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**Silent Killer – Exploring the Loneliness Epidemic, Stigma and Awareness Among
Post-Covid College Students**

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Abstract

In the aftermath of the Covid-19 Pandemic (Covid), American society has experienced what national officials have declared a public health crisis. This research aimed to explore the impact of America's Epidemic of Loneliness and Social Isolation on traditional college students by identifying how perceptions of loneliness stigma and levels of awareness about loneliness affected the loneliness experiences of participants. Research spanning the last several decades has converged, revealing the vast and significant health and well-being outcomes associated with social isolation and loneliness. A lack of social connection and the loneliness it inflicted is linked to many adverse and dire consequences for individuals and society. Loneliness has the potential of shortening life expectancy by 29%. Time spent connecting socially had been declining for decades and has now plummeted to record-breaking lows. Unbeknownst to many, the increasingly widespread loneliness epidemic is likely crippling most of the population and infecting every level of society. Approximately half of Americans had self-reported loneliness prior to Covid, with the current generation of young people being among the most adversely affected. A mixed methods design was used to study a group of 20 undergraduate college students from a western university. Participants engaged in semi-structured interviews conducted both in-person or virtually. Instrument development derived from the Stigma of Loneliness Scale which incorporates UCLA's Loneliness Scale. Scaling and multiple choice were used in quantitative measurements. Open-ended questions provided deeper insight into participants' perspectives and experiences of loneliness.

Keywords: Loneliness, Social Isolation, Stigma of Loneliness, Social Epidemic, Public Health Crisis

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The Loneliness Epidemic Among US College Students

A few years beyond the COVID-19 pandemic mandatory quarantine, American society, no longer required to social distance, is currently experiencing what national officials claim is a public health crisis (HHS, 2023). In 2019, pre-Covid, the US Surgeon General first declared “Our Epidemic of Loneliness and Social Isolation”. He again declared loneliness a national epidemic in early 2023 with the release of an 82-page health advisory (HHS, 2023). The advisory directs the focus and framework of this research. Backed by extensive multidisciplinary research, it provides an overview encompassing the influence and scope of this major health crisis. Loneliness and social isolation have been linked to a wide array of adverse health and wellness outcomes (CDC, 2023). It is considered more of a threat to individuals’ health than smoking 15 cigarettes a day and can predict a premature death by 29%. Perhaps surprising to many, this prevailing problem is significantly impacting every sector of society, spanning all walks of life. The population of study in this research are the traditional college-aged, 18 – 24 year-old young people, who are among the most disproportionately suffering the effect of loneliness. Focusing on this demographic, the purpose of this study is to identify the current impact and nature of loneliness. A comprehensive mixed-method approach was employed to measure levels of loneliness, awareness of loneliness and the stigma associated with loneliness. Additionally, salient perceptions about loneliness and personal experiences with loneliness were explored via semi-structured interviews.

The definition of loneliness can widely differ, yet it is a construct widely understood as the negative and polarizing experience caused by a deficit in social connection or perceived social isolation (Hughes, 2004). When an individual's interpersonal relational needs are not adequately being met, either due to the quantity or quality of social connections (Perlman &

Peplau, 1981), a negative psychological state manifests and leads to emotions, such as, rejection, sadness, anxiety, anger, purposelessness, unworthiness, and feelings of not belonging. The stigma around loneliness refers to the bias held towards lonely people. It is the perception and attitude that the lonely are weaker and less desirable (Lau et al, 1992). Socially sanctioned labels are attached to “the lonely” in society, which in turn polarizes individuals, exacerbating the impact of loneliness and thus inhibits the likelihood of attempts to resolve it (Baretto et al, 2022, Perlman 1981). Social connection is a spectrum influenced by the quality and quantity of interpersonal relations with others. The level of need or desire for social connection differs between individuals. It is dynamic and takes several forms that predict the experience and perception of belonging and support (HHS, 2023).

Community is in direct contrast to loneliness. Some have suggested, the ambiguity of both the meaning and value of community is a roadblock to its existence. At its core, community is about people and relationships. It’s a coming together to share life experiences, ideas, and feelings. It provides a place to belong, feel cared for, and meet common needs. It empowers us to have individual and collective influence on others and the world (Chavis, 2015).

Background

While the problem has been increasing for decades, it was seriously exasperated by Covid (HHS, 2023). Unfortunately, the social isolation required to survive one health crisis intensified a pre-existent and rapidly worsening one. And yet, it is speculated many Americans are currently unaware to the full extent of the social and personal suffering millions of individuals and the collective society are experiencing. Solution strategies are provided in the advisory, calling for urgent collective action. The federal government is pleading with individuals across all demographics, especially educational institutions, and researchers, to

prioritize efforts towards a solution to the loneliness epidemic (HHS, 2023). To combat the vastly detrimental impacts of loneliness, it is imperative to gain a more comprehensive understanding of the phenomenon. As we continue to learn more about this growing problem, we can start to make changes which may potentially reverse the effects and bring relief to all.

The significance of social-emotional learning (SEL) in higher education, especially among college students at a critical stage of identity development, is increasingly acknowledged within academic discourse. Research and discussions highlight how SEL not only supports students in managing emotions and building healthy social relationships but also plays a pivotal role in their identity development and cultural integration within educational environments. When social connection is lacking, a students' sense of self and struggles with identity result (Gilzene, I., 2022; Mintz. S., 2022).

