and what is actually happening for them. Voluntary solitude is not associated with negative emotions and may in fact be an escape from stress. Loneliness, on the other hand, is not a choice and often entails negative feelings of exclusion and isolation. Loneliness can also be experienced when surrounded by other people, if relationships are marked by feelings of disconnection or alienation, a 'not-belonging' or 'alone in a crowd'. While being alone is often temporary, loneliness is likely to be experienced over the longer-term. There is an important distinction to be made between transient loneliness, which may occur at times of transition when someone is having to adapt to a new environment, and chronic loneliness, which has a longer term and more severe impact on wellbeing. Paying attention to transitions matters, so that transient loneliness does not become chronic [15].

4. The extent and causes of loneliness

Despite the billions of people on our planet, loneliness is increasing across many nations. Since the latter part of the last century social disconnection has become a concerning trend across developed societies. The reasons given for this are both systemic and individual, although there are interactions and correlations between these. Social factors and cultural norms include the following: pervasive focus on individual achievement and success rather than community connection, increased competition rather than collaboration, the breakdown of supportive family structures and relationships, discrimination, financial hardship, political unrest, relocation for work and study, shifts in technology, and the pace of modern life [16, 17]. Personal factors may include neurodiversity and disability, poor social skills, loss of a significant relationship, long term ill health, low self-worth, lack of trust in others and a shy, passive temperament leading to poor social engagement, being from a marginalised sector of society and academic pressure [18–21].

Statistics on the extent of loneliness were reported by the UK Office of National Statistics [13]. This report collected data using the Community Life Survey 2016–2017 and the Good Childhood Index Survey 2018. The age group who were the loneliest were those aged 16–24 years, with 11% of children aged 10–15 years and 14% aged 10–12 years saying they were often lonely. Children were much more likely to feel lonely if they lived in cities rather than towns or the countryside, and if they were in receipt of free school meals—an indication of family poverty. There was also a correlation between feeling lonely with poor health and also low satisfaction with relationships.

Young people aged between 16 and 24 were also more likely to feel lonely if they had long term illness or disability or if they lived in single adult households. Interesting findings here were that boys were less likely to report feelings of loneliness than girls, and also that many participants saw loneliness as a failing and were embarrassed to admit this.

These findings were replicated in the Loneliness experiment [14], an online survey of 55,000 people, which found 40% of 16–24 year olds reported often feeling lonely, compared with 27% of those aged over 75 years.

A meta-analysis by Buecker and colleagues [22] explored whether loneliness levels in emerging adults changed over the last 43 years. Their analysis is based on a total of 124,855 young people who completed the University of California Los Angeles (UCLA) Loneliness Scale between 1976 and 2019, and discovered that loneliness increased across the years. Overall, the results imply that loneliness can be a rising concern in emerging adulthood.

Since Covid-19 the issue of loneliness has had an even higher profile. To prevent the spread of the virus there were requirements to restrict mixing with others, maintain social distancing and stay at home where possible. This meant that the number of social contacts allowed were severely restricted. A systematic review of the extent of loneliness before and after Covid-19 [23] indicates a small but clear increase. This was, however, across all age groups and there is some evidence that young people were most affected by lockdown restrictions. In the UK, for example, around one in four adults reported feeling lonely during the lockdown, but this figure was nearly one in two among 18- to 24-year-olds [24]. What is hopeful, however, is that loneliness had returned to pre-pandemic baselines by September 2021 [24]. The long-term negative impact of lockdown on mental health was exacerbated by poor functioning before the pandemic and mitigated by positive, supportive family relationships.

There are similar trajectories on loneliness for adolescents post Covid in Australia [25], the US [26], and many other countries around the globe.

5. Issues for adolescents who are lonely

5.1 Identity

The teenage years are critical for forming a sense of self with identities generated in relationship with others. The groups to whom we are affiliated shape who we are and who we become. Although parental support remains important for many, adolescents routinely shift their reference points for values and aspirations away from family to friends and other social networks. This is, therefore, an important period for social interaction, as peer relationships and community engagement contribute to an adolescent's understanding of where they fit in. Young individuals crave acceptance, and these feelings are pivotal in the development of both their self-esteem and worldview. Their search for meaning and purpose therefore often intersects with their experiences of belonging.

5.2 Social media

In today's digital age social media plays a significant role in shaping perceptions of belonging and identity. Several studies show that loneliness can motivate individuals to find a sense of belonging online rather than in face-to-face interaction [27]. It can be seen as safer, less threatening, and even more meaningful. While it can connect individuals and reduce feelings of isolation, however, it can also foster comparison and competition. Young people may measure their worth against unrealistic portrayals of others' lives, leading to feelings of inadequacy. The media is full of images of young people surrounded by others looking like they are having a great time, so it is unsurprising that many feel that being alone is shameful, reflecting badly on both their sense of self and how they want to be seen.

Constant exposure can also distort a sense of belonging, making individuals feel more isolated despite being more 'digitally connected' than ever. Social media is also influential in identity development, with people telling them who and how to be. With algorithms reinforcing the same messages about how to be more popular, wealthy, famous, beautiful, 'manly' or important, more vulnerable individuals are at risk from the influence of powerful and possibly unethical voices. Passive use of social media—listening to and watching others—appears to be more harmful to wellbeing than those who engage more actively, create content and reach out to others. There is, however, continuing debate about this [28, 29]. Excessive use of social media can detract from face-to-face interaction and negatively impact on the maintenance of healthy, connected family relationships, as well as undermining the development of positive face to face social and emotional skills [30].

5.3 Mattering

Prilleltensky [31] defines mattering as being valued and also being of value. Although there are similarities, mattering differs from belonging, which has connotations of 'fitting in' with a group. Mattering includes having a responsibility to contribute in some way. Frick et al. [32] state that adolescents who see themselves as

not mattering to others such as family, friends, schools or other institutions, are more likely to experience depression, anxiety and a sense of hopelessness. Those adolescents who consider themselves unimportant to others are more likely to be lonely, socially isolated and depressed [33].

6. Potential consequences of chronic loneliness in young people

There are potential consequences of loneliness that are serious both for individuals and and/or the wider community. These include mental health challenges, being a victim of bullying, and a feeling of rejection that can lead to actions that endanger others. For some the desperate need to belong leads young people to affiliate themselves with certain groups, regardless of the implications for their wellbeing or that of others. Fear of loneliness can also result in a reluctance to leave a relationship or group, even though this may be toxic, exploitative, undermine wellbeing and/or generate negative behaviours such as bullying or criminal activity.

The fear of not belonging can lead individuals to protect themselves from rejection. Some may project their insecurities onto others, perpetuating a cycle of harm. This fear can become a significant barrier to authentic connections, causing individuals to hide their true selves and miss opportunities for genuine relationships.

In Hards et al's systematic review [34], loneliness is associated with poorer physical health, sleep problems, and increased risk behaviours, such as smoking, drug-taking, and use of alcohol. Outcomes for the multiple potential consequences of loneliness, however, are complex and interactive. There is no such thing as a single cause and effect, as the underlying reasons for loneliness and both the proximal and distal effects are not the same for all, depending on variables and context. Some individuals have internalising emotional responses ranging from sadness to depression and hopelessness, while others exhibit externalising responses, such as anger, resentment and revenge. The following consequences will therefore impact on some young people, but not others.

6.1 Mental health

There is a bi-directional association between loneliness and poor mental health for adults, and it is likely that children and young people experience a similar connection. We know that pre-existing mental health conditions in young people, such as anxiety, depression, social phobia and neurodevelopmental conditions, can be both a cause of social isolation and also result in greater loneliness [34]. This was exacerbated during the Covid-19 pandemic, when social isolation was mandated as a means of reducing contagion and many schools were closed. For some this meant they lost the support of friends and teachers and/or were living with difficult relationships at home [24].

Prolonged or chronic loneliness can result in adverse cognitive and physiological processes that can include hypervigilance for potential exclusion or rejection, maladaptive social cognition, an increased self-focus, high levels of stress and further social withdrawal [35–38].

6.2 Bullying

Bullying is a universal phenomenon with serious negative social and emotional outcomes. Like other issues in this chapter there is bi-directionality between the

precursors of negative behaviour and the consequences. Hodges and Perry [39] suggest three main social risk factors for being bullied: having few friends; having friends who are unable to help or protect you; and being rejected by the peer group. So a lonely person is more likely to be bullied, and being bullied will isolate them even further from the group unless action is taken to address this behaviour.

Acquah et al. [40] explored the two dimensions of loneliness: social—not having a friendship network or peer group affiliations, and emotional loneliness, which refers to the lack of close, intimate attachment to another person. Although both increased the likelihood of being bullied it is social loneliness that has the bigger impact. Storch and Masia-Warner [41] found that students who were anxious about how they were seen by others and avoided social contact were more likely to be the victims of overt and relational bullying. They also found, however, that prosocial behaviour from peers moderated the effects on loneliness.

6.3 Rejection and retribution

The experience of being excluded can lead to significant emotional pain, reinforcing feelings of inadequacy and worthlessness. People have a powerful, deep-rooted negative reaction to being socially rejected. The brain treats social pain and physical pain in similar ways, and this is particularly evident in the emotional response to social exclusion [42]. Unlike physical sensations, however, this pain can return whenever the incident is remembered [43]. The perception as well as the reality of rejection can have profound effects on an individual's mental health and self-worth. Bernstein et al. [44] review research that supports the view that negative feelings are elicited just as strongly by being actively excluded from groups to which the individual does not have or seek a particular affiliation as from a group in which they see themselves as an “in-member.” Wike and Fraser [45] explored similarities in the incidents of 109 killings in US schools since 1999, and found there had been high levels of social stratification, where some students were seen as stars and others rejected as losers. A later systematic review of 126 school shootings in 13 countries [46] replicated some of these findings. Over 88% of the perpetrators had experienced social conflict in the school environment; nearly 30% were physically bullied, while 53.7% experienced peer rejection.

7. Seeking connection at any cost

While seeking connection is a natural inclination, the desperate need to feel a sense of belonging can lead to negative experiences. Individuals may encounter exploitation, manipulation, involvement with gangs and negative peer groups, especially when they are vulnerable. This highlights the need for awareness and caution in the pursuit of belonging, as not all connections provide the support and acceptance that individuals seek.

7.1 Radicalisation

Roffey and Boyle [47] explored the link between (not) belonging and the risk of radicalisation and associated terrorist activities. Evidence is strong that religion is not the primary motivator for joining violent extremists. When there is a call for jihad very few individuals respond – for most Muslims this is antithetical to their Islamic faith. Extremists are therefore not acting on the basis of religious belief but seeking a

sense of meaning, of connection and of giving their lives some significance [48]. The Australian Strategic Policy Institute [49] found three shared characteristics of those young people who become violent Islamist extremists: they had a sense of injustice or humiliation, they had a need for identity and purpose, and a need to belong. Most had completed school with qualifications, but that evidently wasn't enough. *"Overall, our assessment shows a group of people clearly failing to gain satisfaction or friendship in mainstream Australian life"* (p. 13). Williams et al. [50] also highlight the importance of friendships for countering the risk of radicalisation.

7.2 Gangs

Where connections to *positive* groups are actively fostered this may inhibit violence and anti-social behaviour [51, 52]. However, loneliness and a lack of positive support systems can increase a young person's vulnerability to gang involvement. It is often the more isolated teenagers, perhaps excluded from mainstream education, living in poverty and without family support, who are groomed for gang membership. Gangs can offer a sense of belonging which can be appealing to young people struggling with loneliness or seeking an identity [53], but gang involvement can lead to multiple negative consequences, including violence, criminalisation, drug and alcohol abuse, and decreased access to support networks and authentic healthy relationships. Gangs can also tempt young people into making money by selling drugs. Gang membership entails a loss of personal agency. Once someone has been recruited, it can be hard to get out without fear of retribution. Many vicious attacks on individuals are gang related.

7.3 Online hate groups

In recent years there have been a plethora of social media 'influencers' who attract individuals who find it harder to connect positively with others in real life. Many blame specific groups for the situations they find themselves. Migrants, women and any minority group may provide a target. The Netflix mini-series *Adolescence* focused on how online messaging can lead susceptible young people into holding beliefs about other people that can result in life-changing behaviours. Marginalised and potentially lonely young people may find solace and connection in a shared online object of hate. The rise of misogyny, racism and extremist world views are bound up with the algorithms that reinforce specific beliefs within an online community searching for somewhere to belong. Putting these beliefs into practice, however can result in abuse, violence and criminality. There is also evidence that this online phenomenon is having an impact on what is happening off-line with more adolescents and their teachers reporting hate speech in schools [54].

