

**The Impact of Loneliness and Perceived Social Support on Intentions to Drop Out of
College**

A DISSERTATION

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Abstract

In a world of ever-increasing entropy, the COVID-19 global pandemic unmade a façade of contentment that preceded transitioning into work. A season meant to be filled with personal growth, identity formation, and social development was instead defined by isolation, psychological distress, and purposelessness (Wang et al., 2020). This study examined the impact of loneliness and perceived social support on college students' intention to drop out of their school experience. To include an analysis of the COVID-19 global pandemic, the college setting was examined as a moderator to understand what impact virtual or in-person classes have on an individual's intention to drop out. The goal of this study was to provide insight into the postpandemic college student experience and realize the implications of loneliness and social support on intention to dropout. Results were undetermined due to missing power, lack of statistical significance, and absence of normality. Despite these inconclusive findings, trends uncovered showed clustered responding toward the lower end of the dropout scale despite normal distributions among loneliness and perceived social support. Specifically, this trend was magnified when data were split between two classroom settings, with in-person students averaging a response of strongly disagree to statements indicating their intention to drop out. However, this study was limited in its generalizability and results should be interpreted with caution. Finally, a discussion of future directions should aid researchers in identifying alterations they can make to further study this population and these variables.

Keywords: college student, perceived social support, loneliness, college setting, in-person, virtual, hybrid, intention to drop out

Chapter 1: Literature Review

The impact of the COVID-19 global pandemic abruptly halted people's ways of life and crippled societal systems and structures. Opportunities for advancement were put on pause, major life events were altered, and people were forced to slow down. This pandemic forced a fast-paced status quo to slow dramatically, revealing suppressed mental and social consternation. Though the full impact of the COVID-19 global pandemic is still unknown, evidence has shown this disease increased both mental health and socioemotional impairment, and led to educational and developmental difficulties (Lee et al., 2021). This experience led to students leaving college more uncertain than ever and causing students to ask themselves if college is worth it.

College Students of Gen Z

According to Nicola (2023), most students in this generation believe in the importance of college, ranging from very to fairly important. With regard to gender, ethnicity, and political views, Nicola stated people who were female, Black, and a democrat were most likely to view college as an important step for their future. However, with this belief of college importance, students have added pressure from parents, specifically between ages 37 and 54, who are confident higher education will provide their child with better opportunities (Nicola, 2023). This parental pressure, in addition to high costs of attending a college or university, has contributed to declining enrollment, lengthier degree completion, and increased degree abandonment. These factors, alongside an already challenging transitional season of life, have shaped ways Generation Z (Gen Z) college students engage with this experience.

Hefner and Eisenberg (2009) defined "college-age" as a transitional phase of emerging adulthood strongly influenced by social support, mental health status, and their interrelationships. Dennington (2021) published an article helping to differentiate unique challenges facing Gen Z.

In his article, Dennington highlighted the impact of revolution of technology, access to information, focus of diversity, and openness about mental health. Outside of these categories, the author identified several societal shifts, including increased occurrences of school shootings, legalization of gay marriage, shutdowns related to the COVID-19 global pandemic, the Great Recession, and protesting police brutality, which increased stress felt by Gen Z students (Dennington, 2021). In conclusion, Dennington stated it is imperative to consider these elements when attempting to support Gen Z students as they transition into college.

Well before Gen Z, mental health related issues have impacted college students on campuses all over the United States (Kraft, 2011). In fact, according to Pedrelli et al. (2014), onset of mental dysfunction is common in this life stage due to changes of home life to university living, heightened academic rigor, workplace responsibilities, social living, and personal autonomy. For Gen Z students, influx of cultural issues in addition to the opportunity for mental health issues to develop during this transition has set up colleges and universities to step in to support them (Dennington, 2021). Though the history of mental health services in universities began by being pathologically focused, embrace of talk therapy and education on prevention has allowed for schools to embrace a vast array of mental health related issues (Kraft, 2011).

College students attend various universities across the nation to attempt to become their own person. Chickering and Reisser (1993) described seven vectors of student development that shape a student's experience at university. They proposed that developing competence, managing emotions, moving through autonomy to interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity were tasks students undergo to develop their individual identity (Chickering & Reisser, 1993). These tasks

shape different domains of student growth and development during these formative years.

Though no set curriculum or specific plan for development exists addressing each of these tasks, it is important for colleges and universities to understand their students' identities develop beyond classroom settings (Chickering & Reisser, 1993).

Pedrelli et al. (2014) highlighted how the life of a college student can be stressful. Beyond proximal pressures of their school environment, young adults are often faced with pressures from their parents, relationships from back home, or boundary experiences such as experience another person's death for the first time. Balancing these external worlds, making sense of new encounters, and addressing their rapidly changing internal self can become a disorienting experience (Pedrelli et al., 2014). The student's previous sense of identity can quickly become malleable due to environmental factors at their university. Fleming et al. (2005) identified factors such as peer interactions, classroom environment, physical environment, and a university's ability to understand and support their first-year students as being critical to healthy identity formation during their transition to college.

In a season where formation and development abound, Gen Z students face complexities related to trying to grow while navigating nuanced social issues (Dennington, 2022), mental health difficulties (Kraft, 2011), transitional challenges (Pedrelli et al., 2014), and pressure from parents (Nicola, 2023). Despite all of this, students faced additional adversity throughout the COVID-19 global pandemic that was felt across the world. Politically, economically, and socially, countries across the planet experienced disruption because of mandatory lockdowns and global shutdown (Xiong et al., 2020). These mandates and regulations, though meant to preserve human life, unintentionally caused individual people to experience significant social pain and mental distress.

Impact of the COVID-19 Global Pandemic

The COVID-19 global pandemic disrupted life across the globe. Zviedrite et al. (2024) found from July 2020 to June 2021, 16,890 schools closed across the United States. These closures resulted in over 11 million students missing over 159 million in-person school days (Zviedrite et al., 2024). Additionally, Cai et al. (2022) examined the impact of college closures on parents. Researchers found even though parents were impressed with how universities handled shutting down, the COVID-19 global pandemic negatively impacted their student's experience at their institution. Specifically, students had to make changes that included postponing entrance into college, adjusting graduation timelines, and shifting career trajectories (Cai et al., 2022). Additionally, with regard to parents, Cai et al. highlighted the impact of job loss on families that exacerbated financial stress due to reduced income.

In a 2020 study, Lei et al. examined groups from southwestern China who had been either affected or unaffected by quarantine during the COVID-19 global pandemic. Affected individuals were defined as anyone who experienced being quarantined or had someone close to them experience being quarantined. They found people in this group had a significantly higher prevalence of both anxiety and depression symptoms than people in the unaffected group. This research highlighted ways enforced isolation and inhibiting social relations can impact mental health. Even outside of this region of the world, quarantining was commonplace in managing this disease throughout the COVID-19 global pandemic.

Merriam-Webster (n.d.) defined quarantine as “a state of enforced isolation” and alternatively, “to isolate from normal relations or communication.” In a systematic review, Chu et al. (2020) identified seven social consequences of quarantine. These included communication inequalities, food insecurity, economic challenges, gender inequity and violence, diminished

access to health care, psychological distress, and disruptive education (Chu et al., 2020).

Regrading psychological distress, the researchers discussed how, during and after quarantine, people experienced more emotional and socially related distress, including anxiety, boredom, dissatisfaction with life, fear of getting sick, isolation, loneliness, and mistrust. With regard to disruptive education, Chu et al. described how needing to quarantine necessitated alternative means to provide students with access to education, which meant families had to adjust work schedules or update technology to provide access to their child.

Wang et al. (2020) examined initial impacts of the COVID-19 global pandemic in early 2020 asking specifically about people's experience with symptoms of this disease, their contact with and preventative measures against the disease, and their concerns about what they were experiencing. To measure psychological distress, Wang et al. used various measures that looked at impact, anxiety, depression, and stress. They found 53.8% of participants rated the psychological impact of the COVID-19 global pandemic as moderate to severe, 28.8% indicated experiencing symptoms of moderate to severe anxiety, 16.5% endorsed elevated depression symptoms, and 8.1% endorsed elevated stress symptoms. Regarding quality of life for participants and their families, findings indicated 84.7% of participants spent 20 or more hours at home each day and 75.2% were worried family members would get sick with the COVID-19 global pandemic. In addition, Wang et al. noted participants who indicated student status were at even greater risk to experience psychological distress, and increased levels of anxiety, depression and stress.

In another study, González-Sanguino et al. (2020) examined initial impacts of the COVID-19 global pandemic on people in Spain. The researchers examined impact on symptoms of depression, anxiety, and posttraumatic distress. Their results indicated criteria were met for a

depressive disorder in 18.7% of participants, for anxiety in 21.6% of participants, and for moderate to severe posttraumatic distress in 15.8% of participants. Additionally, González-Sanguino et al. examined age as a protective factor and found people from ages 18–39 were more at risk for experiencing these symptoms of mental distress than older individuals. Finally, having a proximal experience with the COVID-19 global pandemic personally or among family increased likelihood of mental health symptoms. These findings confirmed short-term impacts of the COVID-19 global pandemic on increased mental health distress, differences of that impact on age specific groups, and how being proximate to a diagnosis can increase symptoms of distress.

In a meta-analysis, Xiong et al. (2020) examined how the COVID-19 global pandemic impacted mental health in the general population from countries including China, Spain, Italy, Iran, USA, Turkey, Nepal, and Denmark. These researchers confirmed some of the findings described previously by identifying symptoms precipitated during the COVID-19 global pandemic, including anxiety, depression, posttraumatic stress disorder, general psychological distress, and stress that, at times, met the threshold for clinical diagnoses. Of note, one risk factor researchers identified was student status (Xiong et al., 2020).

The COVID-19 global pandemic impacted families and students across the world. Whether it was in disruption due to academic opportunities (Cai et al., 2022; Chu et al., 2020; Zviedrite et al., 2024), financial difficulties (Cai et al., 2022; Chu et al., 2020), an increase in psychological distress due to quarantine (Chu et al., 2020; Lei et al., 2020), familial relationships (González-Sanguino et al., 2020), or student status (Wang et al., 2020; Xiong et al., 2020), the COVID-19 global pandemic shifted how students' experience their transition to college. These

factors offer insight into laying a new foundation for student care and development as colleges and universities grapple with addressing these factors in years to come.

College Students During the COVID-19 Global Pandemic

As access to quality education continues to expand internationally, there has been a shift in understanding that education is an essential part of individual development (Azevedo et al., 2021). Azevedo et al. (2021) highlighted how differences in quality educational opportunities should be addressed to close the gap between educational outcomes, which include income and living condition. Azevedo et al. continued by emphasizing, despite progress being made, the COVID-19 global pandemic exacerbated this problem with students falling further behind in low- and middle-income countries. These disparities in education access and outcome led to future difficulty with adult skills, such as job training and continuing education (Azevedo et al., 2021).

Learning institutions throughout the world, at various levels of education, faced abrupt closures and mandated distancing (Lee et al., 2021). These shifts in access to education stifled normal development in university students, according to Hagedorn et al. (2022), who setup a mixed-methods study to examine students' frustration with their school experience during the COVID-19 global pandemic. Researchers found students pursuing higher education were faced with challenges in both academic and psychosocial development (Hagedorn et al., 2022). Seven themes emerged from these challenges, including frustrations students had with technology, classwork, research, family, social life, emotional well-being, behavioral indicators, and financial health (Hagedorn et al., 2022). In their quantitative analysis, Hagedorn et al. found students reported lower satisfaction in domains related to learning, health, and financial well-being. Specifically, there was a 65.8% increase in students reporting an average to low quality

experiences with learning, a 15.7% increase in students reporting worse health outcomes, and an increase in student job loss due to the COVID-19 global pandemic, which led to 2.6% of students discontinuing their education to make money (Hagedorn et al., 2022).