The idea that social connection is beneficial is not a new concept, but the extent of its value has become increasingly recognized. Maslow's well-known Hierarchy of Needs (Maslow, 1954) ranks belonging as a primary human need after physiological and safety needs. (McLeod, 2007) However, many now argue that belonging is just as important as the needs Maslow prioritized more. Humans will often sacrifice their physical and safety needs if the need to belong is not being met. Further, physical needs and psychological needs are not mutually exclusive. Research on the body-mind connection informs our psychology and physiology are strongly interconnected (Baumeister et. al,1995; HHS, 2023; Littrell, 2008; Xiuping et. Al, 2014). Belonging may be just as vital to health and wellbeing as the air we breathe.

The Evolutionary Theory of Loneliness claims that the experience of loneliness evolved as a somatic stress response to alert us of our need for social connection. The intended function is to benefit health and wellbeing. It is designed to warn us of the dangers of prolonged social

isolation and motivate pro social behavior in response (Cacioppo et. al., 2014). When the need for social connection and support are met, individuals thrive which causes a ripple-effect of benefits to society. This biological stress response is intended to make us social, which resolves our stress and increases health and well-being. We are biologically programmed to reach out for human connection and support when we feel stressed (McGonigal, 2013)

Among the many benefits of social support, it is one of the most vital contributors to resilience especially when a crisis hits or one is facing difficulty. “Strong social support received after a disaster is associated with an increased psychological resilience” (Rodregez et. al., 2013). Social relationships are important “mechanisms that help us cope and benefit our health” (Long et. al, 2022). It is debatably the healthiest and most powerful way of lowering distress and predicting stronger coping outcomes. (Moore et al., 2021)

The full extent of the consequences and changes resulting from Covid are still being realized. However, it has clearly confirmed evolving research on the profound importance of adequate social connection, being paramount it is to individual and societal health and wellbeing. Social connection powerfully impacts individuals' health through three major pathways; biological, psychological, and behavioral, which subsequently influences many levels of societal health (HHS, 2023).

Stigma. The stigma associated with depending on others to meet needs and the shame of lacking social resources is a double-edged sword. The perception of "loneliness as abhorrent, shameful or embarrassing,” means the role of stigma may be a pervasive mediator that compounds the negative effects of loneliness and fuels the “vicious cycle” of social isolation (HHS, 2023). Research indicates that many people view loneliness as being in the control of the individual, which may inform loneliness stigma (DiJulio, 2018). The development of reliable

instruments such as The Stigma of Loneliness Scale (Ko et. al. 2022) incorporates several well-developed scales. UCLA's Loneliness Scale (Russel, 1996; Stanford) is widely accepted as the gold standard of loneliness instruments. It has been revised multiple times over the past few decades. The latest version includes identification of potential response biases. This is particularly valuable in evaluating the role of loneliness stigma and awareness. It also distinguishes between self and others stigma (Barreto et. al., 2022)

Reliability and Validity of Scores on a Measure of Stigma of Loneliness (Ko et. al. (2022) argues for "operationalizing the stigma of loneliness as a construct that merits distinction, in addition to the construct of loneliness itself." Although most Americans self-reported loneliness, self-reported loneliness scores significantly lower than other measures of loneliness. This may indicate the lack of construct awareness or self-awareness, or the prevalence of the stigma associated with loneliness which is especially prominent in America's individualistic culture. (Ko et. al. 2022)

Both loneliness and the stigma associated with loneliness are reported to be most prevalent in college aged adults (Ker et. al., 2021, Baretto et. al., 2022). This impact is perhaps especially harmful to young people whose identity and perceptions of the world are developing as they transition into adulthood (Erikson, 1963, Erikson 1968, Adams et. al., 2006). Community provides us with reference groups that impact our sense of identity and belonging that mitigate loneliness (Chavis, 2015). When a college student has a strong sense of community and belonging, they are more likely to feel secure and confident with a greater ability to thrive and learn.

Awareness. Knowledge can serve as a powerful catalyst to change. It enables individuals to process new understandings and form broader perspectives that can result in adapting behaviors that foster the need to connect in meaningful ways.

It is anticipated that many Americans may be shocked to discover just how powerful the role of social connection, or the lack thereof, is to individual and societal health. Of individuals who report suffering from loneliness frequently or constantly, only 20% consider it a serious problem (DiJulio et. al., 2018). This reveals that a lack of awareness may play a profoundly inhibiting role in combating loneliness. Self-reports of loneliness scores are lower than other loneliness measures (HHS, 2023), suggesting that people may lack awareness of the dangers of loneliness and self-awareness in identifying their loneliness.

It is expected that greater individual and collective awareness will generate appropriate concern and motivate a sense of urgency for a remedy. A greater level of individual and societal ownership that leads to an increase in prosocial behaviors is essential to lower the prevailing isolation and loneliness being experienced. WhileHowever, the concept that knowledge alone is responsible has been criticized since there are multiple other factors that can act as change agents (Zheng, 2022),. the Information Deficit Model theorizes that communicating information predicts changes in attitude that motivate a change in behavior.