7.4 Fear of leaving

For those trapped in negative or toxic relationships, where they feel alone even though with other people, the fear of leaving can be paralysing [55]. Although most of the research is related to leaving abusive couple relationships, these findings also apply to other situations, such as friends, workplaces or cults, where interactions undermine psychological wellbeing. Even when the cost of staying is high, the fear of loneliness, abandonment and possibly retribution can prevent individuals from seeking healthier alternatives. Change is also often hard to initiate, especially when the relationship has undermined self-confidence and self-worth. This fear reinforces

the need for supportive environments that encourage individuals to seek belonging in positive and affirming spaces, rather than remaining in harmful ones.

8. Inclusive and exclusive belonging

Belonging can be either inclusive or exclusive [56]. Inclusive belonging is open to all and promotes diversity, acceptance and unity, allowing individuals to feel valued for their unique contributions. It does not impose rules about who is acceptable or not. In contrast, exclusive belonging is only open to those who meet certain criteria and as such its members maintain a sense of superiority over ‘outsiders’. Although this can be innocuous and provide reliable alliance for those inside the group, it can also be at the root of inhumanity towards others who do not ‘fit’. At the time of writing, diversity and inclusion are under threat in countries who are ruled by a powerful elite who dictate who is ‘worthy’ or not. Those inside an ‘exclusive’ group are encouraged to demean others who are of a different race, belief, sexual orientation, political affiliation or social standing. Inclusive environments foster mental health and resilience, while exclusive ones can exacerbate feelings of alienation, mental distress and chronic loneliness. Deciding to leave an exclusive group can be challenging and requires courage, resources and support [57].

Exclusive belonging has been historically evident in a certain strata of society where aristocrats and wealthy landowners attempted to ensure that their ‘line’ was maintained by refusing to sanction alliances from ‘outside’ that might dilute their privileged position [58]. Although this has to some extent been reduced by increased social mobility, there is still an ‘elite’ who go to expensive schools and mix with those from a similar background. Infiltrating such groups demands not just social connections, but often wealth and/or a certain notoriety, such as celebrity status. Despite the meme that the US and Australia offer equal opportunities to all the reality is that certain elements of society are more privileged and others face constant discrimination—usually because they are of a ‘less acceptable’ race, colour or background [59].

There is some indication that those who feel disenfranchised within society and have experienced difficulty in feeling they belong are more likely to be drawn to exclusive groups. This is the basis of populist politics. Right wing politicians stir up negativity towards certain groups who are labelled both as outsiders and also to blame for the disadvantages that ‘worthy’ citizens are entitled to. They build an emotional attachment to the exclusive group they promote. Although Jews were a main target of exclusion, the Nazi regime also discriminated against those with disabilities, black people, Romanies, homosexuals and anyone who spoke up for an inclusive ideology. This was part of Hitler’s playbook and can be seen replicated in many other countries today.

9. What might make a difference in counteracting loneliness?

Positive social connection provides a sense of reliable alliance. Somebody who is interested in you, believes in the best of you and will support you when needed. This promotes mental health and wellbeing, confidence and a positive sense of self. A healthy relationship is also reciprocal, generating considerate behaviours, strong families and safer communities.

We need to explore interventions at many levels—family, community, school and society—to foster this sense of belonging to counter chronic loneliness in young people, and also to ensure that interactions with others are healthy, safe and affirming [11]. This chapter focuses on what might be achieved within education. Young people spend many hours a day, many weeks a year and many of their formative years in educational settings. What happens there is critical.

There are several components to this, including the culture of the school and the sense of belonging and inclusion that permeates this, activities that provide opportunities for positive connection, high social capital incorporating the quality of relationships between teachers and students and between peers, regular social and emotional learning with a safe, strength-based, solution focused pedagogy and attention to critical thinking. Santini et al. [10] found that fostering social connectedness at school could prevent loneliness, but that focusing on single indicators would appear to be insufficient. We therefore explore several aspects and their interactions.

9.1 School culture

A healthy school culture is the opposite of a toxic environment. Everyone has a say in what happens; people feel safe both physically and psychologically; senior leadership share a vision of students achieving their unique potential rather than a focus on high exam results; the atmosphere is friendly and purposeful; everyone matters and diversity is valued; people understand what it means to respect each other and there is fairness and flexibility for those who need this. These are the basis of the ASPIRE principles (Agency, Safety, Positivity, Inclusion, Respect, Equity) that underpin a culture that facilitates wellbeing and learning for all [60]. With many young people now out of school and at greater risk of loneliness and associated mental health concerns [61], a welcoming school culture for students, their families and their teachers needs to permeate education systems everywhere.

9.2 Belonging to school

When students feel connected to their school environment, they are more likely to engage academically and socially. The most commonly used definition of school belonging is Goodenow and Grady's [62]: *"the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment"*.

9.3 Inclusion and behaviour

Schools routinely suspend or exclude students who do not conform to behavioural expectations. Young people who come from disadvantaged backgrounds are four times more likely to be excluded. They therefore seek belonging elsewhere. As Riley [63] says: *"the excluded frequently become the exploited"*. Behaviour policies that rely on relational approaches rather than reward and sanctions are contributing not only to the inclusion and wellbeing of individuals but also the safety of the community [64]. On the other hand 'zero tolerance' is both ineffective over the longer term and promotes unhelpful authoritarian school cultures [65].

9.4 Social capital

Relational quality in a school matters not only for academic outcomes [66], but also for how people feel about themselves and their developing identity. It is the micro-moments of interactions that can make the difference. Strong relationships with teachers and peers can provide the support needed for resilience, helping students navigate the challenges of adolescence with confidence. It is not only teachers that impact on students but all other adults in the school, from admin staff to caretakers and support personnel [10]. Schools are systems, conversation in the staff-room impacts on what happens in the classroom.

9.5 Teacher-student relationships

A meta-analysis by Allen et al. [67] found a large effect between teacher support and school belonging. These relationships, which go beyond subject instruction, influence young people's feelings about being in school. When teachers tune into students, they show that they care about them as individuals, not just their grades, and try to make both the pedagogy and curriculum resonate and interact with them in positive ways – showing respect, interest and warmth [60]. The more teachers promote learning over performance, the more school belonging students feel. Students also need to feel they are treated fairly and that teachers do not jump to judgement. Strengths-based language is now widely acknowledged as more helpful and inclusive than deficit-based language. This can incorporate a focus on what a student has done well, acknowledging personal qualities and the value of making mistakes as a pathway to learning [68].

9.6 Peer support

Evidence suggests that school is where adolescents often experience loneliness, with peer relationships being the major source [69]. On the other hand, close and supportive relationships with friends are positively associated with emotional adjustment during adolescence. Friendship can provide experiences that emphasise interconnectiveness [70], so paying attention to inclusion and friendship is one way of supporting individuals who struggle with loneliness and associated mental and physical health issues. Pavarini et al. [71] evaluated the effect of online peer support training. This showed that peer support improved adolescents' mental health and agency. Further positive outcomes included increased self-care and empowerment.

9.7 Social and emotional learning

Regular social and emotional learning (SEL) from pre-school to year 12, reinforced in the everyday life of the school, has the best chance of enabling young people to be positively connected, resilient in the face of challenges and establish and maintain healthy relationships. By promoting skills such as empathy, active listening and problem-solving, alongside developing perceptions of shared humanity and what gives meaning and purpose in life, students are more likely to establish a more positive sense of self, and connections that are protective in the face of potential loneliness.

Learning to Be and Learning to Live Together [72] are the pillars of learning that have taken a back seat in many countries where education has been focused almost exclusively on Learning to Know and Do—the knowledge and skills that sustain

economic wellbeing rather than human flourishing. Integrating SEL into educational settings not only helps students develop self-awareness, healthy relationships and recognise and deal with a wide range of emotions, but also improves behaviour, school engagement and academic outcomes [73].

The extent to which the benefits of SEL are realised depends to a large extent on how well it is implemented [74]. The pedagogy for SEL is critical for effective outcomes. Where young people are encouraged to discuss personal incidents in a public arena, this not only undermines their privacy and may break confidences, but also puts teachers in a difficult position when they do not have the necessary time, resources or training to respond.

Circle Solutions [75] is a framework for SEL based in the ASPIRE principles of agency, safety, positivity, inclusion, respect and equity. Students are given activities in pairs or groups that enable them to reflect and discuss issues, but never incidents. The approach is primarily in the third person and there is no individual competition. The 'pass' guideline gives students the option to stay silent if they do not feel comfortable speaking. Positivity is encapsulated in being solution focused—what do we want here, not what do we want to get rid of. Every Circle includes a moment of fun together—something light-hearted that enables young people to bond by laughing together. In every Circle there are games that mix people up so that they talk to others they would not normally converse with. Having a focus on strengths identification in SEL enables young people to see themselves and others differently, and perhaps develop a more positive self-construct which supports their resilience in challenging times.

Structured conversations enable students to both find out about each other and also explore what they have in common. This, more than anything, gives young people regular opportunities to connect with a wide range of peers and breaks down barriers. Respect is actioned by listening to each other and treating all contributions positively without derision. The teacher is a full participant and as such gets to know more about their students, providing a baseline for further supportive conversations. Circles need to be flexible and fair to ensure that everyone has the opportunity to participate if they wish. That this makes a positive difference is evidenced by the fact that students ask for Circles, and research indicates that connections are maintained over time [76–78].

9.8 Critical thinking

Finally, fostering critical thinking is essential for navigating the complexities of belonging in today's world [79]. Encouraging individuals to question social norms, analyse their relationships, and understand the dynamics of inclusion and exclusion, can empower them to make informed choices that enhance their well-being and sense of belonging. Critical thinking is especially needed in relation to social media. Young people need to discuss together the value of social media but also its downsides and how it can impact negatively on how someone feels about themselves and other people.

10. Recommendations for the future

As we have seen from this chapter, the consequences of loneliness for adolescents have impact not only for individuals and their lives, but also for the communities where they live and the society in which they will participate in the future. There

are ways to alleviate loneliness at many levels but this needs to be accompanied by a resolve to act.

When families and schools regularly raise awareness of the power of social media, and its impact on how young people feel about themselves, other people and the world they live in, there is more chance they will be digitally safe. Encouraging young people to discuss and debate both the value and the negative influence of what they see and hear enhances their much-needed critical thinking. Social and emotional learning needs a much higher profile.

A sense of belonging in school is acknowledged as relevant to mental health and wellbeing and can also address issues of loneliness. There are many ways in which school can foster belonging if there is the will to do so [80].

School systems that primarily honour the academically able risk condemning students who are not acknowledged for their alternative abilities to consider themselves failures. This likely to contribute to a sense of exclusion. The social dynamics of the learning environment also matter for whether a young person feels they matter and can participate, or whether they are rejected or bullied. Schools need to be places where everyone is valued and can achieve. This requires a higher level of flexibility than is currently the case in many educational jurisdictions.

When adolescents are offered structured opportunities to collaborate with others, in positive activities where they have agency to make a difference, there is an incentive to focus on shared goals. It is harder to feel lonely when you are doing something together with meaning and purpose beyond the self [81, 82].

11. Conclusion

Many young people are at risk of chronic loneliness, which impacts on both how they feel about themselves and their futures and also how they position others. There is a bi-directional influence between loneliness and mental health concerns, which in turn impact on physical health and behaviours. Since Covid-19, more young people have been out of school, disconnecting them from sources of friendship and support and also increasing exploitation by others. The role of social media is double edged -it can help lonely adolescents be connected to others in positive ways, but also promote negative feelings about themselves in comparison to others. Social media is also a site for grooming vulnerable individuals seeking a sense of belonging.

Young people spend many years in education interacting on a daily basis with teachers and peers. What happens in the learning environment is critical for promoting mental health, and helping young people develop the positive relationships and connections that will sustain this. Loneliness is not inevitable. We need to ensure that education is not just for passing exams but for generating the ability to flourish in life.

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Social Isolation in Youth: A Public Health Challenge and the Emerging Role of Telepsychotherapy

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Abstract

This chapter explores the phenomenon of social isolation, focusing on its defining characteristics, prevalence across populations, and its association with various psychopathological conditions, including depression, anxiety, and psychotic symptoms. Drawing on recent empirical findings, we highlight how social isolation has emerged as a significant public health concern, particularly in vulnerable and underserved groups. We then introduce a telematic psychotherapeutic intervention developed by our research group, designed specifically for adults experiencing chronic social isolation, who face barriers in accessing traditional, face-to-face mental health care through national health systems. The intervention leverages digital platforms to provide structured psychological support remotely. Finally, we present preliminary findings from an ongoing randomized controlled trial conducted at our laboratory and affiliated research center in Italy, aimed at assessing the clinical efficacy and feasibility of such intervention. These findings offer early insights into the potential of digital treatments to bridge existing gaps in mental health service provision.