Not only were students frustrated with these disruptions, when it came time to transition back to school, challenges also continued. Worsley et al. (2021) examined the period when students transition into a university setting. The objectives of this study were to identify ways to bridge gaps that exist in care so schools can better support student vitality. Overall, four themes emerged from this qualitative study: friendships; the preparatory role of schools and colleges, university staff, and services; feeling supported/unsupported; and tackling multiple challenges. These themes brought to light the importance of supportive relationships amid increasing rigor of university settings. In addition, researchers discussed how, in this transition, students lose their familiar support networks and find themselves lonely as they begin to explore their new environment (Worsley et al., 2021). In general, students initially concealed these difficulties until they found supportive relationships with fellow students, staff, and faculty who promoted belonging and community. Worsley et al. emphasized the importance of early intervention during this transition period as it empowered students to resist loneliness and courageously engage with their new community. Students who found themselves without these supportive relationships felt unsupported, lonely, and unimportant.

Specifically related to students and the COVID-19 global pandemic, Lee et al. (2021) examined how the pandemic impacted mental health in college students. Researchers gathered data on physical, emotional, and social aspects of college living and examined how they were impacted by the COVID-19 global pandemic when schools shut down. Researchers found most students reported being more anxious and depressed, and felt lonelier. Additionally, students

reported familial stress as 20% of students reported worrying about loved ones impacted their mental health, 31.8% stated taking care of family disrupted their plans, and 45.7% reported having strained relationships with their family, which made finishing school more difficult. Though some students reported increased physical activity to manage their mental distress, many students struggled to find healthy coping strategies. Lee et al. concluded by mandating separation, limiting social gatherings, and disrupting traditional college experiences, students' lives were unalterably disrupted. Separation and isolation defined the sociorelational lives of students during a period when they would normally have had an opportunity to flourish. Beyond expanding resources and examining student's needs (Lee et al., 2021), postpandemic college experiences should place a heavy emphasis on social rediscovery and skill building.

As students reset in a world after the COVID-19 global pandemic, cultivating healthy social relationships is more important than ever to mitigate feelings of loneliness and promote social support. Moeller and Seehuus (2019) studied how loneliness mediates the relationship between social skills and anxiety/depression. Their findings demonstrated a student's social expression and social control was negatively correlated with loneliness, thereby lessening experiences of depression and anxiety. These variables can be best understood as a person's ability to initiate and engage in conversations with others (i.e., expressivity) and adjust their social presentation across various social settings (i.e., control). Providing opportunities for students to practice these skills could allow for people to rebuild social competence and reduce societal loneliness.

Most institutions of higher learning provide opportunities to cultivate social relationships and support services to address underlying mental health issues. However, many universities are still trying to find balance with creating developmental social experiences while addressing

students' tendencies to isolate (Kaple, 2024), stick to their screen time (Hagedorn et al., 2022), and resist social engagement (Worsley et al., 2021). Should these issues with isolation and loneliness persist, students from campuses may sink deeper into loneliness, faltered social support, and decide college is not right for them (Worsley et al., 2021).

Loneliness

In recent years, isolation experiences were a necessary part of societal experience. During the shutdown as a result of the COVID-19 global pandemic, people were told by their governing bodies to isolate to prevent spreading a communicable disease. Though this isolation was for safety, the impact of this collective isolation shifted people away from their usual opportunities for connection. Beyond the COVID-19 global pandemic, other forms of isolation are self-imposed or due to willful disengagement with others that may lead to intimate or social isolation.

In 1975, sociologist and professor Weiss once defined loneliness in his book, *Loneliness: The Experience of Emotional and Social Isolation*, as perceived isolation is a gnawing, chronic disease that has no redeeming features. He described observable characteristics such as a strong sense of social pain, emptiness, isolation, sadness for lack of confidants, unimportance, and worthlessness (Weiss, 1975). In this light, loneliness is understood as a lens which shapes one's internal narrative of the world around them. More recently, Segrin and Cooper (2023) defined loneliness as "a discrepancy between a person's desired and achieved levels and quality of social contact. People experience loneliness when the amount of social contact they have available is lower than what they desire" (p. 593). This definition focused more on social components of loneliness that reflect desire, expectation, and lack of access to quality connections. The integration of these definitions provided a foundation for an operational definition of this research. Loneliness is manifest through the absence of quality social relationships, and when in

a prolonged state, will negatively impact an individual's social self-efficacy (Segrin & Cooper, 2023; Weiss, 1975).

Since that time, loneliness has been developed as a popular concept. Hawkley et al. (2005) began by saying, "The survival of the human species depends on social abilities to communicate with, understand, and work with other individuals" (p. 798). The thesis for their work was founded on the idea that humans are a social species that crave connection with one another. In their research, Hawkley et al. expanded upon loneliness by studying it through the lens of isolation, relational connectedness, and collective connectedness. To examine these variables, they used a factor analysis using a popular loneliness scale with both young adult (Study 1) and older adults (Study 2). Despite design differences between these studies, their findings concluded loneliness is impacted by one's belief about their social worth, closeness within an individual's relationships, and how many groups to which a person belongs (Hawkley et al., 2005). Their research highlighted the importance of social relationships and social self-efficacy in understanding of loneliness. To put it simply, they found when a person feels confident in their social ability, maintains deep relationships with others, and belongs to multiple social groups, they are less likely to experience loneliness. Whereas those who are less confident and disconnected are likely to experience more feelings of loneliness.

In a 2012 meta-analysis, Cacioppo and Cacioppo conceptualized loneliness as three types of isolation: intimate isolation, social isolation, and/or collective isolation. In their article, researchers described how different genetic signals, related to social interactions, can make these isolation experiences more salient (Cacioppo & Cacioppo, 2012). In regard to intimate isolation, the researchers noted how a person's genetic sensitivity to loneliness can push them toward familiarity or pulls people into new territories. With social isolation, they examined how people's

experience with loneliness is shaped by their genetic sensitivity to relating with others empathetically and compassionately. Finally, researchers identified collective isolation as being connected to the external world through social engagement, which is commonly experienced through a family unit (Cacioppo & Cacioppo, 2012).

Furthermore, Cacioppo and Cacioppo (2012) described loneliness as an internal feeling and experience, whereas isolation is external and related more to an action of disengaging with others. They discussed specific genetic components that highlight loneliness and isolation as two different constructs that are observed best by identifying isolation and observing feelings of loneliness as a byproduct (Cacioppo & Cacioppo, 2012). No matter what reasons a person has for isolation, these states of separation eventually lead to feelings of loneliness. Considering this close relationship between isolation and loneliness, it is important to differentiate these variables because, for the purposes of this research, focus was on the internal feeling of loneliness rather than actions of isolation.

Specific to college settings, loneliness is all too common. Though college is often a time where people make new friends, have new experiences, and begin to experience life outside of home for the first time, it can still be quite a lonely experience for students. In a comprehensive resource created to fight student loneliness, Kaple (2024) reported, of the first-year students surveyed, 67% of females and 54% of males experienced loneliness at school. As previously discussed, loneliness is not just a feeling; if prolonged, it can shape how students experience their world. In turn, Kaple found this can negatively impact mental health in students leading to an increase in suicidal ideation, nonsuicidal self-injury, and attempts on one's life. He discussed different signs of loneliness, such as poor sleep quality, overreacting, lack of connection, feeling misunderstood, social fatigue, self-doubt, and abuse of substances (Kaple, 2024). Transitioning

to college is often a challenging endeavor, but should a student remain unattached, isolated, and lacking connection, this difficult moment will move beyond a strenuous adjustment and into a full-blown experience with loneliness.

In addition, Kaple's (2024) noted differences between loneliness and solitude. Kaple stated experiencing loneliness can cause a person to feel sad, anxious, or depressed due to disengagement with others, versus solitude, which can provide intentional space for thinking, relaxing, and preparing for social interactions. Additionally, he found outcomes for each experience were vastly different whereas feeling lonely often caused people to feel worse about themselves and experiencing, solitude allowed a person to feel renewed (Kaple, 2024). However, Lee et al. (2021) found students were lonelier than ever when attending their colleges and universities. Reasons for this phenomenon of loneliness are complex and multifaceted, but factors such as student's social ability (Hawkley et al., 2005), depth of relationships (Cacioppo & Cacioppo, 2012; Diehl et al., 2018), level of physical activity, and diet (Diehl et al., 2018), can be targeted to increase student connectedness.

Perceived Social Support

In examining the relationship between loneliness and social support, Zhang and Dong (2022) found those who felt more socially supported experienced a reduction in loneliness. Their findings highlighted the role friends, family, and supportive partners have in developing more connected lives which improve an individual's mental well-being (Zhang & Dong, 2022).

Bowlby (1969) was the founder of attachment theory. In his book, *Attachment and Loss*, he formalized his theory and stated attachment was the way humans were, from birth, programmed biologically to attach with other human beings. At its conception, he focused much of his work on the relationship between a mother and her child and how this relationship was

necessary due to the vulnerable state children are in at the beginning of their lives (Bowlby, 1969). Before long, other theorists were interpreting and publishing on attachment and expanded its foundation into other parts of psychological study.

Schaffer and Emmerson (1964) described different stages of attachment that resulted from their longitudinal study of infants and their mothers for the first 18 months of life. They described four stages progressing from (a) preattachment, (b) indiscriminate attachment, (c) discriminate attachment, and (d) multiple attachments. The researchers identified quality and consistency of care as important for the development of healthy attachment (Schaffer & Emmerson, 1964). This research continued to develop through Ainsworth's (1979) study that identified different attachment styles formed in these early years of life. From this experiment, she noticed children had three unique attachment styles: (a) secure, (b) ambivalent-insecure, and (c) avoidant-insecure (Ainsworth, 1979). Beyond Ainsworth's three styles, Main and Solomon (1990) identified a fourth attachment style that described an infant's disorganized responding to a caregiver. Specifically, Main and Solomon believed an infant who experienced abuse, violence, or other trauma may relate to their care providers with a sense of alarm. In cases where this is true, their alarm system usually signals the infant to seek their parent is set off by the care provider creating confusion within the infant (Main & Solomon, 1990).

Understanding the foundations for attachment form in the first year of a person's life provides context to an individual's ability to make and develop relationships in the future. This finding is specifically supported by Ainsworth (1979) who concluded the way infants attached, at the time of her study, had implications for their ability to form future attachments, and the way the child interacted with their environment. Moreover, Phillips (2007) examined how attachment relationships impact a student's experience with social anxiety during their transition to college.

She found students who had secure attachment style were less anxious with interactions than students with nonsecure attachment styles (Phillips, 2007). This confirmed findings from previous studies that showed securely attached students had better social competence and adjusted easier when faced with separation from supportive relationships.

Sarason et al. (1994) identified specific facets of social support that included personality characteristics, preexisting relationship, and context. They found these variables worked together to define expectations for what support might look like and to help to identify differences in people's ability to provide quality support (Sarason et al., 1994). Additionally, their framing provided individuals with autonomy to decide what healthy support looks like for them, while not defining what it should look like for all people. Defining social support in this way considers diverse responses to care, different contexts of relationships, and their longevity, as well as acknowledges the complexity of personality that all goes together to shape the way an individual defines their relationships with others.

However, social support should not be confused with social network. Drageset (2021) teased apart these two constructs in defining social support as a subjective experience that offers an individual emotional, informational, esteem, and tangible support; whereas social network refers to the structure and number of social connections an individual has. With these various aspects of social support, Drageset highlighted the qualities contributing to a person's development of healthy personal relationships. To measure social support, Drageset identified perceived social support as favorably impacting mental health. As he defined it, perceived social support is a person's subjective belief about how their social supports will help in a time of need which can act like a buffer in times of high stress (Drageset, 2021).