Loneliness Epidemic. The US government acknowledges the complexities to the multifaceted phenomenon of loneliness and urges researchers to prioritize efforts towards a more comprehensive understanding of society's current crisis as a top priority. In April of this year, the Surgeon General, Vivek H. Murthy, sounded the alarm issuing an urgent call to action in an advisory titled "Our Epidemic of Loneliness and Isolation."

The Covid-19 crisis undoubtedly inflicted immense damage to society's social infrastructure, but it was not the originating cause of the loneliness pandemic. According to the rapidly declining trends of key indicators for social connection spanning the past several decades, the fabric of society was already fraying (HHS, 2023).

We may have survived a global pandemic, but we have been thrust into another one. We now face an entirely different danger, a sociological virus that is crippling the health and well-being of at least half of the US population, with young people being among those most impacted. Ironically, in an increasingly technological age that digitally connects us more than ever, we are more disconnected than ever before

Amidst the unfolding societal crisis of loneliness and social disconnection, notably accelerated by the COVID-19 pandemic, and in the wake of a technological age paradoxically characterized by growing disconnection there lies a cure. By advancing research such as this, increasing awareness and lowering the stigma associated with loneliness, thereby fostering emotional intelligence, social skill development and implementing a national strategy society has the potential to pave the path toward. Thereby reweaving the social fabric of our communities and forging a more united, compassionate, and prosperous society

Conclusion

The purpose of this study is to explore the impact of America's current Epidemic of Loneliness and Social Isolation on college-aged adults, identifying current awareness, stigma, and prevailing perceptions. While there is an increasingly robust body of literature confirming the nature, impact and prevalence of loneliness, society calls for much more research. Most of the studies, however, were conducted prior to Covid which played a substantial role in worsening the crisis. A strength of this research is its timely relevance to a major society problem, which

particularly impacts the next generation who are expected to have very little awareness of it. The data collected will help inform solution strategies currently being developed across many sectors of society as a national priority (HHS, 2023)

Methods

This study adopted a mixed-method approach, integrating both a quantitative survey and qualitative semi-structured individual interviews to explore the phenomena of loneliness among 22 college-aged adults.

Quantitative Measures

All participants completed an online survey via Qualtrics. Questions incorporated Likert scale measures derived from well-established quantitative instruments validated for their reliability in measuring loneliness, including the Stigma of Loneliness Scale (Ko et al., 2022) and the UCLA Loneliness Scale Version 3 (Russell, 1996). These instruments were chosen for their ability to mitigate response bias by employing both direct self-disclosed measures and indirect measures.

The majority of the 40 questions were informed by these scales. Loneliness scores were measured with questions beginning with “How often” such as, “How often do you feel alone?” Response options for those measures were “Never,” “Rarely,” “Sometimes” and “Always.” Stigma scores were measured by statements such as “If I were lonely I would be embarrassed” with response options of “Strongly disagree,” “Disagree,” “Agree” and “Strongly Agree.” General demographic descriptors were included to gather descriptive statistics such as age, gender, relationship status and marginalized identities. The inclusion of 2 measures identified whether participants were familiar with the research project and whether they were aware of the Epidemic of Loneliness and Social Isolation prior to participation. To ensure response credibility,

scattered questions were strategically placed throughout the interview to confirm the validity of the participants' answers.

Qualitative Measures

Semi-structured individual interviews were conducted on 15 of the 22 participants. A series of open-ended questions served as a critical mechanism for delving into the personal perspectives and experiences of participants, thereby enriching the understanding of the multifaceted and contextual dimensions underlying the quantitative data. This approach provided a holistic understanding of the loneliness phenomenon, allowing for an exploration of various potential personal contributing factors and enabling a nuanced analysis beyond mere statistical data. The average duration of the interviews was 40 minutes. An example of an open-ended question/prompt asked of all participants was “Describe a time when you felt particularly alone. What were the contributing factors or circumstances?”

Ethical Considerations

The study was conducted adhering strictly to ethical guidelines, including obtaining informed consent from all participants, ensuring the confidentiality of their responses, and securing IRB approval before conducting recruitment or data collection. Participants were fully informed about the confidentiality of the interviews and the purpose of the audio recordings prior to their participation.

The consent form detailed the study's purpose, procedures, voluntary nature of participation, confidentiality measures, and participant incentives. For in-person consent, participants signed the consent form, which the researcher recorded a digital copy of, and participants kept the hard copy. For virtual consent, participants were asked to confirm their agreement by clicking the continue button following review of the consent form and gain verbal

consent before starting the interview. A non-signature consent process was justified for virtual participants due to the logistical challenges of collecting physical signatures remotely.

The comfort and privacy of participants were prioritized throughout the data collection process. Interviews were conducted in a confidential setting, either in a private room on campus or via a secure online platform and were audio-recorded to maintain data collection accuracy and accountability.

All data, including audio recordings and transcripts, was stored securely in a password-protected folder on the researcher's personal, password-protected computer, which only the researcher had access to. Identifiable information was removed or anonymized in the analysis to further ensure confidentiality. Each participant's data will be assigned a number, and no personal identifiers were attached to data that was shared with the mentor and other faculty engaged in assisting the analysis process. All communication between researcher and consenting participants and those communicated with regarding potential participation was erased from the researcher's inbox after the research was complete to protect privacy. Associated email addresses from research participants were not stored in any way or connected to any data.