Keywords: social isolation, loneliness, digital intervention, CBT, psychotherapy, telemedicine, hikikomori

1. Introduction

Social isolation (SI) is a multidimensional phenomenon related to loneliness and social withdrawal. It can be described objectively as the absence of social contacts and interactions and, subjectively, as the feeling of being disconnected from others. SI affects different populations, with adolescents and the elderly being particularly vulnerable. The prevalence of SI varies according to demographic characteristics, cultural norms, and contextual factors such as urbanization. The rapid digitalization

of recent years has further shaped its dynamics. While some studies link internet use to greater loneliness and SI, others suggest potential protective effects, especially in older populations.

SI is increasingly recognized as a major public health concern due to its impact on both physical and psychological health. It has been associated with cardiovascular disease, immune dysregulation, depression, anxiety, cognitive decline, premature mortality, and higher costs for the healthcare systems.

In the following sections, operational definitions, epidemiology, and health consequences of SI will be further detailed, as well as the role of traditional versus digital psychotherapeutic interventions. The final chapter will present preliminary findings from a research project applying digital interventions for young adults with SI.

1.1 Definition of social isolation

SI, loneliness, and social withdrawal are distinct yet interconnected aspects with severe consequences on physical health, psychological well-being, and functioning. SI encompasses both objective and subjective aspects. Objective SI refers to a measurable lack of social interactions or contacts, typically evaluated by the number of social interactions and the frequency of engagement in social contexts. Conversely, subjective SI focuses on the emotional experience of lacking meaningful social connections and feeling disconnected from one's social network, even when others are physically present [1, 2]. Subjective SI overlaps with loneliness, which is defined by the perceived inadequacy of one's social relationships, regardless of their actual number or frequency [3]. Loneliness reflects an inner sense of dissatisfaction related to unmet social needs and the perceived insufficiency of existing interpersonal relationships [4, 5]. Social withdrawal refers to the intentional avoidance of social interactions [6], which can lead to severe conditions such as the hikikomori syndrome, "a form of pathological social withdrawal or SI whose essential feature is physical isolation in one's home" [7]. Core symptoms of Hikikomori syndrome include a withdrawal period extending for at least 6 months, significant confinement at home, and considerable functional impairment or distress resulting from prolonged isolation [7].

Gaining a deeper understanding of these constructs requires examining their operational definitions, overlaps, and differences. For instance, as shown by Amendola et al., terms like SI and social withdrawal are often employed interchangeably, despite referring to distinct phenomena with different processes and effects [8]. Specifically, the poor operationalization of these constructs may lead to errors in differentiating between individuals who are physically isolated and those who deliberately avoid social interactions. This conceptual ambiguity hampers the comparability of studies and the development of targeted interventions. To address these problems, Amendola et al. [8] propose a theoretical conceptualization that specifies the distinctions and overlaps between SI and social withdrawal. The former may be characterized by an objective lack of social contact or interactions and often affects individuals such as retirees, houseworkers, or those who are disabled or functionally impaired. The latter, social withdrawal, refers to a subjective pattern of behavior marked by the intentional avoidance of social interaction. According to the authors, within this framework, the hikikomori syndrome may be conceptualized as a psychiatric condition coexisting within the two dimensions, as both objective SI and intentional withdrawal are present. Notably, the model also differentiates between non-pathological and pathological forms of withdrawal; the former may include peer-isolated

youth, and the latter complex conditions such as autism spectrum disorder, mood and anxiety disorders, and personality disorders [8].

Clarifying the operational definitions of SI and their overlaps is essential, as different conceptualizations of SI directly inform its measurement and the estimation of its prevalence across populations and contexts.

1.2 Epidemiology of social isolation

The prevalence of SI varies significantly across demographic groups (e.g., older adults, youths, and clinical populations), geographic regions (e.g., Eastern and Western countries), and the degree of urbanization of one's living environment (e.g., metropolitan areas versus rural communities). Recent epidemiological data suggest that up to 12% of the general population in Western countries experiences some form of SI [8, 9]. Older adults are generally identified as the most vulnerable group, as recent studies have shown that up to 20% of older adults report moderate to severe levels of social disconnection and loneliness [10]. Similarly, adolescents and young adults are increasingly reporting elevated levels of loneliness, although this may not necessarily be associated with increased objective SI [11]. Moreover, SI is frequently observed in psychiatric disorders such as schizophrenia, major depressive disorder, anxiety disorders, and autism spectrum [12, 13] for which it can be both considered a risk factor and a consequence.

SI is a complex and multifaceted phenomenon influenced by individual, interpersonal, and psychological determinants, as well as by cultural norms and roles—an aspect that has received growing recognition in recent studies. For example, Meehan et al. [14] advocate for a systems-based, social-ecological approach to understanding SI, identifying factors such as neighborhood safety, availability of public spaces, cultural practices, and ageism (i.e., systemic stereotyping, prejudice, and discrimination against individuals or groups based on their age, and particularly older adults) as crucial determinants. According to the authors, community and societal interventions may mitigate SI [14]. Other authors, such as Rokach et al. [15], also examine the effects of culture on SI, suggesting that individuals living in collectivist societies (e.g., Eastern countries), despite having stronger family and communal ties, may experience heightened loneliness due to elevated expectations for social connectedness and stigmatization of emotional expression [15]. For example, strong familial and community ties may offer early protection against SI. However, these same structures may also lead to increased stigma, especially when mental health issues could be interpreted as a potential source of family dishonor or individual weakness [16, 17]. Conversely, other authors such as Barreto et al. analyzed data from over 46,000 participants with the aim of examining associations between culture and loneliness, finding that loneliness was more prevalent in individualistic cultures (e.g., Western countries), particularly among young men, and inversely related to age [18]. Other factors may also contribute to SI. For example, two studies by Horan and Ochnik examined the relationship between SI, loneliness, social media, and the degree of urbanization of one's living environment [19, 20], investigating how social media shapes one's perception of SI and loneliness and how different levels of urbanization and neighborhood cohesion may affect mental health. The authors found a direct correlation between the number of hours spent browsing social media and the severity of SI as measured via self-reported questionnaires [19, 20]. Interestingly, those who spent more than 2 hours every day on social

media attributed their condition to social media itself. Moreover, Horan suggested a relationship between social media and urbanization, as those living in suburban regions were less likely to associate SI and loneliness with social media use when compared with their counterparts living in urban or rural areas. The authors speculated that suburban environments may offer a balance between online interactions and real-life social engagements [19]. Similarly, Ochnik et al. [20] analyzed the interrelationship between urbanization, mental health, physical wellbeing, social cohesion, and loneliness in more than 3000 adults and found that people living in medium-sized cities (from 100 k to 300 k inhabitants) were less likely to be lonely or socially isolated when compared with people living in urban or rural regions. Moreover, in this study, the degree of urbanization was not found to directly impact loneliness and SI, acting instead as a mediator variable between sociodemographic and psychological factors [20].

Lastly, it remains unclear whether digitalization (e.g., internet and social media use) has a beneficial or detrimental effect on SI and loneliness. Existing evidence is limited and frequently mixed, likely due to the influence of contextual factors such as age, demographic characteristics, and the quality and frequency of online interactions. For example, a bidirectional model has been proposed, in which online interactions can either reduce or increase loneliness and SI depending on the user's intention (i.e., maintain existing relationships, reconnect versus substitute face-to-face interactions). Specifically, the authors discuss two complementary frameworks: the "displacement hypothesis," where online use replaces and diminishes real-world social contact, and the "stimulation hypothesis," where digital platforms foster new connections [21]. A more recent work examines the quality of social media use and its association with SI and loneliness. The authors found an association between the use of platforms that facilitate passive consumption of content and greater loneliness. Conversely, participants who used networking-oriented platforms, through which they were likely to interact with people they also knew offline, did not report above-average feelings of loneliness [22]. Other recent meta-analyses have shown that (i) greater internet use is consistently associated with higher levels of loneliness across different study designs, age groups, and cultural contexts and (ii) loneliness and SI are associated with increased rates of dysfunctional, compulsive, or impulsive internet use. These findings suggest a bidirectional relationship: loneliness may contribute to problematic internet use, which in turn can intensify feelings of loneliness, creating a self-perpetuating cycle [23, 24]. In contrast with this, there is also evidence showing that internet and social media use can lead to protective effects against SI in older individuals. Specifically, social and recreational internet use was found to be associated with lower levels of SI and loneliness in elderly people [25]. To summarize, the evidence today is mixed, showing both positive and negative associations between digitalization and SI. The conflicting results appear to be explained by a combination of factors, including demographic characteristics, users' personal motivations for using the internet (e.g., maintaining versus replacing real-life relationships), and the quality and frequency of their online interactions.

As a whole, these studies emphasize the concept that SI cannot be explained by a single determinant as it is a multifaceted phenomenon, influenced by several factors: demographic and clinical characteristics, cultural and societal norms, contextual and environmental variables (urbanization, neighborhood safety, availability of public spaces), as well as digitalization and online behaviors (quality, frequency, and purpose of internet and social media use).

1.3 Social isolation and health

SI is increasingly recognized as a major public health problem, given its profound impact on physical health, psychological well-being, cognitive function, and overall daily functioning [2]. Particularly, SI has been associated with increased risk of mortality, cardiovascular disease, elevated blood pressure, and immune system dysfunction [26, 27]. Furthermore, socially isolated individuals often exhibit greater stress reactivity (e.g., higher cortisol levels), poorer sleep quality, and a higher prevalence of chronic health conditions [27]. Moreover, some studies suggest that a lack of social connections can have similar health consequences to smoking 15 cigarettes a day, and that loneliness and SI may have worse outcomes than risk factors such as obesity and physical inactivity [27]. From a psychological perspective, SI has been associated with several psychiatric disorders such as major depression, anxiety, and psychotic disorders [28, 29]. The relationship appears to be bidirectional: SI can increase vulnerability to these disorders, while the disorders themselves can, in turn, worsen SI. For example, individuals with depression may withdraw due to low energy, self-stigma, or feelings of burdensomeness, which further intensifies their depressive symptoms [30].

As a result of the negative health implications, SI and loneliness may bring significant economic burden for public healthcare systems. Specifically, recent analyses estimate that SI significantly increases healthcare services utilization and costs. For example, recent reviews of the literature reported excess costs linked to loneliness and SI, ranging from US\$2 billion to US\$25.2 billion per year, providing additional evidence on the economic burden of loneliness and SI [31, 32]. These costs may be explained by the associations between SI and cardiovascular disease, depression, and premature mortality, leading to increased demands on healthcare systems. At the societal level, these effects translate into billions of dollars in additional costs each year, underscoring SI as not only a public health concern but also an economic challenge.

2. Treating social isolation: From traditional to digital psychotherapy

Increased recognition of SI/loneliness as risk factors for adverse psychological and physical health outcomes has elevated interest in interventions to reduce psychological issues associated with these conditions. To date, different approaches of in-person treatments have been put in place, including one-on-one interventions, group therapy, and wider community interventions. Similarly, different treatment objectives were taken into consideration, including enhancing social support, increasing opportunities for social interaction, improving social skills, and addressing maladaptive social cognition. Meta-analyses show that, among these social and psychological interventions, the most successful are the psychological interventions addressing maladaptive social cognition [33, 34]; although results should be interpreted with caution due to the small magnitude of the effects and significant heterogeneity among the included studies [35, 36].

Despite the promising results, it is well known that individuals suffering from SI often do not access traditional public health services, due to the social barrier intrinsic to the condition (e.g., fear of social exposure and stigma) [37].

Recent technological advancements have led to the development and widespread use of online support platforms, video calls, and social networking. Compared to traditional face-to-face approaches, digital interventions present several potential benefits as they can engage individuals who might otherwise avoid treatment because

of stigma, shame, health limitations, or distance. They also allow greater flexibility, as they can be accessed at any time and from any place. In addition, telematic and remote interventions are often cost-efficient and easily scalable. Lastly, these interventions can be tailored to personal circumstances, preferences, and specific difficulties related to SI, which is crucial for improving their effectiveness [38].

Moreover, digital interventions (psychotherapies) seem to be as effective as traditional interventions in reducing the severity of symptoms of different mental health conditions [37]. Specifically for SI, a recent meta-analysis showed that, in line with traditional approaches, digital psychological interventions—especially those with social components—were effective in reducing loneliness [38].

Overall, the evidence suggests that digital interventions represent a valid alternative to face-to-face treatments.