When transitioning to college, students begin their journey from a variety of backgrounds. Moving from a place of security and understanding into an environment of uncertainty and new beginnings is the rite of passage many students take as they enter their college years. Adapting to this space on all fronts is challenging, as previously discussed, but specifically, this is a new beginning for one's social support. Turkpour and Medinezhad (2016) sought to understand the impact of social support on a student's ability to adapt to their university setting. In the end, they found a student's socialization, or engagement with social support, predicted their ability to adapt to the college setting.

Expanding on these findings, Hefner and Eisenburg (2009) examined the relationship between social support and mental health issues in college students. To define social support, researchers looked at both structural and functional social support. Structural social support was defined as amount of estimated contact with family and friends whereas functional social support was defined as the individual's perception of their social supports (Hefner & Eisenburg, 2009). They found despite the frequency of contact, people who perceived higher quality social support were less likely to experience depression, anxiety, suicidal ideation, and eating disorders. Considering this finding, Hefner and Eisenburg suggested instead of merely identifying the frequency of interactions a student has, healthy social support should be comprised of the student's perception of quality social interactions. These findings highlighted the importance of meaningful experiences with social support. Instead of just showing up to social gatherings, students should be encouraged to seek quality interactions and relationships with peers on campus. Beyond that, colleges should not simply create opportunities for students to connect but encourage students to deepen their relationships and find meaningful connections.

Student support services are services provided to the student body to facilitate success with achieving academic goals; pursuing professional development; and improving well-being, writing skills, study habits, and a multicultural perspective (Johnson et al., 2022). In their study, Johnson et al. (2022) found use of student support services impacted students' overall student success. The role of the service providers and their interactions with students was notable. Johnson et al. found support college students received from staff members and faculty at the institution was crucial for navigating these support services. Additionally, as college became more accessible to students from different backgrounds, support services need to integrate a diverse perspective (Azevedo et al., 2021; Carlton, 2022).

However, with the increasing development of technology and the rise of artificial intelligence, there is an increased likelihood schools may soon begin to outsource student support services to these tools. Specifically, this phenomenon was highlighted by Martinez-Requejo et al. (2024) in their study that discussed the potential of support being outsourced to chatbot technologies for a virtual campus. In introducing this technology to their faculty and staff, they found it was quite helpful for their students, faculty, and staff. Particularly, the researchers were given primarily positive feedback highlighting usability, efficacy, and helpfulness as key components of the success of the chatbot (Martinez-Requejo et al., 2024). Though this research highlighted some interesting developments in support for students, this technological shift may have ramifications on student's ability to connect with staff and faculty at their institutions.

Students can gain important social relationships from accessing student support services by becoming more familiar with faculty and staff, earning social courage to make new friends, or engaging with study groups that carry over into social connections. Though these constructs are tied together, it is not the services in themselves that are considered social support, it is the

people who provide the services. However, with this shift toward increased technological interventions, whether it be chatbots or fully online classes, students may not have the same opportunities for relationship formation in the context of their university setting.

Therefore, students should be able to make an informed decision when it comes to selecting a college or university that provides them with a clear understanding of how support is built into their college setting. For this research, it should be assumed that perceived social support is not the same as student support services. Instead, it is the person-to-person support coming from engagement with student support services and any functional support (Hefner & Eienberg, 2009) given by family or friends. How these preceding variables interact may have a significant impact upon attrition and a student's desire to remain in college.

Intention to Drop Out of College

Hjorth et al. (2016) studied the impact of mental health on dropout rates across different education levels and found students were more likely to drop out if they experienced difficulties with their mental health. This risk was particularly emphasized in students pursuing higher education (Hjorth et al., 2016). The implications of this research showed students with mental health related issues were more likely to have difficulty in attaining higher education, thereby decreasing the vocational benefits they receive from this pursuit. In conjunction with Hefner and Eisenberg's (2009) research on the impact of social support on the mental well-being of college students, one can begin to see how these variables' interplay might impact student's desire to remain at their university.

According to Hanson (2024), most students who drop out of college have done so within the first year. In the 2021–2022 school year alone, he found 23.3% of all first-time, full-time freshman dropped out of college (Hanson, 2024). Across the nation, 12.6% of the adult

population in the United States were out of school and had some college with no credentials (Hanson, 2024). Regarding current students, Hanson (2024) stated there were two adults with no credentials for every one undergraduate. Additionally, they found 24% of current students seriously considered leaving school or being dismissed, which jumped to 41% when applied to first-generation college students (Hanson, 2024). Furthermore, Bouchrika (2024) indicated if students were given 6 years to complete their degree, only 14.7% of people enrolled in bachelor's degrees and 37.5% enrolled in associate's degrees would finish. More students than ever were not completing their degrees, costing taxpayers close to \$31 billion dollars due to defaulting loans (Bouchrika, 2024). This harsh reality when put beside the aftermath of the COVID-19 global pandemic, tells a story of uncertainty and insecurity.

Though college dropout rates have been studied for many decades, researchers found teasing apart the many variables contributing to this decision can be difficult (Palomino & Ortega, 2023). In 1975, Tinto attributed dropping out to the personal failure of a student to achieve their intended academic goals. For Tinto (1975), dropping out was rooted in performance and focused primarily on academics. Although these factors laid a strong foundation for this construct, they referred minimally to the role of relationships in impacting a student's desire to dropout.

Bean (1985) defined dropout syndrome as an individual student's intention to discontinue their schooling. Specifically, he stated dropping out was defined as when an individual who attended a university in the spring of a particular year no longer attended in the fall (Bean, 1985). With this definition as his foundation, Bean examined variables including academic, psychosocial, and environmental factors. Though some definitions of drop out intention included

the reported changing of a major with the preemptive intent to leave the college or university (Palomino & Ortega, 2023), only the latter was used in the current study.

Building on this perspective, Bernando et al. (2022) recently examined student expectations of their college experience as it related to their ability to use self-regulated learning techniques and how that impacted their engagement. They defined engagement as internalized student motivation that develops from the needs of competence, autonomy, and relationships being met through the learning environment. Among several findings, the researchers found increased levels of engagement reduced the rates of dropping out (Bernando et al., 2022). This research highlighted students who were not engaged in their academic experience were more likely to decide college was not for them. Dost and Smith (2023) found, outside of academics, students found belonging and engagement through clubs, Greek life, residential communities, honor societies, and other programs within their university.

Alternatively, Palomino and Ortega (2023), unlike many of their contemporaries who highlighted academic factors, illuminated the complex features of a dropout decision. Specifically, Palomino and Ortega highlighted personal, socioeconomic, family, institutional, academic performance, behavioral, and personality variables as pertinent factors for students to consider as they plan to terminate their college experience. For this research, social factors such as familial support, relationships with institutional stakeholders, and social connection were of particular importance. Palomino and Ortega spoke to the protective impact of learning community, collaborative academic environments, supportive faculty–student relationships, social connectedness, and familial proximity on student dropout rates. Additionally, the researchers highlighted the need for deepening research on the lead up to a dropout decision. In doing so, they believed colleges and universities could identify students considering dropping

out before they decided to leave, and they could potentially offer support and alternatives that are less consequential (Palomino & Ortega, 2023).

With regard to helping with early identification, researchers like Bäumke et al. (2021) conceptualized the decision to drop out as one made in progressive phases. These included (a) the perception of unsuitability, (b) thoughts of making a change, (c) deliberation, (d) information searching, and (e) making the final decision. Throughout these stages, researchers explored different parts of decision making a student faces when they realize their current pursuits are not fulfilling. In Phase 1, the nonfit phase, Bäumke et al. defined this time as a student's perception of incongruence between the study environment or subject matter and the student's own preferences thereby recognizing a need for change. In the second phase, thoughts of quitting/changing, the researchers identified the emergence of widespread, unsystematic thoughts as the beginning of this phase. These thoughts centered around the student's discomfort with their situation and help them to examine the feasibility of a change and different desired outcomes (Bäumke et al., 2021). This phase followed by the middle phase of deliberation, which is defined by examining alternatives through the lens of the individual's expectations and values. The researchers identified the fourth phase as information search, which included pursuit of information related to activities a student might do outside of their university setting or in another field of study. Bäumke et al. (2021) concluded their phases with what they called the final decision. In this phase, students make their decision to change, which is accompanied by action and relief.

Previous research on this phenomenon has focused on the academic factors shaping a student's decision to leave their university or make a change. However, in 1985, Bean found social life had a significant impact on institutional fit across each college year. This meant student-to-student relationships increased positive attitudes toward the institution better than

faculty-to-student relationships (Bean, 1985). This research highlighted the importance of peer social relationships in prompting retention of students. With these findings, some progress has been made to integrate psychosocial factors in dropout intention research; yet, more should be done.

Considering these findings, especially in a world after the COVID-19 global pandemic, further research is needed to examine how these social variables impact student's intention to dropout. In doing so, the aim of this study was to provide further understanding of how these social obstacles impact students' university pursuits, and how much these challenges impact a student's mental well-being. Additionally, the researcher aimed to establish a need for earlier identification of intention to drop out to support these students with alternatives as they deliberate their decision. For the purposes of this study, student intention to dropout was examined through the lens of perceived social support and feelings of loneliness. Specifically, how these social variables predicted an individual student's decision to drop out of college.

The Purpose and Aims of This Study

After the COVID-19 global pandemic, students faced significant barriers to earning a degree. In addition, schools and universities were picking up pieces following lockdown and figuring out how to engage students of today. A report by Kwakye et al. (2021) highlighted enrollment at colleges and universities had been declining year over year even before the COVID-19 global pandemic. Specifically, they discussed how rising costs, job placement concerns, financial stress, and perceived lower return on investment were key factors over this period (Kwakye, 2021). However, likely due the pandemic, fall enrollment from Fall 2019 to Fall 2020 declined significantly from the previous school year (Kwakye, 2021). Students were having difficulty adjusting to a traditional college experience and were instead choosing

alternative options for their postsecondary experiences (Weissman, 2022). Additionally, with the added layer of the COVID-19 global pandemic, students were navigating this college decision amid personal mental health issues, potential difficulty of being away from home, or fears about making and maintaining friends.

The purpose of this study was to understand how, in a world scarred by a global disease, a student's social relationships impact their decision making related to continuing with their college pursuits. Specifically, this was done by examining how feelings of loneliness and perceptions of social support would predict a student's intention to drop out of college. Additionally, by examining classroom setting, this study aimed to determine if shifting toward virtual and hybrid learning moderates the effect these variables have on intention to dropout. This research is important because it (a) contributed to college dropout research by examining social-relational factors, (b) furthered understanding of how the COVID-19 global pandemic impacted college students' experiences, and (c) broadened bodies of research examining mental repercussions of social disintegration.

To shape its direction, this researcher posed two research questions:

- (1) How did perceived social support and loneliness impact a student's decision to drop out of college?
- (2) How is this effect moderated by classroom settings found in a post-COVID world?

Though many factors impact a student's intention to drop out, these guiding questions were foundational to setting a focus of this research.

Chapter 2: Method

To study these variables, several regression analyses were used. To accommodate a categorical moderator, hierarchical multiple regression analyses were performed with a dummy coded moderator variable. In addition, the following hypotheses were used to guide this study:

1. High assessment scores in a student's perceived social support will predict higher scores in the information search and final decision phases of intention to dropout.
2. High loneliness assessment scores student loneliness will predict higher scores in the information search and final decision phases of intention to dropout.
3. High assessment scores in a student's perceived social support along with high loneliness assessment scores will work together to predict higher scores in the information search and final decision phases of intention to dropout.
4. High assessment scores in a student's perceived social support along with higher loneliness together will be moderated by which classroom setting they use to predict higher scores in the information search and final decision phases of intention to dropout.
5. High assessment scores in a student's perceived social support will be moderated by which classroom setting they use to predict higher scores in the information search and final decision phases of intention to dropout.
6. High loneliness assessment scores will be moderated by which classroom setting they use to predict higher scores in the information search and final decision phases of intention to dropout.

