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Death and Drugs: Exploring Grief and Addiction Among College Students

Alexis B. Kelly
Eastern Kentucky University, alexis_kelly34@mymail.eku.edu

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Death and Drugs: Exploring Grief and Addiction Among College Students

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Alexis B. Kelly

Mentor

Dr. Julie A. Lasslo

College of Health Sciences

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Alexis Kelly

Dr. Julie Lasslo, College of Health Sciences

Abstract

Grief and addiction are typically associated with death and drugs. However, there are many types of non-death losses and behavioral addictions that are overlooked in research and daily living. The experiences of grief and addiction affect everyone, often at many points in their lifetime. College students are at particular risk for these factors, as many changes are occurring in their environment during these years. This research aims to explore the impact and relationship of grief and addiction on college students. The main hypothesis is that grief and addiction are positively correlated with one another. To study this, a survey was distributed to a randomized sample of 1,500 Eastern Kentucky University students. From the responses, over half of students reported significant non-death losses and behavioral addictions, which displays the influence of these events. Furthermore, there was a moderate, positive correlation between the addiction level and grief severity. In all, this research supports the idea that grief and addiction can amplify each other in a feedback loop. More awareness should be brought to these topics to support those who are struggling, as no one should feel alone in their battles.

Keywords: grief, addiction, mental health, stigma, loss, survey, college students

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Dedication

To all those who are struggling, you are seen and loved. This is written for you and to you. This is also dedicated to my grandmothers, Barbara and Marsha, along with my family friend Don. None of them saw me graduate high school, but all of them would be proud of this research.

Introduction

Everyone goes through seasons of difficulties in life, which often include experiences of grief or addiction. Inevitably, all people will experience the death of someone they know in their life. Similarly, many people will be impacted at some point by addictions to drugs or alcohol, either directly or indirectly. However, despite what the title of this paper may suggest, grief and addiction are not limited to death and drugs. People can grieve over non-death losses and be addicted to behaviors. These experiences can be more common in people's lives than death and drugs, as they occur more often. For example, people can experience losses by moving to a new area, switching jobs, being diagnosed with an illness, and breaking up with a partner. When these loss events are sudden or too overwhelming, vices are used to fill the void. People start relying on behaviors such as going shopping, scrolling on social media, hitting the gym, and drinking alcohol to cope. While these may provide temporary relief, it does not last. If it is repeated too much, these behaviors become a necessity and people are dependent. Then, the negative effects come. Relationships end over drunk accidents, jobs fire those who stop showing up, and eviction notices come when rent money is lost at the casino. These create more losses and difficulty. Can you see the issue? People are experiencing a constant cycle of losses and replacements. This paper explores how different types of losses and addictions impact individuals in their everyday lives. Furthermore, this paper examines if there is a relationship between grief and addiction. If a relationship does exist, it could provide evidence of a cycle with losses and replacements. The hope is to understand more about the impact and intersection of grief and addiction, so individuals can be helped in the best way possible.

Literature Review

Grief and addiction have a significant impact on individuals and their communities. While grief is typically associated with death and addiction is associated with drugs, both of these terms have a much wider scope for people's lives. Observations suggest that grief and addiction are experienced by everyone in many different forms, often at multiple points in their lives. There are a variety of non-death losses and behavioral addictions that are not discussed heavily in research. To dive deeper, we must first understand the depth of grief and addiction in people's lives. To preface, the scope of this study will not explore the psychology or physiology of grief or addiction, which is discussed in depth by other researchers. Instead, this study will provide a basic overview of grief and addiction from current and foundational research.

Grief

As described by the American Psychological Association (APA) Dictionary of Psychology, grief is the "anguish experienced by a significant loss," which is often after the death of a loved one (VandenBos, 2007). Grief is common and a natural response after a death. However, some individuals struggle with these feelings for a long period of time and find it impeding on their lives. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, or DSM-5, describes this as prolonged grief disorder (American Psychiatric Association, 2022b). The diagnostic criteria for this includes a death in the bereaved individual's life that was at least 12 months ago and a longing or preoccupation with the deceased person. However, grief is not only experienced when someone dies. Any loss event can create these feelings of sorrow or sadness. This can include events such as breaking up with a significant other, losing a job, being diagnosed with an illness, or failing to achieve a goal. Lynne Despelder and Albert Strickland (2019) refer to these non-death losses as "little deaths." Although this term

is not to be confused with a less intense grief experience. While society may not give these losses as much weight, they are just as detrimental to someone's well-being as a death loss.