3. Digital interventions in practice: Early insights from the SOLITAIRE project

In this section, we present the methods and preliminary findings from the SOLITAIRE project, an Italian multicenter randomized clinical trial started in May 2023 that will end in May 2026.

3.1 Methods

The project aims to assess the feasibility and preliminary efficacy of multimodal digital interventions for adolescents (ages 11–17) and young adults (ages 18–45) with SI, as well as their family members.

Different treatment approaches are employed, including cognitive behavioral therapy (CBT) and cognitive remediation (CR) for socially isolated participants, and psychoeducation for family members. All interventions, as well as the pre-post treatment evaluations, are delivered online. Participants with SI are randomly assigned to the control group (CBT) or the experimental group (CBT + CR). The assessment and treatment of the adult and adolescent subpopulations are conducted, respectively, by the Psychiatry Unit of the Azienda Ospedaliera Universitaria Integrata of Verona, Italy, and by the Unit for Severe Disabilities in Developmental and Young Adult Age at IRCCS Eugenio Medea, Brindisi, Italy. Additional details on the project design, objectives, and methodological approach can be found at <https://clinicaltrials.gov/> (ID: NCT06138301).

For the purpose of this chapter, we present data on adults with SI treated with CBT.

3.1.1 Study population

Recruitment began in November 2023 and is currently ongoing. At our research center, young adults with SI are recruited through the psychiatry department of the local university hospital or promotional materials disseminated on social networks and in public locations of the community (e.g., universities and libraries).

Inclusion criteria

1. Age 18–45 years
2. Moderate-to-high levels of SI as detected by clinical evaluation and confirmed by the Hikikomori Questionnaire – 25 items (HQ-25) [39]

3. Stable pharmacotherapy and symptomatology in the last 3 months
4. No structured suicidal ideation
5. Not being in psychotherapy or being willing to interrupt it during the study
6. Owning a PC/tablet and an internet connection

3.1.2 Treatment protocol

Inspired by key psychological theories of SI [3, 33], we developed a brief online CBT protocol to address the social and emotional difficulties associated with isolation [40]. Specifically, our CBT protocol targets the transdiagnostic cognitive mechanisms that often underlie perceived and objective SI, including maladaptive social cognitions, avoidance, rumination, and low social engagement. The intervention consists of eight weekly sessions, each lasting approximately 45 minutes. Between sessions, participants are invited to practice the strategies learned through homework. The overall therapy lasts approximately 2 months.

Below, we outline the content, aim, and homework of each session.

- Session 1 – Assessment and therapeutic alliance building.

In the first session, the therapist asks the patient to recount their life story, identifying past and present factors that have contributed to and are maintaining their current problems, paying particular attention to the interpersonal context. The reasons that led the patient to seek psychological help and their expectations regarding psychotherapy are also explored. Together, the therapist and patient identify dysfunctional beliefs and emotional, cognitive, and behavioral symptoms (e.g., anxiety, rumination, and avoidance) associated with SI. Finally, the therapist works to build a strong therapeutic alliance.

a. Therapeutic tools employed: Socratic dialog, laddering, ABC.

b. Homework: Weekly diary of activities (level of activity/perception of utility, pleasure, and self-efficacy in performing activities).

- Session 2 – Sharing the disorder model.

In the second session, the therapist builds on what has emerged in the first session to introduce a model explaining how the patient's current difficulties may have developed and why they continue to persist. This process helps the patient feel seen and understood in his own functioning, fostering a sense of being mentally represented by the therapist. As a result, it enhances access to internal emotional states, strengthens the therapeutic alliance, and boosts motivation to engage in treatment.

Presenting the patient's functioning within a coherent model also facilitates the definition of shared therapeutic goals, with the patient actively involved in the process. In addition, the therapist begins to identify personal and contextual resources that may support change throughout the therapy.

a. Therapeutic tools employed: ABC, psychoeducation on problematic emotions (e.g., anxiety and shame) and possible disorders.

b. Homework: weekly diary of activities (level of activity/perception of utility, pleasure, and self-efficacy in performing activities).

- Session 3 – Increasing frustration tolerance and acceptance of feared events.

The aim of this phase of therapy is twofold: first, to help patients increase their tolerance to frustration and, second, to encourage them to accept the risk of feared situations. Tolerating painful experiences rather than avoiding them—for example, by de-catastrophizing the feared scenario and its consequences—helps patients reduce avoidance and protective behaviors and increases the likelihood of participating in social situations.

a. Therapeutic tools employed: cognitive restructuring (e.g., de-catastrophizing scale), diaphragmatic breathing, and safe place.

b. Homework: repetition of identified alternative thought, weekly diary of activities (level of activity/perception of utility, pleasure, self-efficacy in performing activities).

- Session 4 – Reducing self-judgment and rumination

The core of this session is to help patients to adopt an accepting, non-judgmental attitude toward the full range of subjective experience (thoughts, emotions, sensations, urges, desires, etc.). Acceptance and cognitive restructuring reduce self-deprecating thoughts.

a. Therapeutic tools employed: cognitive restructuring (double standard technique, positive reorientation, and cost-benefit analysis) and compassionate mindfulness.

b. Homework: repetition of identified alternative thought, weekly diary of activities (level of activity/perception of utility, pleasure, and self-efficacy in performing activities).

- Sessions 5–7 – Increasing the participation in social situations

Sessions five-to-seven are specifically targeted at modifying the patient's dysfunctional beliefs on self and sociality, often seen as dangerous and sources of negative emotions. By building a representation of positivity, sharing, closeness, and enjoyment, patients start to feel more confident and hopeful about overcoming their fears. Exposure techniques are used to transfer learning from the therapeutic context to real-life situations, increase participation in social situations and to give the patient a more accurate self-image, less determined by his fears.

a. Therapeutic tools employed: gradual exposure in imagination/in vivo, role-playing/modeling exercises on social situations.

b. Homework: gradual assignment of tasks, monitoring diary (negative emotions and thoughts before, during, and after exposure).

- Session 8 - Vulnerability reduction

The final session focuses on consolidating treatment achievements and preventing relapse. The therapist and patient review the entire therapeutic process, reinforcing what has proven most effective. The therapist helps the patient integrate the changes into a new self-image, identifies stressors that may increase the risk of relapse, and ensures the patient is prepared to identify them and has strategies to reduce or cope with them.

3.1.3 Outcome measures

All participants undergo a full clinical evaluation immediately before and after the digital CBT through standardized questionnaires, assessing psychopathological symptoms and functioning such as, depression [Hamilton Depression Rating Scale (HDRS-17)], social anxiety [Social Interaction Self-Statement Test (SISST)], alexithymia [Alexithymia Scale (TAS-20)], quality of life [Manchester Short Assessment of Quality of Life (MANSA)], general health [Short Form Health Survey (SF-36)], global functioning [Global Assessment of Functioning (GAF)], among others. Differences between the score obtained in the pre- and post-intervention assessment are then used to verify the efficacy of the intervention.

3.1.4 Statistical analyses

All statistical analyses were conducted using Stata 18.0 (<https://www.stata.com>). The sociodemographic characteristics of the sample were measured using descriptive statistics (mean score, range). Then, we explored whether the level of SI at baseline was predicted by psychological symptoms. For this purpose, we run multiple linear regression including alexithymia (TAS-20), social anxiety (SISST-AS), social competence (SISST-CS), depression (HDRS-17), and global functioning (GAF) scores as predictors and HQ-25 scores as outcome variable, controlling for age and sex.

Finally, to assess the effect of the intervention, paired-sample t-tests were used to compare pre- and post-treatment (T0–T1) scores across all clinical outcomes.

3.2 Preliminary findings

At the time of the present analysis, 29 participants were enrolled in the CBT group. Of these, 17 completed the full intervention and post-treatment assessment. Of the remaining 12 participants, 5 dropped out at various stages prior to completion, while 7 were still undergoing treatment.

Of the 17 participants who completed the study, 10 were females and 7 males, with a mean age of 27.6 years. At the baseline, participants showed severe SI (HQ-25 mean score: 65.05 ± 9.18 (cut-off = 42)), a higher level of social anxiety (SISST_SA mean score: 51.29 ± 12.68) than social competence (SISST_SC mean score: 38.17 ± 8.32), mild depressive symptoms (HDRS-17 mean score: 6.82 ± 4.92), possible-to-present alexithymia (TAS-20 mean score: 56.76 ± 12.02), a moderate level of impulsivity

(BIS-11 mean score: 65.59 ± 10.42), moderate difficulties in global functioning (GAF mean score: 60.41 ± 10.59), and modest dissatisfaction for life's quality (MANSA mean score 2.95 ± 0.80).

3.2.1 Clinical predictors of social isolation at baseline

Associations between the severity of SI and clinical symptomatology at baseline are shown in **Table 1**. Among the clinical variables examined, worse depressive symptoms (HDRS-17) and lower perceived quality of life (MANSA) emerged as the only significant predictors of greater levels of SI (**Figure 1, Table 1**). No significant effects were found for alexithymia (TAS-20), social anxiety (SISST_SA), social competence (SISST_SC), impulsivity (BIS-11), or global functioning (GAF) in predicting HQ-25 scores.

3.2.2 Clinical changes after the CBT-based tele-psychotherapy

After the CBT-based intervention, participants showed a significant improvement in three out of four measures of SI derived from the HQ-25, including *Isolation* and *Socialization* subscales and the *total score*. Moreover, there was a reduction in depressive symptoms and an improvement in global functioning (**Table 2** and **Figure 2**). Conversely, no significant changes were observed in the HQ-25 emotional support subscale: alexithymia, social anxiety, social competence, impulsivity, or perceived quality of life.

Clinical scale	r	p
HDRS-17	0.26	0.027
MANSA	−2.76	0.016
TAS-20	0.44	0.211
SISST_SA	0.24	0.423
SISST_SC	0.07	0.790
BIS-11	0.14	0.653
GAF	−0.38	0.171

Table 1.
Associations between social isolation and outcome measures at baseline.

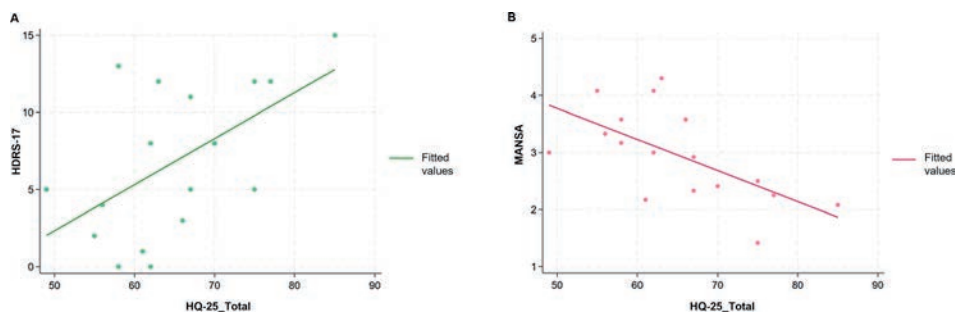


Figure 1.
Regression plots showing the association between HQ-25 total score and A HDRS-17 and B MANSA scores at baseline, adjusted for sex and age.

Clinical variables	T0 (mean ± SD)	T1 (mean ± SD)	<i>t</i> -test	<i>p</i>
HQ-25				
Isolation	23.53 ± 4.35	17.71 ± 6.45	3.29	0.005
Socialization	29.76 ± 6.35	23.94 ± 8.95	3.45	0.003
Emotional support	11.76 ± 0.89	10.12 ± 4.21	1.42	0.176
Total	65.05 ± 2.23	51.76 ± 15.97	3.28	0.005
Alexithymia TAS-20	56.76 ± 2.92	54.94 ± 2.70	1.41	0.271
Depression HDRS-17	6.82 ± 4.92	4.94 ± 4.48	2.96	0.009
Social competence SISST-SC	38.17 ± 8.32	37.11 ± 10.28	0.74	0.469
Social anxiety SISST-SA	51.29 ± 12.68	48.17 ± 11.07	1.47	0.160
Impulsivity BIS-11	65.59 ± 10.43	64.59 ± 11.50	0.83	0.419
Global functioning GAF	60.41 ± 10.59	67.17 ± 13.52	-3.64	0.002
Quality of life MANSA	2.95 ± 0.80	3.24 ± 1.25	-1.08	0.295

Table 2.
Pre-to-post treatment differences.