Participants

Participants of this study were defined as traditional Generation Z (Gen Z) college students. Specifically, students who met these criteria (a) were enrolled in a college or university experience beginning on or after Fall semester 2020, (b) were between age 18 and 28, and (c) attended school within the United States. These factors were determined before beginning the survey using demographics data. Participants who did not meet criteria for inclusion were automatically excluded.

Using a sample size calculator, looking to examine research variables (i.e., loneliness, perceived social support, intention to drop out, and classroom setting), with a power of 0.80, and a large effect size, and a p value of 0.0167, it was determined 58 participants were needed for analyzing these hypotheses (Statistics Kingdom, n.d.).

Participants were recruited using purposive and snowball sampling methods. Using purposive sampling, a survey was sent out to former colleagues, faculty members, and community leaders who had a presence with college students. For communication with these connections, the researcher used a standardized text communication about the project that included the purpose of the study, a link for the survey, and contact information for any questions or comments. Additionally, the researcher posted the survey on survey sharing websites that targeted students within the United States.

For snowball sampling, the researcher used social media and peer-to-peer connections. For social media posting, the researcher created a simple advertisement that was easy to read, catchy, and included all items listed previously. To encourage full participation, each student who completed the survey had an option of providing an email to be entered into a raffle for a \$20 Amazon gift card. A raffle winner was determined using a random number generator.

Students who began the survey were free to discontinue at any time with no penalty. Additionally, participants were invited to share any questions or concerns about the study with the researcher using contact information that was provided in the informed consent form (see Appendix A).

Students enrolled in alternative forms of schooling, such as gap year curriculum or religious training sites, were excluded due to differences in the constitution of their training program compared to a traditional educational model. However, students who attended graduate schools, junior colleges, trade schools, fully online schools, and 2-year institutions were included because these institutions offered a comparable academic structure and experience.

Instruments

Loneliness

The UCLA Loneliness Scale - Version 3 (Russell, 1996) was a self-report measure selected to measure loneliness (see Appendix B). This scale has 20 items that measure subjective feelings of loneliness on a 4-point Likert scale, with 1 being *never* and 4 being *often*. Though this measure has more questions than some brief measures, it provides a more comprehensive overview of various components of loneliness.

In the current version of this scale, 10 of 20 items are reverse scored, and the scale has been simplified to be more accessible for different populations (Russel, 1996). These adjustments helped to improve reliability and validity which were confirmed through multiple studies (Russel, 1996). The UCLA Loneliness Scale showed a high degree of internal consistency ($\alpha = .89-.94$) and test-retest reliability over a period of 1 year ($r = .73$). Convergent validity was indicated by strong correlations with other valid measures of loneliness. Additionally, discriminant validity was indicated by inverse correlations with measures studying

social support. In a three-factor analysis, Austin (1983) found this scale provided a reasonably good fit for his data ($AGFI = .80$).

Perceived Social Support

The Social Support Appraisals Scale (SS-A; Vaux et al., 1986) was used to understand students' perception of their support network (see Appendix C). This scale 23-item measure asks individuals to rate their agreement with statements of perception on a 4-point Likert scale, with one being *strongly agree* and 4 being *strongly disagree*. The questions measure an individual's perception they are loved by, esteemed by, and involved with family, friend, and others (Vaux et al., 1986).

Though family is not a part of their direct college experience for most students, members of a person's family may be very supportive of their decision to pursue higher education or provide limitations which may discourage students from going. Therefore, including these family questions was essential to covering a full scope of social support. Family dynamics certainly influence decision making; therefore, understanding a student's perception of their family domain helped in understanding how support can help in predicting student intention to drop out. The SS-A scale showed a high degree of internal consistency ($\alpha = .90$), and acceptable convergent validity was discovered using a correlational study comparing different valid instruments with SS-A which showed a moderate to strong correlation ($r = .50-.80$).

Intention to Dropout

To examine likelihood of dropout, Bäumle et al. (2021) developed a measure examining different phases of intention to drop out that factored in mental steps students take when deciding to make a change. Specifically, they developed questions used to determine a student's likelihood of dropping out called the Intentions to Quit Studies Completely Scale (see Appendix D). This

scale was developed for their study and was used to enhance variance of the dropout variable. There were six questions asked using a 6-point Likert scale, with one being *disagree completely* and 6 being *agree completely*. For this study, questions Bäumle et al. proposed for intention to change a majors were not used.

Classroom Setting

As the moderator variable for this study, classroom setting was used to moderate intensity of the impact loneliness and perceived social support had on a student's decision to drop out of school. This variable was used to study if students participating in a particular method of school (i.e., in-person or hybrid/online) would strengthen the effect of loneliness and perceive social support had on their intention to drop out of school.

To examine this component, one additional question was added to demographics questions (see Appendix E) to determine in which classroom setting a student was enrolled. This question offered participants two choices: fully in-person or hybrid/online. If a student was enrolled in an experience involving a physical space, and with an in-person instructor for all their classes, then this person was considered fully in-person, if a student attended all their classes virtually with no physical space or in-person instructor, then this student was considered fully online. A hybrid classroom setting was one in which students engaged both virtually and in-person. This included classrooms that had split attendance models, where students chose to be in class or join virtually, as well as any mixture of in-person and online classes. These students were included in the online group for group size comparison.

Procedures

In developing a 2nd-year project for the researcher's studies, perceived social support and loneliness were carried over from the initial study. Though portions of content were similar, these variables were fully reintegrated and fine-tuned for the current regression analyses.

To assess loneliness and perceived social support, the researcher used each instrument described previously to develop a survey that used self-report scales to determine an overall score for loneliness and perceived social support. Additionally, the researcher included classroom setting as a moderator variable to see if this effect was amplified in a particular school setting, which was examined by asking the primary modality each student used for learning. Each item included was transferred over word for word from the original surveys. The compiled survey was developed and distributed online through Qualtrics, a survey design software. Prior to any data collection, approval from the researcher's institutional review board (IRB) was requested and obtained.

Once IRB approval was given, participants were recruited using purposive and snowball sampling methods. Purposive sampling occurred through the researcher's network connections to encourage colleagues, community leaders, and faculty to share the survey with students (see Appendix F). For snowball sampling, the researcher used social media advertisements (see Appendix G) and person-to-person sharing to gather data. Data collection opened on February 3, 2025, and closed on June 30, 2025. The survey was not proctored by the researcher; rather, it was sent out and taken when convenient for each participant.

Once a participant started the survey, they first saw informed consent (see Appendix A) and basic demographics questions (see Appendix E). These demographics questions included race/ethnicity, gender, age range, type of school, year in school, school location, and primary

classroom setting. Following demographics, variables were assessed using the UCLA Loneliness Scale (Russell, 1996) for loneliness (see Appendix B), the SS-A Scale (Vaux et al., 1986) for perception of social support (see Appendix C), and intention to dropout using questions proposed by Bäumke et al. (2021) to determine likelihood of dropping out (see Appendix D). Each item on these questionnaires appeared as it was on each original assessment tool to preserve reliability and validity.

After the participants completed the questionnaire, they were asked to provide their email if they would like to voluntarily enter a raffle. To participate in the raffle, each participant would indicate they waived their right to confidentiality. However, participation in the survey did not require students to opt into the raffle. Moreover, unless a participant won the raffle, there was no need for follow-up or engagement with the researcher. The selected participant received brief follow-up communication to (a) check if the selected participant was still interested in the raffle and (b) to send a gift card via email. An alternative participant would be selected if the researcher was not able to connect with the participant who was selected first. Completion of the survey took an average of 8–9 minutes.

Responses were stored directly on Qualtrics servers through Northwest University with encryption only the researcher has access to. Additionally, the researcher was available to troubleshoot and answer questions throughout data collection; yet, he received no contact from participants throughout the study. Once collection ended, the researcher eliminated incomplete responses or participants who did not meet inclusion criteria.

To protect against ethical issues, the researcher maintained participant anonymity by using a feature in Qualtrics to not track IP addresses. For appropriate storage and encryption of data, the researcher kept raw data in a password protected file on a hard drive. All raw data will

be destroyed once it is no longer necessary for this dissertation project or by June 30, 2026.

Additionally, the researcher took precautions to minimize risk of emotional distress related to answering these questions regarding experiences with loneliness, perceptions of social support, and what might have been a significant decision dropping out of college. These precautions included adding to informed consent (a) a clear statement of topics being studied, (b) a statement that there would not be any use of deception in the study, and (c) a statement making it clear participation was voluntary and participants could discontinue participation at any time or for any reason.

Chapter 3: Results

A number of challenges surfaced in sampling this population, as discussed in the final chapter of this dissertation. A total of 120 participants started the survey; however, only 52 individuals met criteria for inclusion criteria. Many participants were excluded due to failing to acknowledge informed consent ($n = 29$), student status ($n = 18$), location ($n = 10$), or age range ($n = 5$), or not finishing the survey ($n = 5$). Furthermore, a single participant was excluded as an extreme outlier, which largely inflated results. These factors contributed to a 57% exclusion rate across participants who began the survey.

The overall demographics of active participants ($n = 52$) included a variety of responses from participants on various measures for demographics (see Table 1.1). Though there was decent dispersion throughout variables examined, within race/ethnicity, age range, school location and classroom setting, there was a concentration on a specific variable within a particular category. Specifically, for race/ethnicity, White/European American accounted for 65.4% of participants; for age range, 18–24 accounted for 78.8% of participants; for school location, Northwest USA accounted for 65.4% of participants; and for classroom setting, in-person accounted for 67.3% of participants. These factors should be considered when assessing generalizability of these findings. Graphical depictions of these demographics' variables can be found in Appendix H.

Table 1.1*Demographics of Included Participants*

Category	Variable	<i>n</i>	%	Cumulative %
Race/ethnicity	Hispanic/Latino	2	3.8	3.8
	White/European American	34	65.4	69.2
	Black/African American	3	5.8	75.0
	Asian	4	7.7	82.7
	Native Hawaiian/Pacific Islander	1	1.9	84.6
	Brazilian	1	1.9	86.5
	Biracial/Multiracial	7	13.5	100.0
Gender	Male	21	40.4	40.4
	Female	30	57.7	98.1
	Prefer not to answer	1	1.9	100.0
Age range	18 – 24 years old	41	78.8	78.8
	25 - 28	11	21.2	100.0
Year in school	Freshman	6	11.5	11.5
	Sophomore	8	15.4	26.9
	Junior	11	21.2	48.1
	Senior	15	28.8	76.9
	Graduate school	11	21.2	98.1
	Trade school	1	1.9	100.0
School location*	Northwest USA	34	65.4	65.4
	Southwest USA	5	9.6	75.0
	Midwest USA	1	1.9	76.9
	Great Lakes USA	6	11.5	88.5
	South USA	5	9.6	98.1
	Northeast USA	1	1.9	100.0
Classroom setting	Online/Hybrid	17	32.7	32.7
	In-person	35	67.3	100.0

Note. *Reference Appendix E for breakdown of regions by state.

Testing Assumptions of Normality

The researcher paid special attention to assumptions of normality using visual inspection and analysis of skewness and kurtosis statistics. In examining predictor variables, the criterion variable, and a moderator, data met criteria for normality in all but the criterion variable. Specifically, the distribution of perceived social support ($M = 40.27$, $SD = 8.46$), loneliness ($M = 42.37$, $SD = 9.93$), and PSSxLone ($M = 1762.52$, $SD = 698.94$) were statistically and visually

distributed within normal range (see Table 1.2). However, with the criterion variable, intention to drop out ($M = 11.19$, $SD = 5.84$), there was a violation of skewness and kurtosis that indicated data were positively skewed and more leptokurtic than what is acceptable for normality (see Figure 1.1). This was established statistically using a simple examination of data by observing SPSS statistics for this variable were both greater than 1 with both skewness and kurtosis. Additionally, according to Mishra et al. (2019), these statistical values were analyzed by dividing the output value by standard error for each statistical element and compared to a medium size standard of ± 3.29 . It was confirmed data were positively skewed and leptokurtic ($skewness = 5.85$; $kurtosis = 8.49$). Thus, statistical analyses of these data should be interpreted with caution due to abnormal distribution. Discussion of implications related to these distributional abnormalities will occur in the following chapter.