There are a variety of feelings that individuals go through when coping with a loss. Everyone has their own grief process, so it can be difficult to identify what grief is and what it looks like. On the other hand, there are some common emotions that some people feel when grieving. In the book *On Death and Dying*, Kübler-Ross (1969) has identified five of these emotions, which are commonly referred to as the five stages of grief. Kübler-Ross discovered these after her time spent with terminally ill patients. The five stages of grief are denial, anger, bargaining, depression, and acceptance. The first stage, denial, is characterized by a refusal to believe the loss has occurred. The second stage, anger, is associated with arguments and complaints about rational or irrational issues. The third stage, bargaining, is an attempt to postpone or change events by making promises to God or others. The fourth stage, depression, is the realization of the impact of loss and a sense of hopelessness. The final stage, acceptance, is about making peace with the loss. Kübler-Ross does identify these stages in a sequence, but it is worth noting that any of these emotions can occur at any time during the grief process.

Anyone can experience and struggle with grief. However, there are multiple elements that can make it difficult for college students to navigate loss events. To begin, there are many factors in the college environment that increase the difficulty in coping with loss. As explained by Fajgenbaum et al. (2012), some of these factors include the "geographic distance from home and usual support systems, academic demands, college's "carefree" social life, lack of grief support from peers, and many college campuses' limited resources for grief support" (p. 99). Not only are college students vulnerable to more intense grief, they are also fairly likely to experience it during their time at school. A seminal study from 2008 indicates that around 22 to 30 percent of

American college students experienced the death of someone close to them in the last 12 months (Balk, 2008). When considering more recent data, this number could be even higher. A study using the National Longitudinal Survey of Freshmen found that 30 to 36 percent of students reported a loss of a family member or friend in the past year (Cox et al., 2015). This same study reported that 60% of students lost at least one person in their time at college. In the National College Health Assessment, 11% of students reported experiencing a death of someone close to them negatively impacted their academic performance in the last 12 months (American College Health Association, 2023). In this same study, 25% reported having problems after the death of someone close. Since college students are at risk for negative grief experiences, it is important to understand their struggles.

Addiction

The American Psychological Association describes addiction as a "state of physical or psychological dependence" on a substance. The DSM-5 explains many of these substance use disorders, which include alcohol, caffeine, cannabis, tobacco, opioids, and other drugs (American Psychiatric Association, 2022a). However, this is not limited to substances, as many behaviors can be addictive as well. Some common behavioral addictions include shopping, sex, technology, gambling, food, and exercise. The only one of these included in the DSM-5 is gambling disorder, as it has the most research. In recent years, more studies have been conducted to analyze behavioral addictions, but the literature is still minimal. One study noticed that substance and behavioral addictions have many features in common, including the types of individuals affected, family history, neurological reward system, and treatment response (Grant et al., 2010).

There are four factors that are commonly associated with substance addictions, which are referred to as the four C's (Inaba & William, 2014). This includes compulsion, craving, controlling, and consequences. Compulsion indicates an uncontrolled need to use the substance or complete the behavior. Craving involves an obsessive desire to engage in this habit. Control means that individuals feel unable to stop or reduce their use of the substance or behavior. The last is that individuals continue this despite negative consequences, whether it is negatively impacting their health, social relationships, or finances. These four factors are not considered diagnostic criteria but are indicators of problematic use. Even though this framework was created for drug use, it can be applied to behavioral addictions as well.

Dependencies to substances or behaviors reach everyone, whether it is a mild habit or a necessary coping mechanism. In the same way as grief, addictions are especially concerning in young adults. Substance addictions primarily start in the teenage years, as 90% of individuals with substance dependence begin using before the age of 18 (Dennis & Scott, 2007). As these teenagers transition to college, it presents "a risky period for young adults as there are increased opportunities for initiating and establishing unhealthy behaviors" (Jao et al., 2019, pg. 790). Data from the 2021 National Survey on Drug Use and Health would support these claims, as binge drinking, marijuana use, and illicit drug use are highest among the young adult age group from 18 to 25 years old (Substance Abuse and Mental Health Services Administration, 2022). Another study estimates that 39.6% of young adults in college and 44.5% not attending college would classify as having a DSM-5 substance use disorder in the past year. While research on behavioral addictions is limited, there is some evidence that these addictions are also prevalent on university campuses. One study of Canadian college students by Hodgins et al. (2016) reported that two out of five participants were overeating or exercising excessively in the past month. In another study,

Adorjan et al. (2021) reported that around one-fourth of the sample of college students displayed signs of addictive internet use. This number could be even higher today, as social media use has skyrocketed in the past few years.