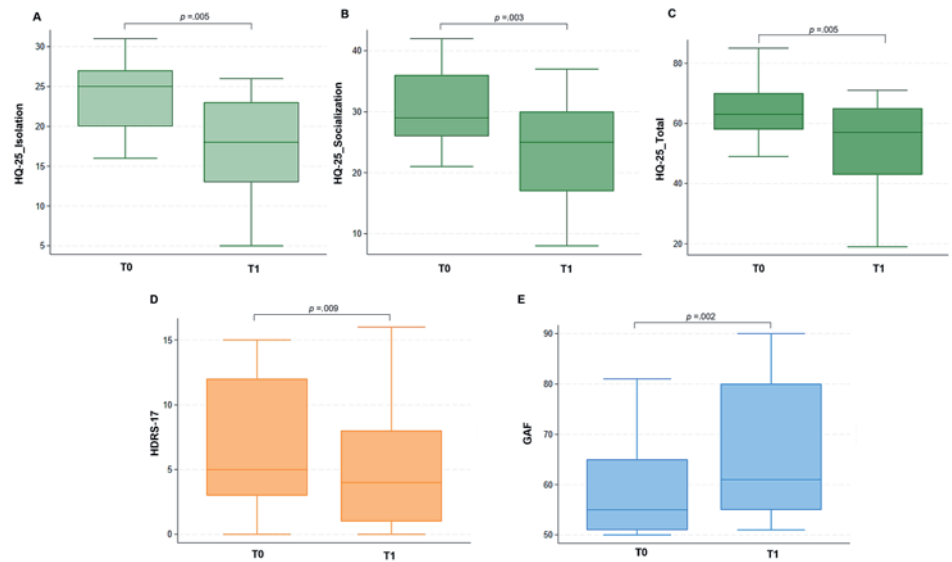


Figure 2.
The box plots show the scores obtained by the study participants on the A HQ-25 isolation subscale, B HQ-25 socialization subscale, C the HQ-25 total scale, D the HDRS-17, and E the GAF before (T0) and after (T1) the treatment with the digital CBT.

3.3 Discussion

Preliminary findings are promising and indicate that the digital CBT-based intervention developed by our group for the SOLITAIRE project [40] is feasible and effective in reducing SI and depressive symptoms and in improving global functioning. These results support the potential of this approach to address previously unmet clinical needs and suggest its possible utility in routine clinical practice.

When considering the predictors of SI, our regression analyses revealed that higher severity of depressive and social anxiety symptoms was associated with more severe isolation at baseline. This result aligns with previous studies demonstrating that internalizing psychopathology is both a risk factor for and a consequence of SI [41, 42]. The bidirectional nature of this relationship underscores the need for integrated treatment approaches that simultaneously target social functioning, social cognition, and emotional symptoms. It also suggests that SI should not be conceptualized as a secondary phenomenon that may precede the onset of psychiatric disorders but rather as a clinically relevant condition in its own right. Based on previous literature and theoretical CBT models, we expected an overall reduction of SI and withdrawal as measured through the HQ-25. Our findings confirm our hypothesis and suggest that the CBT-based protocol developed by our group specifically tackles the transdiagnostic cognitive mechanisms that often underlie perceived and objective SI, including maladaptive social cognitions, avoidance, rumination, and low social engagement. The HQ-25 measures SI across three domains: isolation (the extent of an individual's self-imposed detachment from society and their physical surroundings), socialization (an individual's capacity and engagement in social interactions and relationships), and emotional support (the perceived level of emotional support available to the individual from their social network). Following treatment, scores decreased by approximately 25% on the isolation subscale, 20% on the Socialization subscale, and 20% on the Total HQ-25 score. No significant improvement was observed for the Emotional Support subscale. One possible explanation is that CBT primarily targets dysfunctional cognitions and behaviors related to avoidance and withdrawal, which may more directly impact perceptions of isolation and socialization [43]. By contrast, the availability of emotional support may depend more strongly on external factors—such as the presence of a supportive network—rather than individual cognitive change and therefore may require a different type of interventions (e.g., psychodynamic and systemic) [44, 45].

Among the secondary outcomes, a significant reduction in depressive symptoms was observed. This is in line with a large body of evidence showing the established efficacy of CBT for mood disorders [46], and the tight association between depression and SI [47–49]. By contrast, no significant improvements were found in alexithymia or social anxiety. Nonetheless, the mean scores on alexithymia, social anxiety, impulsivity, and perceived quality of life all showed trends toward improvement. These trends, although not statistically significant, suggest that the intervention may exert broader benefits that could become more evident in larger samples or with longer follow-up assessments. On the other hand, the lack of improvement in difficulties related to emotional awareness and long-standing patterns of social fear and avoidance suggests the potential need for complementary therapeutic modules, such as emotion-focused therapy for alexithymia or exposure-based interventions for social anxiety.

The clinical implications of our findings are noteworthy. First, they show that digital CBT can be delivered to individuals who might otherwise remain unreachable due to stigma, logistical barriers, or the intrinsic avoidance of social contact. This strengthens the argument for incorporating digital platforms into routine care for socially withdrawn populations. Second, the partial but significant improvements observed highlight the importance of tailoring interventions to individual needs, possibly by integrating CBT with complementary modules such as cognitive remediation, social skills training, or family-based psychoeducation. The SOLITAIRE protocol already embraces this multimodal perspective, and future analysis of the full trial dataset will clarify the relative contribution of each component.

A number of limitations should be acknowledged when interpreting the results. The sample size of the CBT group was small, limiting statistical power and the generalizability of our results. In addition, the reliance on self-report measures may have introduced biases related to subjective perception. Another limitation is that our analyses were restricted to short-term outcomes; longer follow-ups are needed to determine the durability of treatment effects. Despite these limitations, the trial design allowed us to investigate an underrepresented population using a rigorous methodology, and the telemedicine-based format enabled access to participants who might otherwise have been excluded from conventional clinical research. Furthermore, the integration of clinical, psychosocial, and (in future steps) neurocognitive measures will provide a rich framework for understanding SI across multiple levels.

Future research should build upon these findings by conducting larger RCTs with larger and better characterized samples of socially isolated individuals, in and out of psychiatric populations, integrating neurobiological measures that will help explore mechanisms of change. It will also be crucial to examine how digital telemedicine-based interventions can be scaled up and incorporated into existing healthcare systems. In this respect, collaborations between clinical researchers, digital health experts, and policymakers will be essential.

4. Conclusions

SI refers to the objective lack of social contacts and interactions and is distinct from loneliness, which reflects the subjective perception of being alone. As highlighted in this chapter, SI affects both young people and adults and is increasingly recognized as a major public health concern, associated with poorer quality of life, mental health disorders, cardiovascular diseases, cognitive decline, and premature mortality. According to recent studies, SI appears to be influenced by a wide array of factors such as demographic (e.g., age and gender), psychological (e.g., anxiety and depression), and social factors (e.g., family dynamics, social support, and stigma), as well as broader cultural and environmental determinants such as urbanization and digitalization.

Addressing SI is essential, as it impacts not only individuals' mental and physical well-being but also places a burden on healthcare systems.

Digital interventions offer promising opportunities to tackle this issue. They are accessible to a wide audience, can be tailored to individual needs, are more cost-effective than traditional face-to-face interventions, and provide a viable alternative to overcome barriers such as stigma, fear of social exposure, and geographic distance.

Preliminary findings from the SOLITAIRE project are encouraging, suggesting that a brief online CBT protocol specifically designed to address psychological problems related to SI is feasible, acceptable, and effective in reducing SI and depressive symptoms while improving global functioning. Based on these insights, future research should aim to conduct large and long-term studies to clarify the effectiveness of digital approaches, their generalizability across populations, their impact on specific subgroups of socially isolated individuals, and how digital tools can be further tailored to personal needs and sociocultural contexts. By combining traditional psychotherapeutic principles with innovative digital platforms, projects like SOLITAIRE represent a promising step toward addressing the pressing challenge of SI in contemporary society.

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Conflict of interest

The authors declare no conflicts of interest.

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Chapter 8

Loneliness, Social Isolation, and Suicidal Behavior: “Only Girl, Middle Child”

Raymond Atwebembere

Abstract

This chapter employs an individual-based, narrative synthesis to examine how chronic loneliness and social isolation interact with sociocultural stressors to fuel suicidal ideation and behavior across four diverse lives: Jane Doe (Uganda), Amber (United States), Mark (United States), and Ahmed (Algeria). Drawing on the Interpersonal Theory of Suicide (IPTs) and the Integrated Motivational-Volitional (IMV) model, we analyze how thwarted belongingness, perceived burdensomeness, defeat, and entrapment converged with culture-specific pressures—patriarchal gender norms, perfectionistic academic climates, masculine stoicism, and bureaucratic injustice—to produce a shared pathway toward self-harm. The case vignettes reveal that sustained invalidation or humiliation eroded self-worth, while mounting isolation severed protective relationships; alcohol or other disinhibitors amplified volitional risk, and unrestricted access to lethal means converted ideation into action. Despite distinct settings, the narratives expose common psychological cornering whereby the absence of a trusted connection and realistic escape routes precipitated fatal outcomes. The chapter highlights Multiple Family Group therapy and the Friendship Bench model as culturally adaptable, community-anchored interventions capable of rebuilding social integration, reducing stigma, and addressing loneliness in low-resource contexts. It calls for longitudinal, cross-cultural research to delineate protective factors that buffer socially isolated individuals and to evaluate the scalability of such interventions. Ultimately, by foregrounding personal trajectories, the analysis underscores that effective suicide prevention must target both the cognitive architecture of entrapment and the social vacuum of loneliness that renders death a perceived solution.

Keywords: loneliness, social isolation, suicide, Interpersonal Theory of Suicide, the Integrated Motivational-Volitional theory, Uganda

1. Introduction

This chapter emphasizes the importance of individual-based contexts in understanding suicidal behavior. Numerous nuanced personal and environmental characteristics or risk factors unique to individuals may become obscured within generalized

findings of population-level studies. Population-based research, while essential for understanding broad epidemiological trends, frequently masks the complex, contextually specific realities that define individual experiences of loneliness, isolation, and suicidality. Conversely, qualitative, narrative-based case studies illuminate these personal trajectories, highlighting the intricate interplay of psychosocial factors often lost in large-scale quantitative analyses. Thus, this chapter leverages the personal narrative of Jane Doe, a 33-year-old Ugandan woman experiencing profound loneliness, isolation, and suicidal ideation, while also drawing parallels with relevant regional and global case studies.

Suicide ideation and behavior encompasses thoughts of suicide and suicide attempts [1]. Globally, suicidal ideation and behavior remain critical public health challenges, claiming approximately 720,000 lives annually and ranking as the third leading cause of death among youth worldwide, with over 77% of these deaths occurring in low- and middle-income countries (LMICs) [2]. Reducing suicide mortality is a public health priority under the United Nations Sustainable Development Goal target 3.4 [3]. A significant gender disparity has been observed, with males experiencing a higher rate of suicide deaths (12.6 per 100,000) compared to females (5.4 per 100,000) [4]—commonly correlated with the differing means and lethality chosen by males. However, regarding ideation and attempts, females are 1.5 times more likely compared to their male counterparts [5, 6]. Regional disparities in suicide rates are striking: Africa has the highest suicide rates at approximately 11.2 per 100,000, compared to Europe at 10.5, Southeast Asia at 10.2, the Americas at 9.8, the Western Pacific at 9.2, and the Eastern Mediterranean region at 6.4 per 100,000 [4, 7, 8].

In Uganda specifically, the crisis is alarming. A 2024 census indicated that 18% of Ugandans aged 10 and above experience psychological distress, with a 1% prevalence of suicidality [9]—likely an underestimation due to complex social stigmas [10–12]. This census also recorded 272,271 cases of suicidal thoughts or attempts in the last decade, disproportionately affecting youth, with those aged 10–24 accounting for over 110,000 cases [9]. Additionally, Uganda’s overall suicide rate of approximately 9.9 per 100,000 places it among the higher-risk African nations [13, 14]. Uganda faces acute challenges given its substantial youth population; approximately 78% of Ugandans are under 35, and 22.7% are between 18 and 30, making Uganda one of the youngest countries globally, according to UNICEF [15, 16]. Despite this, the mental health needs of its youth remain largely unmet, with severe consequences [17, 18]. Mental health services for this population are scarce, with only one psychiatrist per 500,000 inhabitants—100 times below the WHO recommendation [19]. This underscores a substantial gap in suicide research and interventions targeting this demographic.