The researcher engaged in trustworthiness and self-reflective procedures, such as journal checking, to ensure the integrity of the research and mitigate potential bias. Any potential conflict of interest, given some participants were classmates of the researcher, was managed by emphasizing the confidentiality and non-judgmental nature of the study, ensuring participation will not affect any personal relationships. This was explicitly stated both verbally and in the informed consent procedure.

Upon completing their participation, participants were provided with current data released by the US Department of Health and Human Services (HHS, 2023) concerning the

loneliness pandemic, along with information about available student support services on campus, such as the counseling center.

Participant Population

Participants were recruited using a combination of convenience and purposeful sampling methods. The research targeted traditional-aged (18-24 years old) and slightly above traditional age undergraduate students at The University of Northern Colorado, a demographic identified as particularly susceptible to the effects of loneliness due to critical stages in identity development and college life transition periods (Arnett, 2000; Lippman et al., 2014).

Data Analysis

The Researcher, with the collaboration of academic faculty and research labs, conducted data analysis to evaluate scores and potential the relationships between loneliness, awareness, and stigma. The quantitative dataset underwent descriptive data analysis, utilizing the online statistical software Qualtrics. The qualitative data underwent systematic and thoughtful thematic analysis. Audio from interviews was transcribed, followed by systematic coding leading to the identification of recurring and salient themes and patterns in the participant's narratives. This draws on the theoretical frameworks of Cacioppo & Cacioppo (2018) and Hughes et al. (2004).

Results

Demographic Descriptors

The study's participants primarily identified as female (17 out of 22), with fewer males (4) and one undisclosed gender identity. Their sexual orientations included heterosexual (11), bisexual (5), homosexual (4), and other/unknown (2). Racially and ethnically, the majority were White or Caucasian (12), with others identifying as Hispanic or Latino/a (5), mixed race (3), Asian or Pacific Islander (2), Black or African American (1), and Middle Eastern (1). Many

participants also identified with minority statuses, such as being first-generation college students (13), part of a racial (8) or sexual minority (7), from low-income backgrounds (5), disabled (3), or single parents (2). The relationship statuses varied, with some participants single (10), casually dating (5), or in committed relationships (4), and relationship satisfaction also varied widely.

Loneliness Scores

The descriptive analysis of loneliness scores (see Appendix A, Table A1) revealed a mean value of 61.05, with a standard deviation of 11.70, indicating a moderate level of variation among the participants' experiences of loneliness. The scores ranged from a minimum of 35 to a maximum of 79, suggesting a wide disparity in feelings of loneliness within the sample. The distribution of loneliness scores shows a right-skewed distribution (see Appendix A, Figure A1). While the majority of participants reported moderate to high levels of loneliness, there's a smaller group experiencing lower levels of loneliness. There is a relatively wide spread of scores, with a concentration of values in the mid-60s. The distribution is slightly left-skewed, indicating there are a few lower outlier scores and a number of participants report higher levels of loneliness.

Loneliness Stigma Scores

Similarly, the investigation into stigma scores (see Appendix B Table B1) yielded a mean value of 59.00, accompanied by a standard deviation of 11.80. There is a comparable level of variation in the stigma experienced by the participants as observed in loneliness scores. Stigma scores ranged from a low of 28 to a high of 81, highlighting a significant range in the experiences of stigma among the study's participants. The 25th percentile for stigma scores was marked at 53.75, closely aligning with the lower quartile of loneliness scores..

In contrast to loneliness scores, stigma scores display a more varied distribution, with a slight left skewness (see Appendix B Figure B1). This suggests that a larger proportion of the participants perceive themselves as experiencing higher levels of stigma, with fewer individuals reporting lower stigma scores. Stigma scores are also slightly more uniform distribution across its range but also indicate a concentration of values around the mid-60s. Similar to the loneliness scores, it is slightly left-skewed with some lower outlier scores and there is a notable concentration of scores around the median, indicating a commonality in stigma experiences among many participants.

Loneliness and Stigma Score Correlation

Loneliness and stigma scores revealed $r = 0.31$, $p = 0.16$, indicating a weak positive relationship between the two variables. As loneliness scores increase, there is a slight tendency for Stigma scores to increase as well, but the relationship is not strong (see Appendix C, Figure C1 and Figure C2). However, if the outliers are removed the correlation bears no statistically significant correlation.

Aware vs Non-aware

14 participants had awareness of the background and significance of this research via researcher's in-class presentations or conversation with researcher months before data collection. Participants indicated no knowledge of the loneliness epidemic nor the prevalence or impact of loneliness outside of this. Aware participants have higher mean scores for both "Loneliness" and "Stigma" compared to Non-Aware Participants. This suggests awareness (as defined in this dataset) might be associated with higher perceived levels of loneliness and stigma. The spread of scores, as indicated by the standard deviation, is somewhat similar for both groups in each

category, though "non-aware" participants have a slightly wider spread in their "Loneliness" and "Stigma" scores

Stigma and Awareness. The Pearson correlation coefficient $r = 0.34$, $p = 0.12$ indicates a mild positive correlation. Individuals with higher awareness levels tend to perceive higher levels of stigma. This suggests increased awareness or sensitivity to social issues may be associated with a heightened perception of stigma.