Furthermore, certain studies have found that addictions among college students can be associated with one another (Hodgins et al., 2022; Quedan et al., 2022). In a sample of over 2,000 young adults in college, Arterberry et al. (2020) reported that 14% of college students had multiple substance use disorders in the past year. One study in particular found that co-occurring addictive behaviors indicated a higher severity of use (Kairouz et al., 2018). More specifically, the authors discovered that gambling patterns among college students were overwhelmingly associated with higher substance use. These studies are alarming, as college students who are struggling with addictive behaviors are likely to be dealing with multiple dependent habits at once.

Commonalities

At first thought, grief and addiction may seem like two unrelated life experiences. Even so, there are many shared characteristics between the two variables. These similarities include mental health, stigma, loneliness, social support, and chronicity. The latter three influence mental health outcomes, which has the potential to be a confounding variable between grief and addiction. The following paragraphs discuss these similarities between grief and addiction. It should be noted that each of these topics could have their own research study, so information will be limited to provide only a brief overview. These similarities use examples that are primarily from death losses and substance addictions because research is most substantial in these areas.

Both grief and addiction are associated with poor mental health status. In a survey of college students at two Midwest universities, experiencing death or another nondeath loss was "consistently and positively associated with mental health difficulties" (Cupit et al., 2016, p. 503). This association is also observed with addictive behaviors. In a study by Jao et al. (2019), students who fell into the high alcohol and drug use group had the greatest prevalence of all the mental health categories, which were mental health diagnosis, psychological symptoms, and suicidal/self-harm behaviors. This same association with poor mental health has also been noted in studies of prescription drug use as well (Harries et al., 2018; Lo et al., 2013). College students are known to have poor mental health in general, which explains the association between all of these factors. As stated in the American College Health Association's (2023) National College Health Assessment, 52.9% and 23.4% of respondents had moderate or serious psychological distress respectively. Additionally, an analysis of the Healthy Minds Study found that over 60% of college students met the criteria for at least one mental health problem (Lipson, 2022). It can be speculated that poor mental health makes it more difficult to cope with stressful loss events and worsens addictive behaviors.

Both grief and addiction are stigmatized. To begin, there are certain causes of death that are stigmatized, which can make it difficult for the grieving person. Turnbull (2018) writes how bereaving someone who has died from alcohol and/or drugs is disenfranchised grief. This is a type of grief that is not socially accepted and can lead to guilt and shame. Disenfranchised grief is also experienced by suicide loss survivors. These individuals can feel alienated or embarrassed by this loss in their life, even to the point where they may lie about how their loved one died (Goulah-Pabst, 2023). Next, substance addictions are stigmatized by society. Many people see addictions as a choice, even though they are a result of changes in the brain that make substance

use compulsive (Volkow, 2020). A study by Wood and Elliot (2020) found that White college students had more negative views related to White and/or working-class people who used opioids compared to Black and/or middle-class people who used opioids. This stigma can prevent individuals from seeking treatment, which can lead to worsening mental health and continued substance use. Behavioral addictions are stigmatized along with substance use addictions. In a survey of American adults by Lang and Rosenberg (2017), participants were generally unwilling to affiliate with people who had any of the following addictions: pornography, gambling, heroin, marijana, and alcohol. In all, this stigma can prevent individuals from seeking therapy, going to treatment, or discussing their difficulties with a trusted person.

The stigma of grief and addiction can lead to feelings of loneliness and isolation among affected individuals. Firstly, those who experience grief and addiction feel isolated when facing these struggles. Vedder et al. (2022) describes loneliness as a core experience associated with grief. In this article, the authors compile research on bereavement and found that most studies observed moderate or high prevalence of loneliness among their sample. College students in particular feel isolated from their peers when experiencing grief (Servaty-Seib & Fajgenbaum, 2015). Additionally, Pitman et al. (2020) found that people who report being lonely after a sudden bereavement were more likely to make a suicide attempt. These feelings of loneliness are also common among people with addictions. Populations struggling with substance use feel lonelier than the general population (Ingram et al., 2020). In a study of youth and young adults (14-24) in Michigan, Bonar et al. (2022) found that patients with higher alcohol and cannabis use severity had increased loneliness. This lack of perceived social support can lead to a decline in mental health and further prevent someone from seeking help. This is problematic, as social support is noted as a positive factor for both grief and addiction.