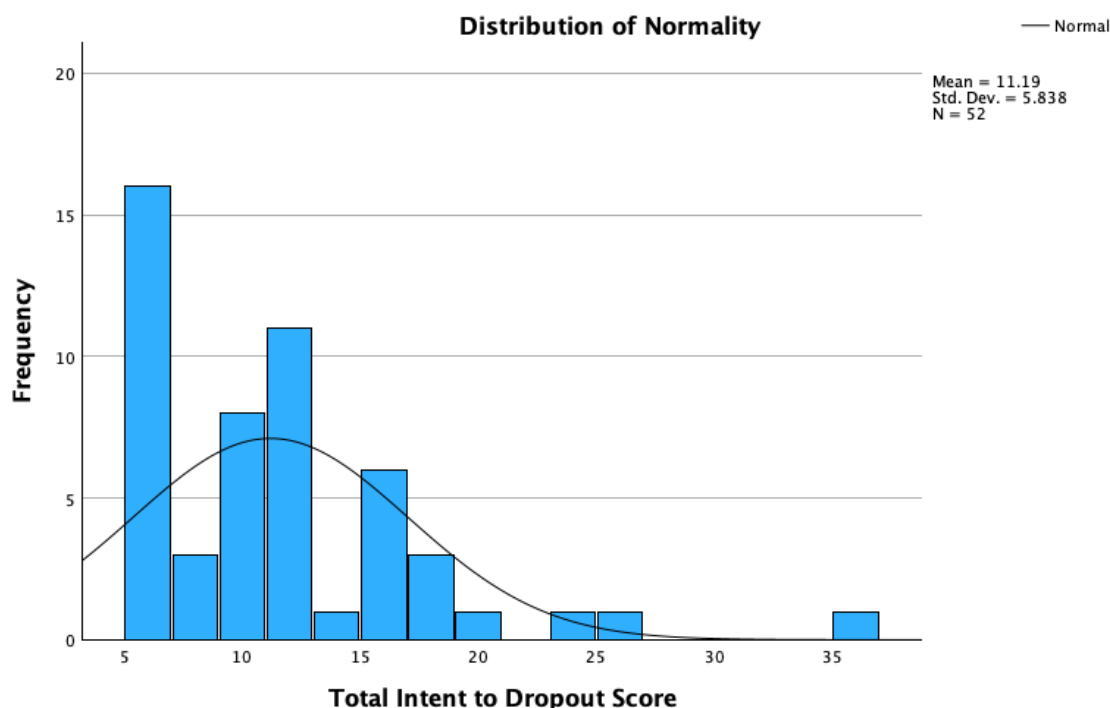
Table 1.2

Descriptive Data

Research variables	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Perceived Social Support	40.27	8.46	-0.052	-0.221
Loneliness	42.37	9.93	0.021	-0.435
Intent to Dropout	11.19	5.84	1.930**	5.516**
PSSxLone*	1762.52	698.94	0.323	-0.711

Note. *Created to examine the interaction effect between two main effect variables.

**Violation of assumptions of normality

Figure 1.1*Distribution of Normality*

It should be noted when data were split to examine overall descriptive variables of the two classroom settings separately, distribution for intention to drop out was distributed normally for online/hybrid classroom setting, both visually and at both statistical standards used previously. Whereas in-person classroom setting distribution was positively skewed indicating participants from this setting had less desire to drop out.

Beyond a visual inspection of data, a Shapiro-Wilks test confirmed a normal distribution was achieved for perceived social support (.982, $p = .634$), loneliness (.985, $p = .747$), and PSSxLone (.971, $p = .232$), but not with intent to dropout (.808, $p < .001$). This evidence further confirmed irregular distribution of the criterion variable.

Hypothesis Testing

Correlation Analysis

A correlation analysis was run to determine a relationship between independent variables and the dependent variable. Loneliness was correlated with perceived social support ($r = 0.686, p < .001$; see Table 2.1). Additionally, the interaction variable (PSSxLone) was correlated with both independent variables (perceived social support: $r = 0.901, p < .001$; loneliness: $r = 0.924, p < .001$). These findings raise issues related to multicollinearity between the independent variables. To control for this issue, independent variables were centered to their mean of each variable to run multiple regression analyses for hypothesis testing.

Table 2.1

Correlations Between Variables

Variable	Perceived social support	Loneliness	Intent to drop out
Loneliness	.686**	-	-
Intent to Drop out	.207	.291*	-
Interaction (PSSxLone)	.901**	.924**	.289*

Note. * $p < .05$ ** $p < .01$.

Regression Analyses: Hypotheses 1–3

A multiple regression analysis was run to determine if perceived social support, loneliness, and the interaction variable could predict intention to drop out. It was determined (H₁) perceived social support, (H₂) loneliness, and (H₃) the interaction variable (i.e., PSS X Loneliness) could not predict intention to drop out because the model was not significant for predictive effect of these variables, $F_{(3,48)} = 1.95, p = 0.134$ (see Table 2.2). A follow-up stepwise multiple regression was conducted to determine if there were any predictive value. The model

excluded perceived social support and the interaction variable but found loneliness was predictive of intent to dropout ($F_{(1,50)} = 4.63, p = 0.036$) and accounted for 8.5% of variance for intent to drop out. However, this finding fell outside the established statistical significance value predetermined by the examiner of less than 0.0167. Thus, null hypotheses should be accepted for each.

Table 2.2

Multiple Regression With Perceived Social Support, Loneliness, and Interaction as Predictors

Coefficient	Estimate	SE	p
Constant	11.19	.788	<.001
Perceived Social Support	-.499	.467	.291
Loneliness	-.329	.451	.469
Interaction (PSSxLone)	.012	.011	.263

Note. $F(3,48) = 1.95, p = 0.134$.

Moderated Regression Analyses: Hypotheses 4–6

Hierarchical multiple regressions were employed to determine the predictive change of the moderator variable for each independent variable. For every analysis, classroom setting was dummy coded to examine if predictive change from the model was significantly different when only in-person data were accounted. Thus, the first model examined predictive change of both classroom settings, whereas the second model accounted for just in-person predictive change. Therefore online/hybrid participants served as a control variable for these analyses. For each independent variable, the researcher ran hierarchical regression in this way to determine if classroom setting led to predictive change with intent to drop out.

For the interaction variable (H_4), it was determined there was no significant change across both models for the variance of combined setting ($F_{(1,50)} = 4.56, p = 0.038$) or in-person

only ($F_{(2,49)} = 2.38, p = 0.103$) that met statistical significant. With perceived social support (H_5), it was determined there was no significant change across both models for the variance of combined setting ($F_{(1,50)} = 2.24, p = 0.141$) or in-person only ($F_{(2,49)} = 1.27, p = 0.289$). Finally, with loneliness (H_6), it was determined there was no significant change across both models for the variance of combined setting ($F_{(1,50)} = 4.63, p = 0.036$) or in-person only ($F_{(2,49)} = 2.31, p = 0.110$) met significance standards set by the researcher. Thus, null hypotheses should be accepted.

Chapter 4: Discussion

The aim of this study was to expand understanding of research surrounding Generation Z (Gen Z) students' intention to drop out from their university experiences in a postpandemic world. Research by Bouchrika (2024) identified an approximately \$31 billion dollar tax burden in the United States caused by students defaulting on student loans from their incomplete degrees. Moreover, Hanson (2024) highlighted how in just 1 year after the COVID-19 global pandemic, 23.4% of first-time freshman dropped out of college which further contributes to a rising percentage of adults who are out of school without credentials. In the wake of this pandemic, understanding what is impacting students' decisions to leave their college experiences is crucial for future higher education in this country.

Historically, Tinto (1975) viewed dropping out of university as an academic dysfunction disconnected from university social experiences. However, following Bean's (1985) inclusion of psychosocial and environmental factors, researchers have continued to pull away from a purely academic conceptualization. Factors such as engagement, family, socioeconomic, and behavioral difficulties have been examined to conceptualize this phenomenon (Bernando et al., 2022; Palomino & Ortega, 2023). These social factors were at the focus of the present study and were examined using loneliness and perceived social support measures.

These variables were studied to see if they could predict intention to drop out and, thereby, empower professionals in related fields with insight into a predictive relationship between these negative social self-perceptions and students dropping out of their university experiences. Additionally, in considering impacts from the COVID-19 global pandemic, the researcher examined classroom setting to understand if being in-person or having a virtual experience affected predictability of the variables. This information can further empower these

professionals in knowing how to allocate resources to their student populations that are increasingly more virtual in a postpandemic world.

Unfortunately, results from this study were inconclusive and demonstrated no significant predictive relationship across each of these hypotheses. Despite this finding, some trends and relationships were uncovered that should be considered for future study. In the conclusions section, an examination of trends related to data specifically is highlighted and tied to trends within current research. In the limitations section, the researcher speaks to limiting factors of the current study and speaks to potential solutions. Finally, the researcher provides a conceptual framework for a future study attempting to mitigate these limiting factors.

Conclusions

Sample and Demographics

To best interpret these results, the sampling and demographics provide a foundation to build upon. Overall, of 120 participants who began the survey, only 52 of them completed it. There was a 57% exclusion rate, which means more participants were removed from the study than were included. Of this 57%, 29 participants did not agree to informed consent or were bots, and 33 participants did not qualify based on inclusion criteria. These data suggest issues with sampling techniques, specifically in recruitment from the intended population.

Furthermore, in examining dispersion of the data, demographic variables including race/ethnicity and school location had a single variable represent over 65% of the total category. This suggests these findings were more representative of White/European American and Northwest USA participants than other populations. Moreover, within age range, 18–24-years old accounted for over 75% of the participants, indicating a majority representation of traditional college students as opposed to Gen Z as a whole. These demographical trends indicate there may

be challenges with generalizability of these findings because certain variables have a higher presence of certain demographic factors.

Additionally, for classroom setting, 67% indicated in-person as their school setting, which limited analysis of moderation of the research variables on their predictive ability. Despite this, the researcher proceeded to see if there were any trends that could be identified. These unequal distributions across certain demographic variables limited generalizability of the findings and ability to examine the moderator's effect on each regression model.

Assumptions of Normality

First, when using a visual inspection, answers regarding intention to drop out were not normally distributed, with many data points concentrated toward the low end. In the statistical analysis of data, the criterion variable was positively skewed and leptokurtic (skewness = 5.85; kurtosis = 8.49), confirming findings from visual inspection. Following this, a Shapiro-Wilks test reconfirmed lack of normal distribution within the dependent variable.

Specifically, these findings suggest students were unlikely to be information searching and making a final decision for their intent to drop out model. The minimum score of 6 was indicated by 16 participants, which means these participants strongly disagreed with every prompt of information search and final decision. In addition, the mean score of 11.19 can be converted into an average of 1.87 per question, which indicates people on average disagreed with statements related to dropping out. These data suggest participants in the study were not interested in dropping out of their institutions regardless of their feelings of loneliness and social support system. In addition, due to these violations of normality, each statistical analysis was adjusted within reason and interpreted with caution.

It should be noted when intention to drop out was split between classroom setting, data became normally distributed with participants who indicated a virtual experience, whereas data remained positively skewed for students who indicated an in-person experience (see Figures 2.1 and 2.2). When controlling for outliers, the mean score for intent to drop out in-person participants dropped to 8.41, which is an average of 1.40 per question on the intention to drop out scale. Therefore, findings suggest most people who participated in an in-person experience strongly disagreed or disagreed with having a desire to drop out of college.