Loneliness and Awareness. The Pearson correlation coefficient of $r = 0.24$ $p = 0.29$ reveals a slight positive correlation was observed between loneliness and awareness, indicating that those who are more aware of loneliness-related issues may be more likely to score higher loneliness.

Qualitative Interviews

Qualitative interviews conducted with 15 of the 22 college students surveyed on their personal experiences with loneliness have yielded profound insights into the students' perceptions and lived realities. The majority of these participants (13 female, 2 male) belonged to the awareness group, having prior knowledge about the loneliness epidemic and its widespread, multifaceted adverse effects on health and well-being.

COVID-19. Covid was unanimously cited as a critical factor exacerbating loneliness among participants. This period was described as intensely isolating, particularly for those at pivotal transition points in their educational journey. The disruption to normal college life and the hindrance in forming new connections led to a reassessment of college expectations versus reality. The move to online learning and socializing, coupled with restrictions on in-person interactions, significantly amplified feelings of disconnection.

Intersectionality and Marginalized Identities. Intersectionality and marginalized identities emerged as significant themes, highlighting the unique challenges faced by non-cisgender

students and those from racial minority backgrounds in finding authentic and accepting social spaces. 6 first-generation students highlighted the unique challenges and pressures they face, further isolating them. The struggle to navigate identity within the college environment was particularly pronounced for students with mixed heritage or those identifying with minority groups, exacerbating feelings of loneliness and exclusion.

Additionally, the dual pressures of rigorous academic demands and work commitments further limited students' capacity for social engagement. Limits of time, energy and finances were identified as barriers to engaging in desired social activities.

Validation of Feelings. A significant theme that emerged was the sense of validation participants felt upon learning about the loneliness epidemic and most recent research on its impact. This awareness helped them recognize and validate their struggles, understanding that their feelings of loneliness were not isolated incidents but part of a broader, more common experience.

Internalization and Self-Stigma. A profound theme that emerged from the interviews was personal blame and feelings of insufficiency of loneliness experienced, a process where individuals attribute their feelings of isolation to personal deficiencies. One participant stated, "I take it out on myself." This internalization often manifests as a deep-seated belief of "not being enough," leading participants to blame themselves for their disconnected state. Participants articulated a recurring narrative where loneliness was not just an external circumstance but a reflection of their own perceived inadequacies. This sentiment was encapsulated in expressions of unworthiness, self-doubt, and the notion that some intrinsic deficit was at the root of their isolation, admitting sentiments like "the way I see myself is the way others treat me, there must be something wrong with me."

The self-stigma was also attributed to causing a perpetual cycle of self-critique and further isolation. Many shared constantly feeling like they need to change themselves in order to achieve belonging and meaningful acceptance. One participant said, “I’m constantly trying to change myself to make myself fit in and be liked.” The striving to conform to the perceived standard of acceptance was identified as a very defeating process as, regardless of the efforts exerted, they never seemed to be able to achieve the desired outcome.

Societal Stigma and Self-Perpetuation. All participants acknowledged the significant role of stigma surrounding loneliness, noting its polarizing effect and how it contributes to the perpetuation of loneliness by discouraging open discussion and acceptance of these feelings. Individualistic American culture was identified as a contributor to this, as well as a perceived standard of reciprocity. Shame associated with needing others or asking for needed support unless there is an equal need one can offer the other was identified.

Discussing loneliness openly was highlighted as a significant challenge. Participants preferred using terms like “bored,” “stressed,” or “depressed” over admitting to feeling lonely, underscoring the deep-seated stigma and difficulty in acknowledging loneliness even to oneself. Regarding feeling lonely, participants expressed sentiments such as the following, “I try to accept it because I ‘shouldn’t be’ feeling that way.” and “The taboo makes you ‘fake it till you make it’ and prevents any real solution.” The social pressure to “be happy alone” and not admit needing others was a salient contributor to the experiences of social stigma associated with loneliness.

Childhood Experiences on Lifelong Loneliness. Approximately half of the participants shared poignant narratives about their upbringing and early social encounters that have profoundly influenced their ongoing struggles with loneliness. As one participant put it, “all my life I’ve been navigating a world that was not meant for me, where I’ve never felt I truly belong.”

A common theme among the narratives was the emotionally distant or absent parenting styles encountered in their homes. Four participants explicitly linked their feelings of loneliness to growing up with emotionally absent or neglectful parents. They described an environment where emotional expression was not only discouraged but actively shamed, with one participant recounting that showing emotions was viewed as "an outright act of rebellion" within their family. This suppression of emotional expression led to a profound sense of isolation from a young age, impacting their ability to form connections and articulate feelings in later life.

School experiences, particularly related to bullying and social exclusion, were highlighted as pivotal factors that exacerbated feelings of loneliness. Many participants recounted instances of bullying or simply never fitting into established friend groups during their elementary and secondary education. These experiences left indelible marks, setting a precedent for their perceptions of social interactions and belonging in subsequent stages of their lives. The lack of a sense of belonging or acceptance in these formative years contributed to a deeply ingrained sense of loneliness.