Both grief and addiction are mitigated by the presence of social support. For grief, social support can be helpful if it is provided in the right way. In a study by Lipp and O'Brien (2022), social support from family was a positive predictor of growth after bereavement. In another, mixed-methods study by Cacciatore et al. (2021), participants rated their satisfaction with social support from different individuals or groups. As a whole, the sample was dissatisfied with the support they received. Although, the qualitative responses describe both desires for better social support and comments on ways people have been helpful. Furthermore, Steiner (2006) describes how grief groups are not used by many, but are beneficial for those who attend. Participants noted that it was helpful to talk to someone who could relate and understand their experiences. These studies display the positive impact of social support for grieving people, in both formal and informal social settings. In a similar thread, Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) groups have also been successful in helping individuals recover from substance addictions. In a review of literature, Kelly et al. (2020), notes that Alcoholics Anonymous groups were beneficial in many areas of recovery such as abstinence, drinking intensity, and addiction severity. Eisenbarth (2020) found that social support was negatively correlated with stress and alcohol use in a sample of college students. In a study of the National Epidemiologic Survey on Alcohol and Related Conditions, Jodis et al. (2023) observes social support as a potential protective factor for alcohol use disorder symptoms. In short, social support can improve the outcomes of individuals who are experiencing grief or addiction.

Long-term social support is key because grief and addiction are both characterized as chronic. While people can learn to live with grief and can recover from addictions, the battle with these is long-lasting. In a powerful TED Talk, McInerny (2018) uses an example of her own life to demonstrate how people do not move on from grief, they move forward. McInerny lost her

husband in 2014 due to cancer and she describes how he is still present with her always, even in her current marriage. She explains that her life is just one example of the losses that people are marked by for the rest of their lives, even if it may appear like they have moved on from the outside. One analogy used to describe grief uses a ball in a box with a pain button inside (Herschel, 2017). In the beginning, the ball is big and you cannot move the box without hitting the pain button. Over time, this ball gets smaller and hits the pain button less often. However, when it does, it hurts just as much. For most, the ball never goes away, it simply gets small enough to only hit the pain button occasionally. This illustrates how grief from losses may never completely heal, but people can still move forward. In the same way, people living in recovery may continue to feel temptations to use drugs again. Dennis and Scott (2007) describe how many people in recovery go through cycles of relapse and treatment. They mention that addiction is a chronic but treatable condition. Moreover, addictions can be likened to other chronic conditions. McLellan et al. (2000) explains how adherence to treatment for drug addictions is similar to other chronic illnesses such as diabetes, asthma, and hypertension. In various studies cited in their article, individuals with any of these conditions are likely to struggle with medication regimen and/or require medical care after symptoms return. Individuals with grief or addiction may struggle on and off with these throughout their lifetime. This is not to claim that recovery is not possible, but that the remnants of these experiences will always be present. Grief and addiction are continual battles that individuals face when coping with losses and dependencies.

Intersectionality

Despite the robust literature on grief and addiction in their separate fields, few studies have explored how these two variables intersect with each other. Some sources do begin to connect grief and addiction, but make only one-directional associations. Firstly, there are sources

that explain how addictions can lead to grief outcomes. This can happen either through grief experienced by the family of a person who has overdosed or an individual's personal grief due to financial or social losses from active use (Bethune Scroggs et al., 2022; Turnbull, 2018; Valentine et al., 2016). Next, some sources begin to link intense grief as a potential trigger for addictions. A study by Lipp and O'Brien (2022) found that avoidant-emotional coping strategies (such as distracting oneself), had a strong positive association with complicated grief outcomes. This is supported in another survey of young adults at two universities, as participants who experienced a violent loss were more likely to report consuming alcohol in the past 30 days (Eddinger et al., 2019).

While this previous research is promising in understanding the relationship between these variables, none of these studies consider non-death losses or behavioral addictions. Additionally, these studies only suggest one-directional relationships: that addictions can create grief or grief can provoke addictions, but not both. The hypothesis for this paper is that both are occurring, and often in a variety of forms. Substance and behavioral addictions could contribute to losses in a person's life through unintended consequences from their addiction. This would lead to grief over those losses. Grieving death and non-death losses requires coping with intense emotions, which could onset the beginnings of an addiction or lead to a relapse of a previous issue. In all, this paper aims to explore the relationship between grief and addiction in college students.

Research Questions

1. Is there a linear correlation between grief and addiction?
2. Do grief scores differ by addiction level?
3. Do people with death losses and non-death losses differ in the strength of their grief?
4. Do people with substance and behavioral addictions differ in their addiction severity?

Methods

To study grief and addiction, a survey was distributed at Eastern Kentucky University (EKU), a public institution with over 15,000 students (Office of Institutional Research, 2023). This survey was conducted using the university sponsored Qualtrics program. IRB approval was received in the fall of 2023 and data collection was conducted in the spring of 2024. The distribution of the survey began in January of 2024 and was delivered by email. This time of year was the most appropriate for a higher response rate, as classes are less rigorous at the beginning of the semester. The survey portion was selected through a simple random sample of 1,500 current students, which included both undergraduate and graduate degrees. The survey was titled, "EKU 2024 Loss and Behavior Survey," as the word "addiction" would have a negative connotation to readers and lead to less honest responses.