Figure 2.1

Distribution of Normality: Online/Hybrid

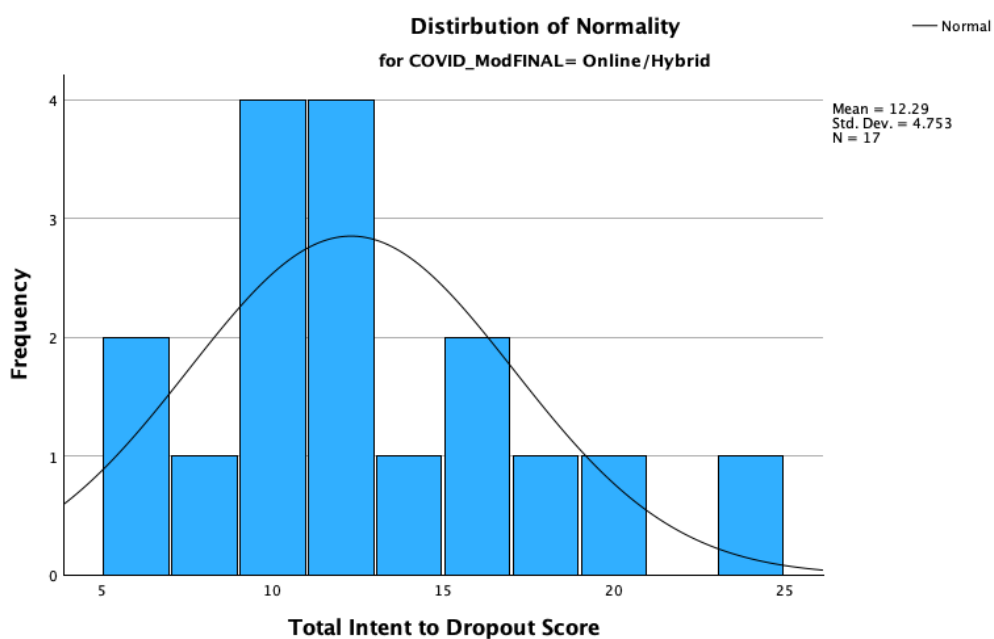
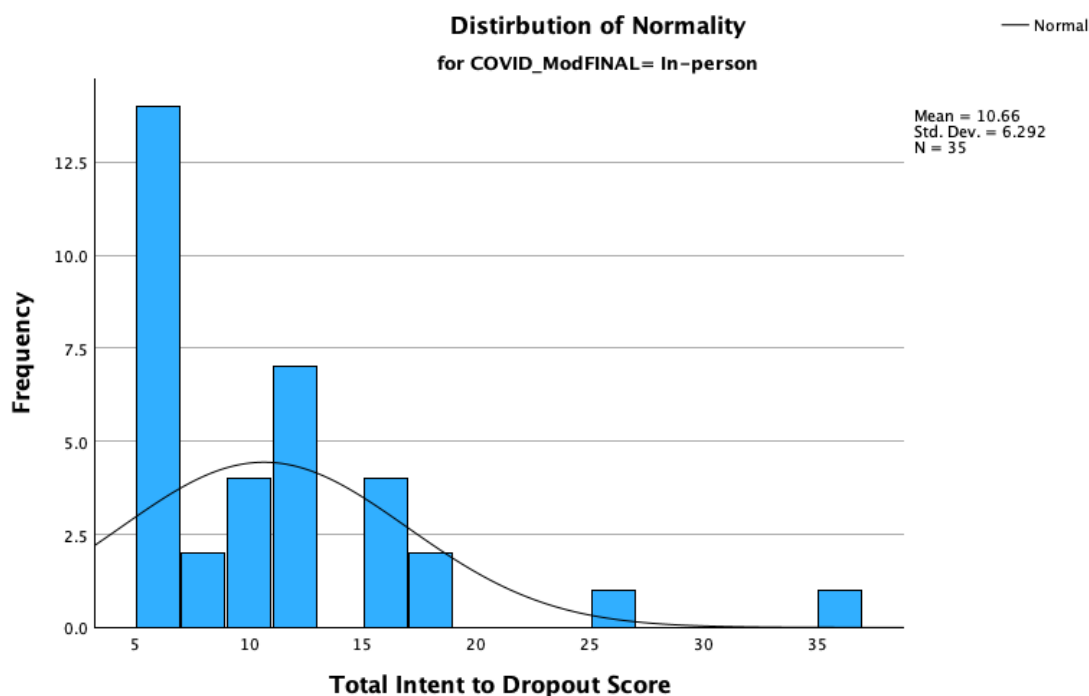


Figure 2.2*Distribution of Normality: In Person*

This finding suggests there is a possible difference with engagement between in-person and virtual university experiences. In his study, Drageset (2021) highlighted the difference between social support and social network discussing how the former established healthier personal relationships. Furthermore, research by Moeller and Seehuus (2019) found opportunities to practice social expressivity and control led to a reduction in loneliness and improved mental health outcomes. Similarly, the nature of an in-person experience provides students with greater opportunity for individuals to feel more connected and develop relationships with other people.

Correlations

With correlations, a relationship was found between the two predictor variables, loneliness and perceived social support. This indicated there was a strong positive relationship between the two independent variables, meaning when someone was lonelier, they would perceive to have less social support, which aligned with research by Zhang and Dong (2022) who found people who were more socially supported were less lonely. Other significant correlations did not meet threshold for significance set by the researcher.

However, these other correlations indicated trends highlighted previous research that indicated people who were lonelier had more difficulty making progress specifically in a post-COVID-19 global pandemic world (Lee et al., 2021), leading to lower satisfaction with learning, higher stress, and financial difficulties which led to separation from their universities (Hagedorn et al., 2022). In addition, an interaction between perceived social support and loneliness plays a role in someone considering dropping out. This finding parallels research by Worsley et al. (2021) who suggested students who engage with faculty, staff, and services early on develop their social support network and resist against loneliness.

Multiple Regression

To test if loneliness, perceived social support, and the interaction variable could predict intent to drop out, a multiple regression analysis was run to establish a predictive equation. It was determined loneliness, perceived social support, and an interaction between these two variables could not predict intention to drop out. However, in a follow-up stepwise regression, there was a predictive relationship between only loneliness and intention to drop out. Specifically, understanding a participant's struggles with loneliness enables one's ability to predict, to some

degree, an individual's likelihood of dropping out. However, this was only a trend and did not meet the researcher's set standard for statistical significance.

This finding is similar to research by Kaple (2024) who sought to understand patterns of loneliness in the 1st year of college and how these may shape students' experience in college. Specifically, it confirms the pervasive way loneliness can negatively impact mental health, behavioral indicators of health, social relationships, and self-perceptions (Kapte, 2024), which can later contribute to decisions to drop out of school.

Moderated Regression

No statistically significant model was identified for these hypotheses. Difficulties with sampling and inclusion criteria reduced the number of participants that contributed to a limited comparison between a dummy coded model and the comparison group.

Limitations

As previously discussed, there were several limitations for this study that should be further explored to provide transparency with these findings and inform future research. Firstly, it should be noted amendments were made to this study due to difficulties with participant recruitment. Specifically, the researcher adapted the moderator variable due to difficulties recruiting participants who engaged in hybrid or virtual school experiences. These two experiences were combined into one group that was examined as an alternative to an in-person experience. This change was made to help create an equal distribution between two moderator groups. Despite this change, in-person participants made up 67.3% of participants, which indicates a slightly skewed distribution of participants.

Another amendment was inclusion of all Gen Z participants, which included individuals born in 1997, according to consensus among researchers. This adjustment was made to expand

inclusion criteria, thereby generating a greater sample size that accounted for 21.2% of participants. Though many people begin college during emerging adulthood, including participants at the upper threshold of Gen Z increased confounding variables affecting the presentation of research variables between emerging adulthood (i.e., 18–24 years old) and young adulthood (i.e., 25–28 years old).

Moreover, issues with sampling led to expansion of purposive and snowball sampling techniques. These changes included sharing the survey on distribution websites that generate participation through engagement in other surveys. Though this increased engagement, many participants did not meet inclusion criteria and were excluded from consideration. Additionally, the researcher expanded sampling to include his direct network of students who were heavily involved in student life. Though these students had access to students who would fit inclusion for the study, many of these students were engaged in in-person experiences and from schools located in the northwest U.S. region. These factors contributed to a greater bias in the sample.

It should be noted these sampling adjustments were made due to difficulties recruiting via social media. Prior to recruitment, the researcher was not established on many social media sites. This limited access to social media groups and recruitment sites like Facebook and Reddit, which were identified as particularly salient sites for recruitment. Furthermore, websites the researcher was familiar with engaged other professionals and did not get the survey in front of students directly. This meant the researcher was dependent on his network to share the survey on his behalf instead of directly to students. With purposive sampling with his former colleagues and social network, the researcher was limited due to access afforded to the researcher with other institutions. Specifically, several institutions limited access due to needing institution-specific institutional review board (IRB) approval instead of accepting approval from the researcher's

institution. Furthermore, many of the researcher's network were student development professionals who primarily worked with student leaders who were typically engaged more in campus life. Not only were these factors barriers for engaging with students generally, but they were also particularly limiting with students who may be feeling disconnected and have thoughts of dropping out of college.

Another limitation of the study is lack of generalizability of findings. As previously mentioned, there were significant clusters within race/ethnicity, school location, and classroom setting. This clustering of data demonstrates limitations for a representative sample that would be able to be generalized to an entire population of college students in the United States. Though the researcher made a conscious effort to recruit from across the country, his network was primarily made up of private Christian universities in the midwest and northwest regions of the country. Likely, these factors contributed to bias in these particular demographic categories.

Similarly, distribution of the moderator variable was limited by the researcher's network. Specifically, the researcher was connected with professionals who led in-person experiences in higher education. Access to students who engaged in primarily virtual and hybrid experiences was limited and was dependent upon members of the researcher's network, social media postings, and participants engaged from the survey distributions sites. Due to these reasons, there was a skew toward in-person experiences, which undermined the ability for comparison among different classroom settings.

Modifications for Future Research

Despite lacking significant findings in this study, some promising trends were identified that warrant further investigation to help researchers understand impacts of the COVID-19 global pandemic on college students. Considerations for future research should consider sampling

techniques, definitions for the sample, and how to effectively examine the COVID-19 global pandemic.

Working with universities to sample students across campuses in the United States is no small task. Each university's IRB often safeguards access to students. This restriction created barriers to access with this study despite interest people had in understanding the interactions between these variables. In addition, IRBs can be decentralized from institutional research opportunities, which means approval does not necessarily mean adoption of the study. Therefore, a study may not even reach students despite it having approval. In the future, researchers should consider how to navigate institution-specific safeguards and research practices as the study is set to launch. Considerations include targeting specific institutions, identifying key researchers on campus, fully understanding their research processes and procedures, and recruiting buy-in prior to launching participant recruitment. In considering these factors, researchers can better prepare for institutional challenges and streamline the research process.

Additionally, institutions often have specific research timelines for assessing students regarding university initiatives and objectives. With this study, though sampling was purposed for the end of the school year, these dates fell at different times for different institutions and often clashed with end of year surveys that evaluate classes and other university experiences. This means institutions were not interested in adding another survey to their research agenda, and students may have already been experiencing survey fatigue. To resolve this issue, researchers would do well to work with institutions to add their study to institutional research timelines or add their study to an established survey that has already been integrated into student experiences.

Furthermore, intention to drop out was not indicated as often by participants. It is likely students who met inclusion criteria and participated fully were more engaged in their student experiences. As mentioned previously, sampling limitations were likely focused participation on students who involved in campus activities and had an in-person experience. Instead of sampling a general population of students, future researchers should aim to target students who are experiencing hardships, are disengaged in their school experience, and are beginning their postsecondary schooling. Students who are having trouble with transitioning to college, familial distress, studying for their classes, or engaging in social life should be targeted through using historical data from each institution. Researchers should work with student retention specialists from identified institutions they are working with to gain specific access to students who previously attended the university and who are currently struggling. However, access to students does not immediately guarantee participation. Students who are dealing with these challenges are less likely to fill out a survey, which is why special attention should be given to using incentives and strategic procedures.