Two participants attributed part of their struggle with loneliness to being only children. They shared how the absence of siblings contributed to difficulties in connecting with other children during their elementary school years. The isolation inherent in being an only child, coupled with limited opportunities for early socialization outside the family unit, posed challenges in developing social skills and forming friendships, further entrenching feelings of loneliness.

Disconnect from the College Community. Approximately two-thirds of the respondents reported feeling disconnected from their college community, with several describing feelings of invisibility on campus, exacerbating their loneliness. Many students felt let down by their

institution, perceiving a gap between claims of inclusivity and the actual support and environments provided during their college experience, especially during Covid and its aftermath still being experienced.

Social Anxiety and Introversion. The interviews revealed that self-identified social anxiety and introversion significantly impacted participants' ability to connect socially, leading to further isolation for just over half of the group. Although most agreed a lack of social skills was not a major contributor to loneliness, the introverted students felt the extraverted had a major advantage socially. Conversely, those who identified as extraverts with great people skills expressed confusion and disappointment that although they possess those traits, they are still unable to achieve many meaningful social connections.

Depression & Suicidal Ideation. Participants described dark experiences of depression during their most lonely times. Notably, 4 participants discussed experiencing suicidal thoughts during particularly lonely periods.

Coping Strategies. The primary coping strategies identified involved suppression and distraction, with most participants turning to online platforms, video games, or television to escape their feelings of loneliness. Alarming, one student recounted developing alcoholism during a period of intense loneliness as a means of numbing their pain. Others described throwing themselves into their academics as a way of distracting themselves.

Digital Environments and Loneliness. Participants highlighted how technology advancements leading to an increase in living life through screens exacerbated by Covid-induced shift to online learning and socialization has not only intensified feelings of isolation but also altered the nature of social interactions. Participants expressed concern over the decline in verbal communication skills and the rise in social anxiety, attributing these trends to the

prevalence of digital communication. The constant comparison to curated online personas, the pressure to maintain a certain image on social media, and the paradoxical loneliness of being "connected" but not truly engaged were recurrent themes. Furthermore, a common expression was that digital environments have become a “double-edged sword;” while providing a temporary escape from loneliness, it also reinforces isolation by substituting genuine human connections with superficial interactions.

Desensitization and Resignation. A deep-seated desensitization and resignation towards loneliness was unveiled throughout the interviews. Painting a picture of individuals grappling with persistent feelings of disconnection and isolation. This resignation stems from a history of unsuccessful attempts to establish meaningful relationships, compounded by experiences of rejection that have left many feeling as though they are navigating a world in which they inherently do not fit. A foundational lack of belonging that has permeated their social interactions into adulthood. The absence of early secure attachments has not only impeded their ability to form connections but also fostered a normalization of loneliness as an inevitable aspect of their existence.

A sense of hopelessness was identified causing normalization which evolved into a cycle of resignation and self-isolation, where loneliness is viewed as a condition which cannot be changed. Repeated failed attempts at social connection—whether due to unresponsive peers, incompatible social settings, or personal insecurities—have reinforced a belief in the futility of seeking companionship. Each failure adds to a cumulative sense of hopelessness, further deterring students from engaging in social opportunities. Participants highlighted the profound impact of rejection on their willingness to pursue social connections. Experiences of rejection intensified feelings of loneliness and contributed to a diminished trust in others. A loss of trust,

coupled with the fear of further rejection, has created a significant barrier to social engagement, with many students opting for self-isolation as a protective measure against potential hurt.

Discussion

The quantitative and quantitative results illuminate the multifaceted nature of loneliness and stigma among post-Covid U.S. college students. The diversity within the sample as well as responses provides a comprehensive backdrop for understanding the nuanced experiences of loneliness and stigma.

Implications

Sample. The predominance of female participants in this study aligns with existing literature indicating that women may be more likely to report feelings of loneliness and stigma, potentially due to societal norms and expectations around gender and emotional expression (Cacioppo & Cacioppo, 2018). The diversity in sexual orientation among participants further underscores the importance of considering the intersectionality of loneliness and stigma, as individuals from sexual minority groups often face additional challenges that can exacerbate feelings of isolation (Ko et al., 2022). The distribution of participants across different years in college may speak to how academic pressures and transitions can impact loneliness and stigma.

Loneliness. The loneliness score results provide a valuable insight into the prevalence and variation of loneliness experiences among the sample in the post-COVID era. The large majority of participants scored moderately to highly lonely with a mean loneliness score of 61.05. The standard deviation of 11.70 and range of loneliness scores from 35 to 79 highlight the broad spectrum of loneliness intensity within the sample, reflecting the complex interplay of individual, situational, and societal factors that influence feelings of loneliness. The presence of a few lower outlier scores, indicating lower levels of loneliness, alongside a larger number reporting higher

levels of loneliness, further emphasizes the variability in how students navigate their social environments and perceived loneliness.

The somewhat right-skewed distribution of loneliness scores, with a concentration of values in the mid-60s, suggests that most participants experience moderate to high levels of loneliness. This finding is consistent with existing literature identifying loneliness as a significant issue among college students, exacerbated by the COVID-19 pandemic's disruption to social life and academic routines (Loades et al., 2020). The skewness in the distribution points to the resilience and coping mechanisms which some students may have developed, enabling them to maintain lower levels of loneliness despite the challenges posed by the pandemic and its aftermath. Conversely, the higher concentration of scores around the median and upper quartile underscores the pervasive nature of loneliness among the majority, signaling a critical area for intervention by educational institutions and mental health professionals.