Loneliness and social isolation exacerbate suicide risk. Systematic reviews and meta-analyses confirm that chronic loneliness doubles the risk of suicidal ideation—even among individuals without diagnosed mental disorders [20–23]. Longitudinal studies reveal that adolescents reporting loneliness are nearly twice as likely (adjusted OR ≈ 1.97) to experience persistent suicidal thoughts after 6 years [21]. To draw your attention to Sub-Saharan Africa, Teens who lack close friendships or parental support exhibit three times the likelihood of reporting suicidal ideation compared to supported peers [24–27]. It is notable that loneliness and social isolation compound to form a serious public health threat, empowering suicidal aspirations, especially in contexts where social cohesion is rapidly evolving. This highlights that loneliness transcends being merely an emotional discomfort; it is a quantifiable and potent predictor of suicidal ideation and behavior.

Jane Doe’s trajectory—from early emotional neglect, gender-role humiliation, and alcohol-fueled hopelessness to recurrent suicidal thinking—mirrors patterns that reappear across the three subsequent cases despite vast differences in age, culture, and circumstance. Amber, the gifted American valedictorian, likewise internalized perfectionistic self-critique until a single academic setback collapsed her sense of worth [28, 29]; Mark, the jocular Midwestern chef, numbed lifelong panic with heavy drinking while joking his way past intervention [30]; and Ahmed, the Algerian civil servant, watched a workplace injury erase both income and identity, leaving him convinced he had become a burden to his family [31]. Each story shows the same lethal convergence that defines Jane’s: chronic invalidation or defeat that feeds perceived burdensomeness, escalating entrapment, substance or situational disinhibition, and ready access to lethal means. Placed side-by-side, the four narratives underscore how culturally specific stressors—patriarchal expectations in rural Uganda, Ivy-League-or-bust standards in the U.S., masculine stoicism in Midwestern kitchen culture, and bureaucratic injustice in Algeria—can channel people toward the same psychological corner when protective relationships, trusted help, and realistic escape routes are missing.

1.1 The Interpersonal Theory of Suicide (IPTS)

IPTS, advanced and elaborated by Van Orden et al., is one of the most empirically supported frameworks explaining why suicidal desire develops and why only a subset of individuals act on that desire [32]. It is organized around three mutually reinforcing pillars:

- Thwarted belongingness—a chronic, painful sense of social disconnection. Individuals feel they “don’t belong anywhere” and lack reciprocal caring relationships. Quantitatively, it aligns closely with psychometric indices of loneliness and objective markers of social isolation (e.g., living alone, low social network density).
- Perceived burdensomeness—the belief that one’s existence is a liability rather than an asset to family, friends, or society. Cognitions such as “My death would be worth more than my life to others” encapsulate this construct and often coexist with shame, internalized stigma, and low self-esteem.
- Acquired capability for suicide—habituation to the fear and pain involved in lethal self-harm. Repeated exposure to painful or provocative events—self-injury, violent assault, combat, chronic illness procedures—erodes the natural self-preservation instinct through opponent-process learning, thereby lowering the threshold for acting on suicidal thoughts.

IPTS proposes that when thwarted belongingness and perceived burdensomeness rise in tandem and are accompanied by hopelessness about change, an intense desire for suicide crystallizes. Lethal behavior occurs only if this desire coexists with sufficiently elevated acquired capability. Meta-analytic evidence spanning more than 200 studies across 37 countries—including several LMIC samples—confirms medium-to-large effect sizes for these relationships [33, 34]. Importantly, while cultural expressions of belongingness and burden differ—collectivist norms in Uganda, for instance, frame social worth through extended-family reciprocity—the model’s latent structure appears culturally invariant [35].

IPTS provides clear treatment targets: interventions rebuilding social connection (e.g., Multiple Family Group therapy, peer-support clubs) mitigate thwarted belongingness; cognitive-behavioral techniques that reframe one's value to others counter perceived burdensomeness; and means-safety, substance-use regulation, and exposure-reduction strategies work to keep acquired capability below the lethal threshold [36, 37].

The Integrated Motivational-Volitional model embeds IPTS within a broader developmental cascade and distinguishes three sequential phases [38]: Pre-motivational phase—distal vulnerabilities (genetic loading, personality traits, early adversity) intersect with environmental precipitants (loss, discrimination, political violence). Motivational phase—feelings of defeat trigger a state of entrapment (“no escape”), giving rise to suicidal ideation [38, 39]. Thwarted belongingness and perceived burdensomeness operate here as key moderators, intensifying the entrapment-to-ideation pathway. Volitional phase—the shift from ideation to action, governed by volitional moderators such as acquired capability, impulsivity, alcohol and drug misuse, habitual self-harm, and immediate access to lethal means [38, 40].

Together, IPTS and IMV offer complementary lenses: IPTS pinpoints the content of suicidal desire, while IMV maps the process by which life stressors are translated into ideation and, for some, into suicidal behavior.

In addition to IPTS and IMV, this chapter incorporates Attachment Theory and Erikson's psychosocial stage of Trust vs. Mistrust to deepen our understanding of individual suicide risk [41–43]. Attachment Theory posits that early relational experiences shape an individual's capacity to form secure attachments, influencing lifelong patterns of trust and relationship-building [43]. Insecure attachment resulting from inconsistent or neglectful caregiving significantly increases vulnerability to social isolation, emotional distress, and mental health issues including suicidality. Similarly, Erikson's psychosocial stage of Trust vs. Mistrust emphasizes the foundational importance of consistent caregiving and emotional responsiveness during infancy [44]. Failure to establish this initial sense of trust often results in persistent interpersonal difficulties, mistrust, and isolation, exacerbating suicide risk in later life. These developmental theories highlight how early relational disruptions can profoundly affect psychological resilience and coping mechanisms throughout an individual's lifespan.

By integrating IPTS, IMV, Attachment Theory, and Erikson's developmental stages, this chapter provides a comprehensive theoretical framework for understanding the multifaceted nature of suicide ideation and behavior, using Jane Doe's narrative as a culturally contextualized and clinically insightful illustration.

2. Case vignettes

2.1 Jane Doe: Only girl, middle child

Jane Doe, who is the focus of this chapter, is a 33-year-old Ugandan woman who vividly recounts a life deeply impacted by relational and social dynamics that have significantly shaped her psychological well-being. Jane identifies herself as both a middle child and the only girl among four siblings, a position she connects explicitly with vulnerabilities described in Alfred Adler's birth-order theory [45, 46]. She describes persistent feelings of emotional neglect and insecurity, rooted in early developmental experiences characterized by insufficient parental attention. These early experiences entrenched a chronic sense of thwarted belongingness, a core construct of the Interpersonal Psychological Theory of Suicide (IPTS), by leaving her

feeling invisible and marginalized within her family unit [32]. See **Table 1** for participant demographics.

Jane further highlights how her identity as the only daughter compounded these early experiences. Growing up in a traditional Ugandan household, Jane faced entrenched gender disparities that repeatedly reinforced feelings of inadequacy and defeat, as described in the Integrated Motivational-Volitional (IMV) model [38]. Her attempts to bridge familial gaps by emulating her brothers’ behaviors were consistently met with disregard, deepening her internalized sense of humiliation and inadequacy. These persistent defeats solidified Jane’s belief that she was fundamentally inadequate, laying the groundwork for profound psychological entrapment, a hallmark of the IMV model. The pervasive sense of having “no escape” from her distressing circumstances amplified her suicidal ideation over time.

Jane’s internal dialog reveals self-critical thoughts consistent with the IPTS construct of perceived burdensomeness. Although not always explicitly articulated, Jane implicitly conveys feeling like a burden to her family, interpreting her emotional needs as overwhelming or problematic. Recalling her parents’ expressed uncertainty about handling her emotional sensitivity further intensified her belief in being fundamentally flawed and burdensome. This internalized belief, coupled with lifelong experiences of emotional neglect and isolation, created a powerful narrative reinforcing the perception that her existence negatively impacts others, further fueling her suicidal thoughts.

Domains	Biological	Psychological	Social-relationship	Social-environmental
Predisposing	Possible genetic predisposition toward anxiety or depressive disorders	Negative self-image, emotional sensitivity, persistent insecurity, anxious attachment style	Emotional neglect from parents, gender discrimination, isolation from siblings	Patriarchal cultural norms reinforcing gender disparities, traditional expectations
Precipitating	Alcohol use as maladaptive coping	Poor coping strategies (avoidance behaviors), social anxiety, depressive episodes	Difficulty forming intimate bonds and friendships during young adulthood	Transition periods (university, employment), exposure to social settings with peer expectations
Perpetuating	Ongoing substance use patterns, chronic depressive symptoms, recurrent suicidal ideation	Entrenched negative cognitive schema (self-worth issues, feelings of invisibility), avoidance coping strategies	Limited social network, persistent relational mistrust, superficial social connections	Limited emotional support systems, minimal access to mental health resources, stigma around mental health
Protective	Physical resilience, general health stability	Increasing self-awareness, coping insight, journaling and self-expression, cognitive capacity for personal growth	Strong emotional bond with mother, developing support networks (e.g., cousin, online peers), active community engagement	None reported

Table 1.
Highlights a summary of Jane Doe’s 4Ps.

Additionally, Jane’s narrative can be understood through the lens of Attachment Theory and Erikson’s psychosocial development stage of Trust vs. Mistrust. Attachment Theory suggests Jane’s early experiences of emotional neglect and inconsistent responsiveness from her parents likely led to insecure attachment patterns, contributing significantly to her difficulty in forming trusting relationships as an adult and deepening her sense of isolation and vulnerability [47].

Compounding these psychological vulnerabilities, Jane’s use of alcohol emerged as a maladaptive coping strategy in adulthood. Initially employed as a social lubricant to temporarily alleviate feelings of inadequacy, her substance use evolved into a perpetuating factor that increased her risk of suicide by reducing her fear of death, aligning with the IMV’s concept of maladaptive volitional factors [38]. Despite providing momentary escape, alcohol use exacerbated her underlying feelings of entrapment and defeat, trapping her in a vicious cycle of escalating distress.

However, amidst these considerable struggles, Jane identifies significant protective factors that have supported her through her most challenging periods. Central to her resilience is her relationship with her mother, which she identifies as profoundly stabilizing. Jane articulates, “My mom. I live for her and her alone. She’s seen me through the hardest things,” highlighting her mother’s unique ability to understand her in ways others could not. This relationship provides Jane with essential emotional validation and strength, counteracting her pervasive sense of thwarted belongingness and perceived burdensomeness. Jane’s description of her mother as someone who “gives me strength in the way she speaks to me” and provides consistent reassurance (“she loves me, and she is there for me”) underscores the importance of secure attachment as a protective element in her ongoing psychological health. See **Table 2**.

Referencing the DSM-5, Jane’s symptoms align with diagnostic criteria for Major Depressive Disorder and Alcohol Use Disorder, including persistent low mood, anhedonia, recurrent thoughts of death, and maladaptive substance use [48–50].

2.2 Amber’s unfinished Sonata

Amber could sight-read Chopin at 13 and recite Shakespeare without glancing at the page, yet her classmates mostly remembered the girl who wore sunglasses during

Attribute	Detail
Age	33 years
Gender	Female
Birth order	Middle child; only daughter among four siblings
Marital status	Single (never married)
Children	None
Education level	Post-graduate
Occupation	Full-time formal sector
Location	Urban
Religion	Christian
Ethnicity	Black/African

Table 2.
Jane Doe’s socio-demographics.

state testing and answered questions "too fast" [28, 29]. Teachers praised her brilliance, then scrawled "tone down opinionated voice" across her essays. At home, a string of perfect report cards hung on the fridge; inside her dresser drawer, she kept a private notebook labeled "Reasons to Leave," "Reasons to Stay," and "Plans."

Child-IQ testing placed Amber in the 140 s, winning her early entry to gifted classes—and daily whispers of "show-off." By 10, she was writing night-time poems about trees that wither because they grow "alone and too tall." When a second-grade teacher called her restlessness oppositional, Amber concluded that being exceptional meant being wrong. She resolved to outrun judgment by staying first at everything.

High school magnified the stakes. A mid-semester virus cost her 4 days of classes, and, with them, the valedictorian rank she'd pursued since eighth grade. Ivy League rejection letters soon followed. Amber wrote in her notebook, "I'm on top now and can only descend."

Peers saw flashes of anger: a spat with a librarian who denied her an extra history text, a walk-out when a substitute confiscated her satire piece "Inculcations." She fought the district's plan to cut advanced programs, accusing administrators of "punishing curiosity." They threatened suspension over pepper spray found in her bag—an item other students carried without rebuke—and she felt officially singled out.

That spring she compiled three suicide scenarios—car bomb, train track, pistol—and shared them with friends in late-night chats. One classmate shrugged it off: "She's dramatic; genius types are." Amber refused counseling, telling her mother, "Therapists put labels on people like me."