Instead of offering gift cards, it may be more advantageous to recruit participants by offering free services to students who engage, which could help them with transitioning, identifying strengths, and developing purpose. This technique may make participation more attractive to students who are thinking of deciding to drop out. By engaging with resources and support, students will be able to navigate what is beyond a decision to leave their university and have formalized support as they step into what is next. This initiative will further empower students to make informed decisions as they find right ways to cultivate their future.

Beyond incentives, capturing data at the right time is crucial. Specifically, having a survey at the point of termination would allow for data to be collected in the moment of

separation instead of in a reflective manner. Moreover, capturing these data when a student drops out would help to identify each participant's true factors for dropping out. Moreover, it may be more useful to do a mixed-methods study that can highlight themes related to reasons Gen Z college students decide to drop out.

Furthermore, adjusting methodology would allow for a survey to be streamlined. The current study was comprised of several scaled questionnaires that had over 20 questions. Though efforts were made to shorten these surveys, more work could be done to reduce time participants spend completing the survey. Specifically, identifying key questions from each different scale, and allowing for brief qualitative response sections would allow for better exploration of research questions and offer more information for future research on this subject.

Additionally, as Gen Z students make their way through their university experiences, researchers should invest in understanding the overlap of traits that exist between Gen Z and Generation Alpha. As generations change, so do life experiences, motivations, and worldviews. With the rise of technology, childhood experiences that reliably shaped previous generations are transformed or replaced by technological advancements and quick access to information. Higher education in its current state will certainly be impacted because knowledge is no longer accessed in a sequestered space but is accessible in most of our pockets. In addition, advances in artificial intelligence have shaped how students approach their schoolwork and will affect how humans research, study, and engage with learning. Future researchers should take these factors into account and consider their impact on a study similar to this and consider how the COVID-19 global pandemic is shaping student experiences with socialization for years to come.

References

- Ainsworth, M. D. S. (1979). Infant-mother attachment. *American Psychologist*, 34(10), 932–937.
<https://doi.org/10.1037/0003-066x.34.10.932>
- Azevedo, J. P., Goldemberg, D., Montoya, S., Nayar, R., Rogers, H., Saavedra, J., & Stacy, B. W. (2021). *Will every child be able to read by 2030? Defining learning poverty and mapping the dimensions of the challenge*. World Bank. <https://doi.org/10.1596/1813-9450-9588>
- Bäulke, L., Grunschel, C., & Dresel, M. (2021). Student dropout at university: A phase-orientated view on quitting studies and changing majors. *European Journal of Psychology of Education*, 37(3), 853–876. <https://doi.org/10.1007/s10212-021-00557-x>
- Bean, J. P. (1985). Interaction effects based on class level in an explanatory model of college student dropout syndrome. *American Educational Research Journal*, 22(1), 35–64.
<https://doi.org/10.3102/00028312022001035>
- Bernardo, A., Galve-González, C., Núñez, J., & Almeida, L. (2022). A path model of university dropout predictors: The role of satisfaction, the use of self-regulation learning strategies and students' engagement. *Sustainability*, 14(3), Article 1057.
<https://doi.org/10.3390/su14031057>
- Bouchrika, I. (2024). *College dropout rates: 2024 statistics by race, gender & income*. Research.com. <https://research.com/universities-colleges/college-dropout-rates#2>
- Bowlby, J. (1966). *Attachment and loss* (2nd ed.). Basic Books.
- Cacioppo, J. T., & Cacioppo, S. (2012). The phenotype of loneliness. *European Journal of Developmental Psychology*, 9(4), 446–452.
<https://doi.org/10.1080/17405629.2012.690510>

- Cai, Q., LeBouef, S., Savage, M., & Dworkin, J. (2022). What happened when COVID-19 shut down in-person higher education? Parents speak out. *About Campus Enriching the Student Learning Experience*, 26(6), 26–34. <https://doi.org/10.1177/10864822221082695>
- Carlton, G. (2022). *The history of public universities in the U.S.* BestColleges.com. <https://www.bestcolleges.com/blog/public-universities-history/>
- Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). Jossey-Bass. <https://eric.ed.gov/?id=ED423498>
- Chu, I. Y., Alam, P., Larson, H. J., & Lin, L. (2020). Social consequences of mass quarantine during epidemics: a systematic review with implications for the COVID-19 response. *Journal of Travel Medicine*, 27(7). <https://doi.org/10.1093/jtm/taaa192>
- Dennington, A. D. (2021). Gen Ztressed: A new generation of college students. *timelycare*. <https://timelycare.com/blog/generation-z-college-students/>
- Diehl, K., Jansen, C., Ishchanova, K., & Hilger-Kolb, J. (2018). Loneliness at universities: Determinants of emotional and social loneliness among students. *International Journal of Environmental Research and Public Health*, 15(9), Article 1865. <https://doi.org/10.3390/ijerph15091865>
- Dost, G., & Smith, L. M. (2023). Understanding higher education students' sense of belonging: a qualitative meta-ethnographic analysis. *Journal of Further and Higher Education*, 47(6), 822–849. <https://doi.org/10.1080/0309877x.2023.2191176>
- Drageset, J. (2021). Social support. In G. Haugan & M. Eriksson (Eds.), *Health promotion in health care – Vital theories and research* (pp. 137–144). Springer. https://doi.org/10.1007/978-3-030-63135-2_11

- Fleming, W. J. B., Howard, K., Perkins, E., & Pesta, M. (2005). The college environment: Factors influencing student transition and their impact on academic advising. *The Mentor: Innovative Scholarship on Academic Advising*, 7.
<https://doi.org/10.26209/mj761636>
- González-Sanguino, C., Ausín, B., Castellanos, M. Á., Saiz, J., López-Gómez, A., Ugidos, C., & Muñoz, M. (2020). Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain Behavior and Immunity*, 87, 172–176. <https://doi.org/10.1016/j.bbi.2020.05.040>
- Hagedorn, R. L., Wattick, R. A., & Olfert, M. D. (2021). “My entire world stopped”: College students’ psychosocial and academic frustrations during the COVID-19 pandemic. *Applied Research in Quality of Life*, 17(2), 1069–1090. <https://doi.org/10.1007/s11482-021-09948-0>
- Hanson, M. (2024). *College dropout rates*. Education Data Initiative.
<https://educationdata.org/college-dropout-rates>
- Hawkley, L. C., Browne, M. W., & Cacioppo, J. T. (2005). How can I connect with thee? *Psychological Science*, 16(10), 798–804. <https://doi.org/10.1111/j.1467-9280.2005.01617.x>
- Hefner, J., & Eisenberg, D. (2009). Social support and mental health among college students. *American Journal of Orthopsychiatry*, 79(4), 491–499. <https://doi.org/10.1037/a0016918>
- Hjorth, C. F., Bilgrav, L., Frandsen, L. S., Overgaard, C., Torp-Pedersen, C., Nielsen, B., & Bøggild, H. (2016). Mental health and school dropout across educational levels and genders: A 4.8-year follow-up study. *BMC Public Health*, 16(1).
<https://doi.org/10.1186/s12889-016-3622-8>

- Johnson, C., Gitay, R., Abdel-Salam, A. G., BenSaid, A., Ismail, R., Al-Tameemi, R. A. N., Romanowski, M. H., Fakih, B. M. K. A., & Hazaa, K. A. (2022). Student support in higher education: Campus service utilization, impact, and challenges. *Heliyon*, 8(12), Article e12559. <https://doi.org/10.1016/j.heliyon.2022.e12559>
- Kaple, T. (2024). *Combating student loneliness and isolation in college: Help, support, and resources*. EduMed. <https://www.edumed.org/resources/student-loneliness-help-and-support/>
- Kraft, D. P. (2011). One hundred years of college mental health. *Journal of American College Health*, 59(6), 477–481. <https://doi.org/10.1080/07448481.2011.569964>
- Kwakye, I., Kibort-Crocker, E., Lundgren, M., & Pasion, S. (2021). *Fall enrollment report: Exploring the impact of COVID-19 on postsecondary enrollment in Washington*. Washington Student Achievement Council. <http://files.eric.ed.gov/fulltext/ED613351.pdf>
- Lee, J., Solomon, M., Stead, T., Kwon, B., & Ganti, L. (2021). Impact of COVID-19 on the mental health of US college students. *BMC Psychology*, 9(1). <https://doi.org/10.1186/s40359-021-00598-3>
- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth strange situation. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 121–160). The University of Chicago Press.
- Martinez-Requejo, S., García, E. J., Duarte, S. R., Lázaro, J. R., Sanz, E. P., & Vivas, G. M. (2024). AI-driven student assistance: Chatbots redefining university support. *INTED Proceedings*. <https://doi.org/10.21125/inted.2024.0221>

- McLean, L., Gaul, D., & Penco, R. (2022). Perceived social support and stress: A study of 1st year students in Ireland. *International Journal of Mental Health and Addiction*, 21(4), 2101–2121. <https://doi.org/10.1007/s11469-021-00710-z>
- Merriam-Webster. (n.d.). *Quarantine*. Encyclopedia Britannica. Retrieved August 10, 2024, from <https://www.merriam-webster.com/dictionary/quarantine>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), Article 67. https://doi.org/10.4103/aca.aca_157_18
- Moeller, R. W., & Seehuus, M. (2019). Loneliness as a mediator for college students' social skills and experiences of depression and anxiety. *Journal of Adolescence*, 73(1), 1–13. <https://doi.org/10.1016/j.adolescence.2019.03.006>
- Nicola, T. (2023). *Majority of Gen Z consider college education important*. Gallup. <https://news.gallup.com/opinion/gallup/509906/majority-gen-consider-college-education-important.aspx>
- Palomino, J. C. V., & Ortega, A. M. (2023). Dropout intentions in higher education: Systematic literature review. *Journal on Efficiency and Responsibility in Education and Science*, 16(2), 149–158. <https://doi.org/10.7160/eriesj.2023.160206>
- Pedrelli, P., Nyer, M., Yeung, A., Zulauf, C., & Wilens, T. (2014). College students: Mental health problems and treatment considerations. *Academic Psychiatry*, 39(5), 503–511. <https://doi.org/10.1007/s40596-014-0205-9>
- Phillips, C. (2007). Attachment styles and transitioning into college. *The Review: A Journal of Undergraduate Student Research*, 9(1), 24–27. <https://fisherpub.sjfc.edu/cgi/viewcontent.cgi?article=1034&context=ur>

- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40.
https://doi.org/10.1207/s15327752jpa6601_2
- Sarason, I. G., Pierce, G. R., & Sarason, B. R. (1994). General and specific perceptions of social support. In *Springer eBooks* (pp. 151–177). https://doi.org/10.1007/978-1-4899-1106-3_6
- Schaffer, H. R., & Emerson, P. E. (1964). The development of social attachments in infancy. *Monographs of the Society for Research in Child Development*, 29(3), 1.
<https://doi.org/10.2307/1165727>
- Segrin, C., & Cooper, R. A. (2023). Neighborhood disadvantage and mental health. In H. S. Friedman (Ed.), *Encyclopedia of mental health* (3rd ed., Vol. 2, pp. 590–597).
<https://doi.org/10.1016/b978-0-323-91497-0.00167-3>
- Statistics Kingdom. (n.d.). *Regression and ANOVA - Sample size calculator*.
https://www.statskingdom.com/sample_size_regression.html
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125.
<https://doi.org/10.3102/00346543045001089>
- Turkpour, A., & Mehdinezhad, V. (2016). Social support, academic support and adaptation to college: Exploring the relationships between indicators of college students. *The New Educational Review*, 44(2), 84–95. <https://doi.org/10.15804/tner.2016.44.2.07>
- Vaux, A., Phillips, J., Holly, L., Thomson, B., Williams, D., & Stewart, D. (1986). The social support appraisals (SS-A) scale: Studies of reliability and validity. *American Journal of Community Psychology*, 14(2), 195–218. <https://doi.org/10.1007/bf00911821>

- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 Coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), Article 1729. <https://doi.org/10.3390/ijerph17051729>
- Weiss, R. (1975). *Loneliness: The experience of emotional and social isolation* (New ed.). The MIT Press.
- Weissman, S. (2022). Why would-be students aren't choosing college: New study explores why people drop out or don't enroll. *Inside Higher Ed*. <https://www.insidehighered.com/news/2022/09/29/new-study-explores-why-people-drop-out-or-dont-enroll>
- Worsley, J. D., Harrison, P., & Corcoran, R. (2021). Bridging the gap: Exploring the unique transition from home, school or college into university. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.634285>
- Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders*, 277, 55–64. <https://doi.org/10.1016/j.jad.2020.08.001>
- Zhang, X., & Dong, S. (2022). The relationships between social support and loneliness: A meta-analysis and review. *Acta Psychologica*, 227. <https://doi.org/10.1016/j.actpsy.2022.103616>

Zviedrite, N., Jahan, F., Moreland, S., Ahmed, F., & Uzicanin, A. (2024). COVID-19 related school closures, United States, July 27, 2020–June 30, 2022. *Emerging Infectious Diseases*, 30(1), 58–69. <https://doi.org/10.3201/eid3001.231215>

Appendix A: Consent Form

Northwest University: College of Behavioral Sciences Consent Form

Thank you for your interest in this study on the impact of loneliness and perceived social support on intention to dropout. The focus of this study is to account for the impact the COVID-19 global pandemic had on our social well-being and how that impact is shaping the mental health of students which is impact their decisions to remain in school. This study is a part of a dissertation project by Patrick McLeland, a PsyD student at Northwest University

To qualify for participation, you must be an adult above the age of 18, enrolled in a college or university, and be able to read at or above sixth grade. Completion of this study typically takes approximately 7-15 minutes and is strictly anonymous. Upon completion of the survey, voluntary participation in a raffle will ask you to enter an email should you choose to participate. This is not required for participation in the survey. Your responses will be treated anonymously and will not be linked to any identifying information about you. If you agree to participate in this study, you will answer questions regarding demographic information, inclusion criteria, feelings of loneliness, perception of social support, and factor related to a potential decision to drop out of school. All data collection and submitted survey information will be password encrypted and stored on the secure server of our survey provider.

The Northwest University Institutional Review Board has approved the study. No deception is involved, and participation in this study poses minimal risk to participants. If you experience emotional distress when answering questions that deal with loneliness, perception of social support, or dropping out of college, please call or text the National Mental Health hotline at 988 or reach out for therapy using an online service provider. Some services include Headway.com or Betterhelp.com. If you are looking for in-person support, go to psychologytoday.com and search for therapists near you!

By submitting the survey, you are giving permission to use your responses in this research study. Data will be analyzed using SPSS and stored on a device that will have a unique password for access. The results from this study will be utilized for a dissertation study and may be presented within a variety of psychological forums (formal and informal). Data will be destroyed when it no longer serves its research purpose or at the latest June 1st, 2028, when the researcher can no longer continue with the doctoral program.

If you have any questions about this study, please contact the principal researcher Patrick McLeland at xxxxxxxx@northwestu.edu. If you have further questions, please contact my advisor Nikki Johnson at xxxxxx@northwestu.edu. You may also contact the Chair of the Northwest University IRB, Professor Cheri Goit, at cheri.goit@northwestu.edu or xxx-xxx-xxxx.

As a reminder, participation in this study is voluntary, and you may elect to discontinue the questionnaire at any time and for any reason. Before beginning the survey, please read this consent form in full. If you understand all information contained in this form, meet the inclusion criteria, and agree to freely participate in this study, please click the "I Agree" button. You may print this consent form for your records.

Patrick McLeland
PsyD Student
5520 108th Avenue NE, Kirkland, WA 98033
xxxxxxx@northwestu.edu

Appendix B: UCLA Loneliness Scale (Version 3)

Scale:

INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

Statement	Never	Rarely	Sometimes	Often
*1. How often do you feel that you are "in tune" with the people around you?	1	2	3	4
2. How often do you feel that you lack companionship?	1	2	3	4
3. How often do you feel that there is no one you can turn to?	1	2	3	4
4. How often do you feel alone?	1	2	3	4
*5. How often do you feel part of a group of friends?	1	2	3	4
*6. How often do you feel that you have a lot in common with the people around you?	1	2	3	4
7. How often do you feel that you are no longer close to anyone?	1	2	3	4
8. How often do you feel that your interests and ideas are not shared by those around you?	1	2	3	4
*9. How often do you feel outgoing and friendly?	1	2	3	4
*10. How often do you feel close to people?	1	2	3	4
11. How often do you feel left out?	1	2	3	4
12. How often do you feel that your relationships with others are not meaningful?	1	2	3	4
13. How often do you feel that no one really knows you well?	1	2	3	4
14. How often do you feel isolated from others?	1	2	3	4
*15. How often do you feel you can find companionship when you want it?	1	2	3	4
*16. How often do you feel that there are people who really understand you?	1	2	3	4
17. How often do you feel shy?	1	2	3	4
18. How often do you feel that people are around you but not with you?	1	2	3	4
*19. How often do you feel that there are people you can talk to?	1	2	3	4
*20. How often do you feel that there are people you can turn to?	1	2	3	4

Scoring:

The items with an asterisk are reverse scored. Keep scoring on a continuous basis.

This scale is provided only for Researchers.

Appendix C: Social Support Appraisal Scale

Below are a list of statements about your relationships with family and friends. Please indicate how much you agree or disagree with each statement as being true.

(circle one number in each row)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
My friends respect me	1	2	3	4
My family cares for me very much	1	2	3	4
I am not important to others	1	2	3	4
My family holds me in high esteem	1	2	3	4
I am well liked	1	2	3	4
I can rely on my friends	1	2	3	4
I am really admired by my family	1	2	3	4
I am respected by other people	1	2	3	4
I am loved dearly by my family	1	2	3	4
My friends don't care about my welfare	1	2	3	4
Members of my family rely on me	1	2	3	4
I am held in high esteem	1	2	3	4
I can't rely on my family for support	1	2	3	4
People admire me	1	2	3	4
I feel a strong bond with my friends	1	2	3	4
My friends look out for me	1	2	3	4
I feel valued by other people	1	2	3	4
My family really respects me	1	2	3	4
My friends and I are really important to each other	1	2	3	4
I feel like I belong	1	2	3	4
If I died tomorrow, very few people would miss me	1	2	3	4
I don't feel close to members of my family	1	2	3	4
My friends and I have done a lot for one another	1	2	3	4

Appendix D: Intention to Dropout

Scale Items: Intentions to Quit Studies Completely

Instructions: Below are some statements about your current study habits at your school. Please indicate the degree to which you agree with each statement below on a scale of 1 (disagree completely) to 6 (agree completely)

1. Non-fit perception;
 - a. At the moment, it occurs to me that studying does not suit me well.
 - b. At the moment, I don't feel suitable for studying.
 - c. At the moment, I realize that I don't like studying.
2. Thoughts of quitting studies completely:
 - a. At the moment, different thoughts go through my head, about what I could do instead of studying.
 - b. At the moment, I'm considering quitting my studies.
 - c. At the moment, I can't get rid of the feeling that I should quit my studies.
3. Deliberation:
 - a. At the moment, I'm deliberating exactly what quitting my studies would mean for me.
 - b. At the moment, I collect and evaluate advantages and disadvantages of quitting my studies.
 - c. At the moment, I systematically consider what quitting my studies would mean for me compared to continuing studying.
4. Information search:
 - a. At the moment, I inform myself precisely about alternatives to studying at a university.
 - b. At the moment, I am specifically looking for information about alternatives to studying (e.g., education counsellor, employment agency, internet, acquaintances)
 - c. At the moment, I thoroughly research what the requirements are for alternatives to studying (e.g., professional training)
5. Final decision:
 - a. At the moment, I've decided to quit my studies completely.
 - b. At the moment, I'm sure that I will not continue studying.
 - c. At the moment, I'm certain that I will quit my studies

Appendix E: Demographics

Race/Ethnicity

Check all that apply:

- Hispanic/Latino origin
- White/European American
- Black/African American
- Asian
- American Indian/Alaska Native
- Native Hawaiian/Pacific Islander
- Aboriginal
- Other: _____

Gender:

- Cisgender Male
- Cisgender Female
- Transgender Male
- Transgender Female
- Prefer Not to Answer

Age Range:

- Under 18
- 18 – 24 years old
- 25 and older

Have you attended college in since Fall 2020?

- Yes
- No

What kind of school do you attend?

- Undergraduate
- Trade School
- Graduate School

What year are you in school?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate school
- Trade school

Where is your school located?

- Northwest USA (WA, OR, ID, MT, WY, AK)
- Southwest USA (CA, NV, UT, AZ, NM, CO, HI)
- Midwest USA (ND, SD, KS, NB, MN, IA, MO)
- Great Lakes USA (WI, IL, IN, MI, KY, OH)
- South USA (TX, OK, AR, LA, TN, MS, AL, NC, SC, GA, FL)
- Mid-Atlantic USA (VA, MD, DC, DE, PA, NY, NJ)
- Northeast USA (CT, MA, VT, NH, RI, ME)
- Outside of the USA

How do you attend classes primarily?

- Online (primarily online for educational experiences)
- Hybrid (time is split between online and in-person experiences on a regular basis)
- In-person (primarily in-person for educational experiences)

Appendix F: Purposive Sampling

Shareable Text Script

Hello!

My name is Patrick McLeland, a PsyD student at Northwest University.

I am reaching out to request help for a research study I have developed to understand the impact of mental health on students' decisions to drop out of college. In this post-COVID world, all the disrupted social supports and experiences with loneliness have left students distraught and looking for answers.

The reason I am reaching out to you is because I would like to request you to share my survey with any students you may know. Even if they have never discussed dropping out of school, their participation is crucial, and their access to other who may be struggling is vital.

The survey should take no longer than **15 minutes** to complete and data will be collected using a secure survey link. Though this research does not deal with any sensitive topics, students will have the opportunity to opt-out at any time.

Here is the link: TBD

My hope is that this research can offer new understanding for how to engage students and prevent further communal distress. I am grateful for your consideration for furthering scholarship in student development. Please reach out to me if you have any questions or would like any further clarification!

Grace and Peace,
Patrick McLeland
PsyD Student
5520 108th Avenue NE, Kirkland, WA 98033
xxxxxxxxxx@northwestu.edu

Appendix G: Snowball Sampling



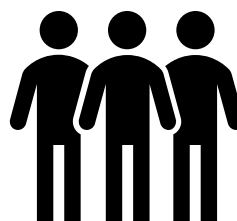
CALLING ALL COLLEGE STUDENTS

*Are you a student struggling to know if college is right for you?
Do you have difficulty knowing who your people are?
Is it easier for you to suffer in silence than to reach out for help?*



You are not alone.

In the United States, **24% of *current students*** and **41% of *first-generation students*** have seriously considered leaving college or are in danger of being dismissed.



I am conducting a study on the impact **loneliness and social support** have on **dropping out of college**.

Any student, **within the United States**, who has **attended college at any point since the beginning of the Fall 2020 semester** and **considered dropping out** is encouraged to participate!



Please follow the link to participate in this 10–15-minute study: [LINK TBD](#)



Please share this link with anyone who is struggling in the same way!

Appendix H: Demographic Charts