Stigma. With a mean stigma score of 59.00 and a standard deviation of 11.80, the data illustrates a considerable variation in experiences of stigma. This variability of the perception of stigma outlines a social phenomenon, influenced by individual perceptions, societal norms, and the broader cultural context. The range of stigma scores from 28 to 81 indicates a wide spectrum of stigma experiences among the participants. This significant range suggests that while some students feel minimally stigmatized for their loneliness, others perceive a high level of stigma, which could potentially exacerbate feelings of isolation and deter them from seeking support. The slight left skewness in the distribution of stigma scores implies a larger proportion of the study's participants experience higher levels of stigma, a finding that resonates with the narratives explored in the qualitative portion of the research, where participants voiced the challenges of dealing with societal perceptions and the internalization of stigma.

Awareness. With 14 participants having prior awareness due to in-class presentations or conversations with the researcher, the analysis sheds light on how knowledge of loneliness as a widespread issue might influence individuals' self-perception of loneliness and stigma. Aware participants had higher mean scores for both loneliness and stigma compared to their non-aware counterparts. This potentially suggests that awareness of loneliness issues may, paradoxically, intensify feelings of loneliness and perceptions of stigma. Conversely, the phenomenon could be attributed to a heightened consciousness and sensitivity to one's own social experiences and the societal views surrounding loneliness. The slight positive correlation between loneliness and awareness ($r = 0.24$, $p = 0.29$) further supports this, indicating individuals with a greater understanding of loneliness issues tend to report higher levels of loneliness. Similarly, the moderate positive correlation between stigma and awareness ($r = 0.43$, $p = 0.12$) underscores the association between increased awareness and a heightened perception of stigma.

These results suggest increased awareness about loneliness and its impacts do not necessarily mitigate the stigma associated with it. Instead, it may heighten individuals' sensitivity to the societal judgments surrounding loneliness. This emphasizes the double-edged sword of awareness in the context of stigma. It points to the importance of not only raising awareness about the prevalence and effects of loneliness but also addressing the societal attitudes and beliefs which contribute to the stigma surrounding it.

The findings echo the discussion in the body of the research paper, which posits awareness of loneliness as a significant social issue resulting in complex effects. On one hand, awareness can empower individuals by validating their experiences and encouraging them to seek support; on the other hand, it may also lead to increased self-scrutiny and concern over societal judgment, thereby exacerbating feelings of loneliness and perceptions of stigma. This

dual nature of awareness highlights the need for awareness campaigns and educational interventions to be carefully designed to inform without unintentionally reinforcing negative perceptions (Cacioppo & Patrick, 2008).

Research by Masi, Chen, Hawkley, and Cacioppo (2011) demonstrates that awareness of the adverse health effects associated with loneliness can motivate individuals to engage in behaviors that reduce loneliness. However, this awareness needs to be paired with accessible, effective strategies for managing loneliness and its stigma. Increasing public awareness about loneliness and its impact can serve as a catalyst for societal change, prompting both policy-level initiatives and grassroots efforts aimed at fostering community and connection. Hawkley and Cacioppo (2010) suggest societal acknowledgment of loneliness as a public health issue is crucial for mobilizing resources and support systems aimed at reducing loneliness at the community level. Awareness campaigns can help destigmatize loneliness, making it easier for individuals to seek help and support.

Limitations

Small Sample Size. The study employed a small sample of 22 college-aged adults, which limits the statistical significance and generalizability of the findings. The narrow demographic focus on traditional college students from a single institution may not reflect the wider population, potentially skewing the results and their applicability to different or more diverse populations.

Challenges in Qualitatively Assessing Loneliness. The accuracy of self-reported measures of loneliness is questionable, particularly among participants who may not have a clear self-awareness of their own emotional states. This issue is compounded in non-aware

participants who struggle to identify and articulate their feelings of loneliness, leading to potential underreporting or misreporting of loneliness levels.

Influence of Stigma on Responses. The presence of social stigma associated with loneliness may have influenced participants' willingness to express their true feelings, thereby impacting the authenticity of the responses. This stigma varies across different demographics, making it difficult to detect and accurately measure its effect on the study's findings. The internalized and societal biases towards loneliness can lead to altered responses, either through downplaying the issue or reluctance to discuss it openly due to fear of judgment or discrimination.

These limitations suggest that while the study provides valuable insights into the loneliness experienced by college students, the results should be interpreted with caution. Further research with a larger and more diverse sample, improved methods for assessing self-awareness of loneliness, and strategies to mitigate the impact of stigma are recommended to enhance the reliability and applicability of the findings.

Future Direction

Clinical Interventions. Future studies should explore the development and efficacy of clinical interventions tailored to mitigate loneliness, especially those that can be integrated into mental health services. Investigating the impact of therapeutic approaches, such as cognitive-behavioral therapy and social skills training, can provide valuable insights into reducing loneliness levels among college students and the general population.