Graduation day captured Amber at her most dazzling—steady voice, immaculate phrasing, standing ovation. Three months later, the house was quiet except for her younger brother's video-game hum when she opened her father's unlocked gun case. She set her notebook on the desk—23 "Reasons to Leave," headed by "Fear of further rejection" and ending with "Started thinking about it in 5th grade." A single shot ended 18 years in less than a heartbeat.

Police noted no struggle, no substance use, only a pristine bedroom and an unsecured firearm. Friends surrendered letters discussing suicide pacts; teachers expressed shock, admitting they had focused on her performance, not her pain. Review of school records revealed a PHQ-9 screener she had never been offered.

2.3 The case of Mark

He was always the funny one—the "life-of-the-party" friend who could flip pancakes in a crowded brunch rush and still crack a joke about the smoke alarm. Yet beneath the chef's banter and easy smile, Mark (the name his family uses here) carried a knot of dread that had tightened since childhood.

Mark's teen years were a blur of social anxiety and beer cans. He never finished high school; crowds made him shake, so he slipped out the side door for cigarettes instead of algebra. Journals from that period show a boy who longed to teach history 1 day but was certain, even then, that "people like me don't belong at the front of a classroom." At 17, his parents staged an intervention over underage drinking; that night, he promised to cut back, then quietly wrote that alcohol was the only switch that could dim the panic long enough to sleep.

In his twenties, Mark found rhythm in restaurant kitchens—heat, noise, camaraderie without small talk—but the panic never left. At 25, he told his primary-care physician that attacks now hit four times a day and lasted an hour; a PHQ-9 score of 27 marked "severe depression" and "suicidal thoughts nearly every day." Celexa

and Xanax were prescribed, yet he wrote later, “I’m hopeless—no pill will fix not fitting in.”

Meanwhile, the coping grew riskier. He bought a “crotch-rocket” motorcycle he could not afford, racked up credit-card debt, and drove his Jeep fast enough to feel something stronger than worry. Friends still saw the jokester; even his long-time girlfriend missed the nights he drank himself unconscious just to silence racing thoughts. By summer 2008, the scale showed a 30-pound gain, and labs flagged sky-high cholesterol; autopsy would later reveal advanced coronary disease in a 27-year-old body.

That same summer, Mark announced a career switch: he enrolled in police academy classes, telling coworkers he wanted “a badge and a fresh start.” What the family noticed instead was his new fascination with guns. In 3 months, he purchased five firearms and kept a handwritten catalog of models he still “needed.” Worried, a relative delivered a gun safe; Mark laughed, “Don’t you trust me? Think I’ll hurt myself?”

His journal—the place where jokes stopped—told a different story: “Real hell is life... Don’t want to wake up.” Alcohol cans were piled high in his bedroom trash, and panic-attack notations resumed. Yet at family barbecues, he flipped burgers and insisted he was “fine.”

October 2008. Mark and his roommate’s girlfriend watched late-night TV while he sipped beer. Sometime after midnight, the roommate left on an on-call shift. Hours later, the girlfriend, irritated by the blaring screen, knocked on his door—no answer. When the roommate returned, he pushed the door open and found Mark on the floor, a recently purchased pistol beside him, the television still loud. Toxicology showed intoxication above the legal limit.

Investigators mapped six high-impact risk factors: daily suicidal ideation, escalating substance use, purposelessness after educational derailment, chronic anxiety, entrenched hopelessness, and reckless behavior—all amplified by easy access to unsecured firearms. Mark’s death stitched together gaps in care (PHQ-9 scores flagged but not explored), a family history peppered with suicide, and a culture that praised bravado while whispering about fear.

2.4 Ahmed’s last appeal

Ahmed had once been the dependable face behind the counter of a provincial government office in north-western Algeria. Neighbors remember how he could quote regulations from memory and still pause to ask after an elder’s health. The job gave him stature, a steady salary, and the pride of providing for his wife and two small children. All of that shifted the morning he slipped on a wet marble stair, fracturing cervical vertebrae and sustaining a neurological injury that left him with tremors, headaches, and blurred vision. The accident cost him his post; within months, the civil-service board declared him unfit and dismissed him without pension. Ahmed felt discarded “like a broken tool,” his wife later told investigators.

Dismissal meant forfeiting a third of the family’s income. A promised disability allowance never materialized, and after two appeals, the administrative court upheld the decision: he must go back to work or lose all benefits. Forced to clock in, though he could barely hold a pen, Ahmed returned each evening dizzy and humiliated, muttering that the system was “crushing the wounded.” His medical papers piled up beside unpaid electric bills. Friends noticed he no longer visited the café for chess; one recalled him staring at the board “as if the pieces were accusing him.” At home, arguments flared over rent arrears and school fees. Nights found him alone in the kitchen, head bent over a notebook, writing furiously beneath a bare bulb.

In January 2021, Ahmed told his brother, “If the judge rules against me again, I’ll hang myself, so they finally listen.” The brother brushed it off as frustration. Over the next weeks, Ahmed’s phrases darkened: “I am already dead,” “Better one rope than all this begging.” His wife pleaded for him to see a psychiatrist; he refused, saying a diagnosis would brand him “*majnoon*” (crazy) and cost him the last chance of reinstatement. Relatives, bound by the stigma that surrounds suicide, counseled prayer and patience, unaware they were witnessing warning flares.

On an April night, after learning the final court verdict had gone against him, Ahmed composed a two-page letter in neat Arabic script. He addressed it “To those who closed every door,” accusing superiors of injustice, lamenting the burden he had become to his family, and begging Allah to forgive a soul “strangled by men before a rope.” He folded the note and slipped it into the right pocket of his trousers. In the predawn quiet, he fashioned a noose from an extension cord, fixed it to a ceiling beam of the sitting room, and leaned forward until the cord bit deep; his feet still touched the tiled floor, an incomplete hanging that nevertheless stopped the breath within minutes. His wife found him just after sunrise, television still tuned to the children’s cartoon channel.

Forensic police documented an orderly flat: no forced entry, no struggle. Autopsy recorded a high, oblique ligature mark, facial cyanosis, and bilateral subconjunctival hemorrhage—clear signs of vital hanging. Internal dissection showed muscular bruising of the neck and visceral petechiae; toxicology was negative. Investigators labeled the folded pages “Lettre d’adieu,” noting its tone of betrayal and hopelessness. Interviews confirmed that Ahmed had verbalized suicidal intent, yet cultural taboos and limited mental health access meant no one intervened.

2.4.1 Closing reflection: Threads that bind four lives

From a patriarchal homestead in rural Uganda to a Midwestern kitchen, an Algerian civil-service desk, and an American honors classroom, Jane, Mark, Ahmed, and Amber moved through vastly different cultural scripts—yet their despair followed a chillingly similar choreography. Each story charts a progressive tightening of life’s margins: sustained humiliation or invalidation erodes self-worth; mounting loneliness and social isolation sever the protective power of belonging; perceived burdensomeness deepens; and adaptive coping gives way to alcohol, secrecy, or furious note-writing. Once a highly lethal method lies within reach, profound entrapment can pivot to irreversible action.

These narratives underscore that suicide prevention cannot rest on a single lens (clinical, cultural, or legal) nor on a single level (individual or structural). Effective safeguards must be braided together:

1. Early recognition—and literal response—to verbal and behavioral warning signs.
2. Deliberate cultivation of environments that counter social isolation, ensuring people have trustworthy listeners long before a crisis.
3. Systematic restriction of lethal means in homes, workplaces, and communities.
4. Structural reforms that restore agency and connectedness—whether through equitable gender norms, compassionate employment policies, or inclusive gifted-education practices.

Only when these strands are woven simultaneously can we hope to interrupt the common pathway—marked by isolation, hopelessness, and unopposed access to lethal means—that claimed all four lives.

3. Thematic analysis of Jane Doe's case

Thwarted belongingness: Jane Doe's pervasive feelings of isolation and loneliness intersect with the Interpersonal Theory of Suicide (ITS) construct of thwarted belongingness. Her narrative consistently highlights the absence of meaningful, supportive relationships, particularly within her family context, exacerbated by rigid patriarchal norms and gender roles prevalent in Ugandan society [51–54]. Jane explicitly recounts feeling excluded and marginalized, citing that despite efforts to integrate socially by emulating her brothers, she continually experienced emotional neglect and lack of acknowledgment. These dynamics foster a profound sense of alienation and an unmet fundamental human need to belong [55–57].

Empirical studies from Uganda affirm that inadequate social connectedness and diminished parental support significantly correlate with heightened suicidal ideation, particularly among women. For example, her admission of distrust and absence of confidants parallels findings that low community trust and weak parental bonds significantly elevated suicide ideation risk in Ugandan women [32, 58]. In ITS terms, the subject experiences chronic alienation: she is “lonely,” has few satisfying interactions, and senses that no one in her household or village truly cares for her. These are classic indicators of thwarted belongingness [32]. Jane's account illustrates how rigid gender constraints, emotional distance from siblings, and community mistrust coalesce into a potent social reality of non-belonging—one that perpetuates her sense of isolation and fuels passive suicidal desire.”

Empirical studies from similar contexts support Jane's experience. Research in suicidology has long observed that social disconnection—such as having fewer friends, weak family bonds, or living in a non-intact family—is associated with heightened suicidal ideation [59–61]. In Uganda specifically, low social support and feelings of not fitting in have been linked to greater suicide risk, especially among women facing rigid cultural expectations.

Perceived burdensomeness: Parallel to her experience of social isolation, Jane's narrative subtly but consistently suggests feelings of perceived burdensomeness. While Jane does not explicitly articulate viewing herself as a burden, her internalized sense of inadequacy and self-critical evaluations strongly imply this belief. Her narrative includes themes of emotional neglect and being misunderstood, reflecting an internalized belief that she contributes negatively to her family or community by not fulfilling traditional expectations or roles adequately. In ITS terms, she likely believes “my existence worsens others' lives,” echoing the theory's definition of burdensomeness [32]. Her self-directed shame (“I hate myself,” “I am useless”) would fit the self-hatred dimension of perceived burdensomeness. Furthermore, research within Uganda highlights perceived burdensomeness as a critical predictor of suicidal behavior, emphasizing that individuals who internalize feelings of worthlessness and inadequacy due to cultural and familial pressures are at increased risk [62–64]. Jane's account of feeling invisible, undervalued, and “trying too hard” to fit in aligns with theoretical definitions of burdensomeness, suggesting her perception of herself as fundamentally defective and socially burdensome significantly escalates her suicidal risk when combined with thwarted belongingness.

Defeat and entrapment: The motivational phase of the Integrated Motivational-Volitional (IMV) model is prominently evidenced in Jane's experiences of defeat and entrapment. Jane repeatedly describes herself as overwhelmed by life circumstances, indicating profound feelings of defeat characterized by persistent emotional neglect, gender-based constraints. This persistent state of defeat aligns with the IMV concept of feeling "brought down" by life's adversities [38]. Critically, her narrative underscores entrapment through explicit references to feeling trapped, highlighting perceptions of having "no escape" or viable alternatives to her current distressing circumstances.

According to the IMV model, defeat arises when one feels humiliated or overwhelmed [38]; the subject's sense of having "failed" as a daughter or sister fits this profile. Her narrative repeatedly emphasizes *entrapment*, stating that there is no escape from her situation (e.g., "no way out," "I feel trapped at home"). This captures the IMV definition of entrapment as "no prospect of escape or rescue" from defeat. The interplay is textbook: a defeated appraisal ("brought down") paired with perceived entrapment ("no rescue") produces intense suicidal ideation [38]. Indeed, she notes that in moments of entrapment, suicidal thoughts become pervasive—illustrating the IMV premise that entrapment bridges defeat to ideation. This aligns with research that treating defeat without addressing entrapment leaves one at extreme risk [65]. In short, her narrative's recurring themes of failure and inescapability embody the defeat-entrapment pathway to suicidal motivation emphasized by the IMV model [38].

Gender roles and sibling dynamics: Cross-cutting through the above themes are the powerful influences of patriarchal gender roles and family dynamics in Jane's life. Culturally prescribed gender expectations in her Ugandan context have both intensified her defeat and eroded her belongingness [52, 54]. From childhood, Jane was constrained to a traditional female role—expected to be compliant and domestic, which denied her the autonomy her brothers enjoyed. She notes that boys were valued, and girls were largely disregarded in her family. This not only isolated her socially (fueling loneliness) but also fostered a sense of failure and powerlessness. No matter how hard she tried to "be like her brothers," she could not win her family's approval or equal standing. Such rigid gender norms left Jane feeling defeated—as if she failed simply by being born a girl in a patriarchal household. Every instance of being told "you can't do that, you're a girl" likely chipped away at her self-worth and reinforced that she was less important, feeding into perceived burdensomeness.