Educational Institution Interventions. There is a critical need for interventions within educational settings that focus on enhancing social connections and addressing loneliness directly. Future research could evaluate the effectiveness of peer mentoring programs, social

integration initiatives, and curriculum changes that incorporate social-emotional learning to foster a more connected student body.

Social Policy Changes. The findings highlight the necessity for policy changes that prioritize social health and connectivity. Research aimed at assessing the impact of policies designed to enhance community building and social cohesion can guide lawmakers and community planners in creating more inclusive and supportive environments.

Raising Awareness. Further research should aim to bring greater awareness to the prevalence and impact of loneliness as a significant public health issue. Studies which disseminate findings through public health campaigns, educational workshops, and media can play a pivotal role in shifting public perception and understanding of loneliness.

Lowering Stigma. By continuing to highlight the commonality of loneliness experiences across diverse populations, future research can help in reducing the stigma associated with loneliness. This involves promoting narratives that emphasize loneliness as a shared human experience, rather than a personal failing, thus encouraging more individuals to seek help and support.

Cultural Change. Future directions should include investigating how cultural norms and values influence loneliness and developing strategies that promote a more community-oriented mindset. Research into the benefits of collectivist approaches to community and social life could provide a counter-narrative to the prevailing individualistic ethos, promoting the importance of interdependence and communal support.

By embracing an integrated approach which includes clinical, educational, and policy-based strategies, and by fostering a societal shift towards greater communal interconnectivity, we can hope to mitigate the loneliness epidemic and enhance the overall

well-being of individuals. This research, while a critical starting point, highlights the vast scope of work yet to be done in understanding and combating loneliness in the aftermath of the Covid pandemic.

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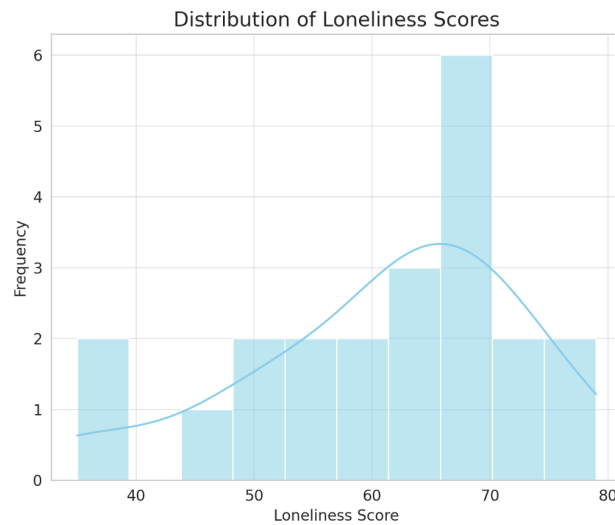
Appendix A

Loneliness Scores

Table A1 Loneliness Scores Descriptive Statistics

Mean	61.05
Standard Deviation	11.70
Range	35-79
25 th Percentile	53.75
Median	63.5
75 th Percentile	68.5

Figure A1 Distribution of Loneliness Scores



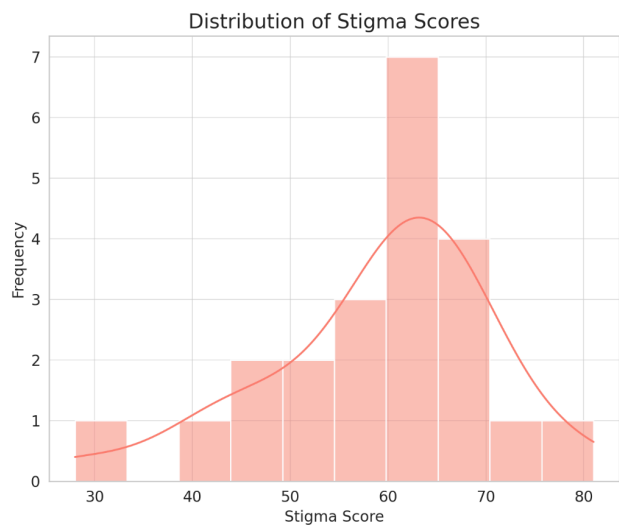
Appendix B

Stigma Scores

Table B1 Loneliness Stigma Scores Descriptive Statistics

Mean	59.00
Standard Deviation	11.80
Range	28-81
25 th Percentile	53.75
Median	63.00
75 th Percentile	65.25

Figure B1 Distribution of Loneliness Stigma Scores



Appendix C

Figure C1 Scatter Plot of Loneliness vs. Stigma Scores

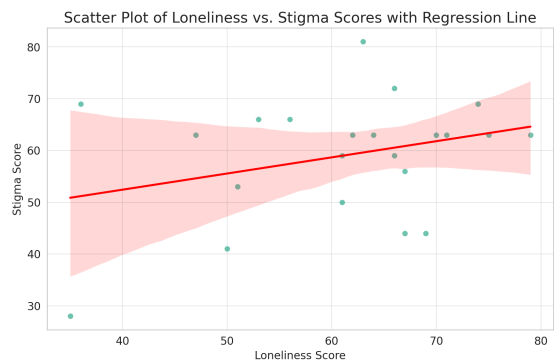


Figure C2 Joint Plot of Loneliness and Stigma Scores