Moreover, the sibling dynamics in her family undermined any sense of support or care [46]. Jane's brothers held most of the privilege and attention, while she felt emotionally neglected. This frayed sibling bond meant that rather than siblings being a source of comfort, they became another arena where she felt unseen [5, 6, 52, 66]. The absence of close, nurturing relationships with her brothers deeply undercut her feeling of belonging within the family. According to IPTS, even a few satisfying relationships can protect against thwarted belongingness, but Jane lacked these [32]. The family environment instead fostered conflict and favoritism—conditions known to correlate with loneliness and suicidality. Additionally, patriarchal authority likely limited her ability to seek help or express distress. For example, if her parents dismissed her emotional struggles as "over-sensitivity" (as she overheard), she would internalize that her feelings are a burden or invalid.

Substance use and suicidal motivation: Finally, Jane's use of alcohol as a coping mechanism emerges as a critical theme that intersects with her suicidal ideation. In her early adulthood, Jane admits to excessive drinking at social events to numb her

anxiety and loneliness. Temporarily, alcohol made her feel more accepted and less self-conscious, suggesting she was desperately trying to fill her void of belongingness. However, this maladaptive strategy ultimately exacerbated her problems—masking but not healing her deep-seated pain [67]. From a theoretical standpoint, substance use can play a role in both the motivational and volitional phases of suicidality [32, 38, 68]. Psychologically, Jane's drinking is a sign of escalating desperation and entrapment—she had to “escape” her feelings somehow, even if only via intoxication. This implies her sense of entrapment was acute; alcohol was the only escape hatch she saw. Consistent with the IMV model, such behaviors can be viewed as volitional facilitators, lowering inhibitions and increasing the likelihood of translating suicidal thoughts into actions [38]. Biologically and behaviorally, heavy alcohol use is known to increase one's acquired capability for suicide by reducing fear of death and increasing impulsivity [48, 69–71]. In Jane's case, drinking might have made her more fearless or numb regarding self-harm, edging her closer to an attempt when her distress peaked. She indeed has a history of at least one suicide attempt, which may have occurred under the disinhibiting influence of alcohol or in the aftermath of a binge when depression rebounds.

Substance use also compounds risk in the context of Ugandan society. Studies among youth in urban Uganda found that alcohol misuse is strongly associated with suicidal thoughts—youths who drink heavily are nearly twice as likely to report suicidal ideation [72, 73]. Alcohol is often readily used as a coping tool in environments where mental health support is scarce, as is the case in many Ugandan communities [74–76]. Unfortunately, this can create a vicious cycle: Jane's alcohol use, rather than truly alleviating her loneliness, likely worsened her depression and alienation over time (she may have alienated family or friends further through her drinking behavior, or felt shame afterwards, reinforcing perceived burdensomeness). It also put her at greater risk of acting on suicidal impulses during moments of intoxication or withdrawal [71]. Overall, Jane's substance use is a red flag in her suicidal trajectory—it signals the severity of her entrapment (“seeking any relief, even harmful ones”) and facilitates the transition from suicidal desire to capability [77, 78]. Any case analysis must note that addressing Jane's alcohol use is crucial, as untreated substance abuse can undermine therapy and dramatically elevate the danger of an impulsive suicide attempt. In conclusion, Jane's turn to alcohol underscores how her various struggles coalesce: the more isolated and hopeless she felt, the more she engaged in self-destructive coping, which in turn heightened her suicidal motivation. This interplay of loneliness, self-medication, and suicidality is a sobering reminder of the need for comprehensive support that offers healthier coping alternatives and rebuilds her sense of connection.

4. Discussion

The case of Jane Doe underscores the profound impact of sociocultural context on mental health. In many Ugandan communities, traditional gender roles limit women's autonomy and emotional expression [52]. For example, men are expected to show stoicism and suppress feelings, while women who express strong emotions may face negative judgments [79]. These gendered norms inhibit help-seeking and perpetuate silence and internalized distress. Stigma toward mental illness is widespread in Uganda; less than 15% of people with mental health disorders receive care [17, 18, 80]. Studies note that families often manage problems privately and regard open

discussion of mental health, particularly suicide- as taboo [81, 82]. Such emphasis on family obedience and discretion can discourage people from talking about depression or suicide outside the household. Therefore, entrenched patriarchal expectations and stigma create social barriers: women like Jane, who feel “excluded” or unworthy, are left with few safe outlets for emotional support.

Social isolation further compounds Jane’s despair. Women who deviate from norms (for instance, by remaining unmarried or openly emotional) often face family rejection and exclusion [83, 84]. Studies in Uganda report that marginalized girls (e.g., unmarried teen mothers) experience extreme stress, social ostracism by relatives, and high rates of depression and suicidal behavior. In Jane’s case, tense family dynamics and weak peer ties mirror this pattern of isolation. In many communities, alcohol is a common yet harmful coping mechanism. For example, Ugandan men often turn to alcohol to numb emotional pain, creating a vicious cycle of addiction and worsening mental health [48, 70, 76]. In community settings where alcohol use is normalized, such self-medication may go unchecked.

Addressing these challenges requires culturally grounded solutions and public dialog. Reducing stigma and promoting gender equity are essential first steps. Culturally appropriate psychosocial programs can also foster healing. For example, community interventions might include: Peer mentorship and empowerment programs: Training respected community members (especially women) as “peer counselors” or storytellers can break down barriers to help-seeking. Empowerment and community-mobilization strategies have been effective in similar Ugandan contexts. These approaches use shared experience and narrative to build trust and encourage open discussion of emotions.

These theoretical insights are echoed in Uganda and elsewhere. Recent Ugandan studies find that low trust in the community and weak family bonds sharply increase suicide risk among young women [84]. For example, women without close parental support or who distrust neighbors had significantly higher odds of suicidal thoughts. Family breakdown or conflict is repeatedly identified as a major precipitant of suicide attempts in urban Uganda [5, 85]. Likewise, research across sub-Saharan Africa documents that rigid patriarchal norms and constrained autonomy elevate distress in women [52–54, 79]. (At the same time, other work suggests that strong family and community support can buffer these risks, highlighting that context and social integration matter.)

4.1 Recommended community-based interventions

Multi-Family Group Therapy—MFG. A key intervention that has been tested in the Uganda setting to address HIV related stigma is the Multiple Family Group (MFG) therapy [37]. This model brings together several families to discuss common challenges and coping strategies. By involving whole kinship networks, MFGs can normalize conversations about mental health, improve intergenerational communication, and rebuild trust within extended families.

The MFG intervention is rooted in family systems theory, structural family theory, and social learning theory with elements of psychoeducation and social group work [86]. MFG is a family-centered, group-delivered, evidence-informed, strength-based 10-session intervention for adolescents whose families struggle with poverty and associated stressors [87].

MFG integrates components of existing evidence-based practices that successfully improve parental management, mental health-promoting family processes, and

family strengthening [88, 89]. Sessions focus on the core components of MFG, also known as the 4Rs and 2S (rules, responsibility, relationships, respectful communication, stress, and social support). Families are combined into groups of no more than 10 families each to promote communication and support within and among families.

Sessions are delivered in the local language, lasting approximately 1 hour, and are delivered once a week, in a time of the families' choosing. Given the significant and protective role families play in adolescent and youths' health and mental health, it is expected that strengthening family functioning and dialog by involving everyone through MFG will lead to better mental health outcomes, including addressing loneliness, social isolation and suicide behavior.

The decision to point out the MFG Therapy for addressing these critical public health concerns among adolescents in Uganda is grounded in both empirical evidence and the unique cultural context of the region. The MFG intervention has been previously adapted and implemented in Uganda to address HIV-related stigma among adolescents living with HIV and their families. In the Suubi4Stigma study, the intervention was found to be both feasible and acceptable, leading to reductions in stigma and improvements in mental health outcomes among participants [90]. This demonstrates the intervention's adaptability and effectiveness within the Ugandan context. By focusing on enhancing family dynamics, MFG addresses the interpersonal factors that contribute to suicide risk.

At the individual level, utilizing a task-shifting strategy, the Friendship Bench Intervention- originally developed in Zimbabwe- trains lay "grandmother" counselors to provide brief talk therapy on benches in community clinics [36, 91]. This intervention is based on a cognitive behavioral approach comprising six sessions of problem-solving therapy delivered by community members. The Friendship Bench is community-based, task-shifting intervention originally developed in Zimbabwe and used in other African countries like Malawi to address mental health challenges, including depression among adolescents [92].

Key components of the Friendship Bench intervention include: Problem-solving therapy, strengthening coping skills, Emotional support and empathy, and Psychoeducation [93]. Sessions would be conducted individually, ensuring personalized attention to each participant's needs. They would be delivered in the community's preferred language, lasting approximately 45 minutes, and scheduled once a week outside of school and work hours.

The trained community members facilitating the sessions would receive specialized training in mental health support and suicide prevention, enabling them to provide culturally sensitive and effective therapy. The Friendship Bench intervention leverages local resources by training lay counselors, making mental health support more accessible and sustainable within the community as intended by the WHO [94]. By focusing on individual coping skills and emotional support, the intervention aims to reduce suicidal ideation and behavior among adolescents by enhancing their ability to manage personal challenges and build resilience [91].

The adaptation of the Friendship Bench intervention to address suicide behavior among adolescents in Uganda is justified by empirical findings from its implementation in other African contexts and the pressing need for accessible mental health services in Uganda. While initially designed for adults, the intervention has demonstrated promising results when adapted for younger populations, as evidenced by some pilot studies. Adapting the Friendship Bench for has specifically yielded positive outcomes in reducing mental health symptoms [95, 96]. Randomized trials showed significant drops in depression for bench participants. In practice, the Friendship

Bench blends informal social support with evidence-based problem-solving, helping people like Jane reconnect socially and manage distress.

Both the MFG and Friendship Bench approaches are promising because they build on local customs (family gatherings, communal care) while delivering mental health support. Each has shown scalability: for instance, the Friendship Bench now serves tens of thousands of clients across dozens of communities, and the MFG intervention has been endorsed for wider rollout in Uganda and similar low-resource settings. Importantly, these models create safe spaces to address taboo subjects (e.g., sadness, suicide) within culturally familiar forums.

Strengths of this analysis include its grounding in robust, relevant theory (IPTS and IMV) and in Jane’s own voice, avoiding unfounded speculation. We also drew on culturally pertinent studies from Uganda and similar contexts, bolstering the validity of our interpretations. Limitations include reliance on Jane’s retrospective account, which may be subject to recall bias. Key contextual details (e.g., her exact socioeconomic status, education level, or family structure) are missing because she preferred to withhold that information, which hinders generalization. Finally, while we reviewed African research, most theoretical models originate in high-income settings, so some nuance may be lost.

This case points to important future research needs. Longitudinal studies in Uganda and elsewhere should track how sociocultural, economic, and psychological factors interact over time to produce suicide risk. Research is also needed on protective factors: for instance, how certain families or communities successfully mitigate risk even under patriarchal norms. Finally, rigorous evaluation of culturally tailored interventions (peer groups, MFGs, Friendship Bench, etc.) will be crucial to establish what truly prevents suicide in low-resource settings.

5. Conclusion

Jane Doe’s experience vividly illustrates how chronic loneliness and social isolation and a sense of personal defeat, can precipitate suicidal ideation. Her story of deep isolation and self-blame strongly mirrors IPTS’s notions of thwarted belongingness and burdensomeness. At the same time, her pervasive feeling of being “defeated” and trapped reflects the IMV model’s motivational phase. Together, these models suggest that Jane’s suicidal motivation arose from the combination of unmet personal and social needs and intolerable helplessness.

Empirical evidence supports this interpretation: Ugandan studies have found that low social trust and lack of parental support (i.e., broken family ties) are linked to much higher rates of suicidal ideation. In practical terms, addressing Jane’s risk would involve strengthening her connections and reframing her self-view—for example, through community-building programs and counseling to challenge beliefs of worthlessness. Overall, this case underscores that effective suicide prevention in Uganda must be culturally attuned, integrating both interpersonal and motivational perspectives.

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Conflict of interest

The author declares no conflict of interest.

Notes

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Loneliness - The Ultimate Suffering in Modern Society offers a deep understanding of one of the most unspoken curses of the modern era. This book explains how loneliness evolves into the most pervasive societal concern through the lens of individual differences and connectivity. Many of us are grappling with the emotional disconnections, yet the connectivity is paradoxically at our fingertips. This insightful journey does not stop at highlighting the consequences of loneliness, but also calls for and advocates actions and compassion that ensure societal harmony free from the desperate feeling of loneliness.

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