The survey contained three sections with a total of 68 questions. The first section assessed the quality of life and mental health of participants with questions from the World Health Organization (2012) Quality of Life Brief Version, or WHOQOL-BREF. This section also asks for two demographic factors, age and gender. These were the only chosen demographics, as the survey subject matter is sensitive and too many identifying questions could deter responses. Regardless, these demographics will provide a basic idea of how representative the survey sample is of the population.

The second section assessed grief with a shorter version of the Reactions to Loss (RTL) Scale, which was developed by Cooley, Toray, and Roscoe (2010). First, this section begins by having respondents identify any losses that may have occurred in the past five years out of a list of 18 events. The original study focused on the past 12 months, but this period was extended for students to share experiences that may be a little further in the past. A time period of 5 years was

selected as it would include students' time in college and/or their transition to college. Next, participants identify the loss event that impacted them the most during this time period. This chosen loss event is then used for the loss scale, which is a series of statements on common grief emotions and thoughts. The Reactions to Loss Scale in Cooley, Toray, and Roscoe's study had 65 items, but it was narrowed down to 18 for the purpose of this study. These statements represent various aspects in the five stages of grief created by Kübler-Ross (1969).

The third section assessed addiction with an adapted version of the Screener for Substance and Behavioral Addictions (SSBA) created by Hodgins, Wilson, and Schluter (2022). This study focused on ten addictive substances or behaviors: alcohol, caffeine, tobacco, illegal/prescription drug use, gambling, shopping, technology, overeating, sexual activity, and exercise. Four statements are given and participants are asked to rate how often they felt this statement applied to each behavior. Each statement assesses for one of the four C's of addiction mentioned earlier. To illustrate, the statement "I did it too much" relates to compulsion, "Once I started, I couldn't stop" refers to control, "I felt I had to do it in order to function" represents craving, and "I continued to do it, even though it caused problems" displays consequences. The second and third sections on grief and addiction were randomized in case participants experienced survey fatigue. Permission was provided for all instruments.

To measure internal reliability, Cronbach's alpha was calculated. The overall survey was found to be highly reliable (65 items; $\alpha = .84$). The 6 item quality of life section ($\alpha = .75$), the 19 item grief section ($\alpha = .68$), and the 40 item addiction section ($\alpha = .90$) were all acceptable in terms of reliability. The two demographics questions and the question to identify all loss events were removed from the calculations. These were removed due to missing values in the demographics and high variability in the loss events people had experienced.

Results

Logistics

There were 348 total responses to the survey, 332 of which were valid. However, only 272 of these responses were complete, so only these responses were used for analysis. A response was considered complete when the respondent had filled out all of the second and third sections, which assessed for grief and addiction experiences. The grief and addiction sections were scored with scales created prior to analysis. For grief, a scale of 18–90 is used for the chosen loss experience. For addiction, a scale of 0–16 was used for each addiction. These scales are similar to the scales used in the studies where the survey questions originated (Cooley et al., 2010; Hodgins et al., 2022). These scales were each divided into four categories: none, mild, moderate, and severe. This was done to aid in the reporting of descriptive statistics and support statistical analysis. The distinctions for these scales are displayed in Table 1. The data was analyzed using version 4.3.2 of the R programming language where *p* values of less than 0.05 were considered statistically significant (R Core Team, 2023). All figures, with the exception of Figure 9, were created in R using the ggplot2 package (Wickham, 2016).

Table 1

Grief and Addiction Scales

Grief Score		Addiction Score	
18-36	Minimal Grief	0-3	No Addiction
37-54	Mild Grief	4-7	Mild Addiction
55-72	Moderate Grief	8-11	Moderate Addiction
73-90	Severe Grief	12-16	Severe Addiction

Demographics

The demographic characteristics are limited to only age and gender identity. The average age of participants was 25.99 years old (*SD* = 9.4) and the median age was 22 years old (*IQR* = 10). The participants ranged from 18 to 74 years old. The majority (73%) of respondents were female, with a smaller portion being male (24%) or identifying with another gender (3%). While the proportion of female students may be slightly higher than anticipated, it is still similar to the EKU student population. EKU has a higher enrollment for female students than male students, which is likely contributing to this result. According to the most recent data from Fall 2023, 61% of EKU's annual enrollment was female (Office of Institutional Research, 2023). Overall, it appears that the sample is representative of the population based on these two factors. As a result, the findings drawn from this sample will reflect the larger population of college students.

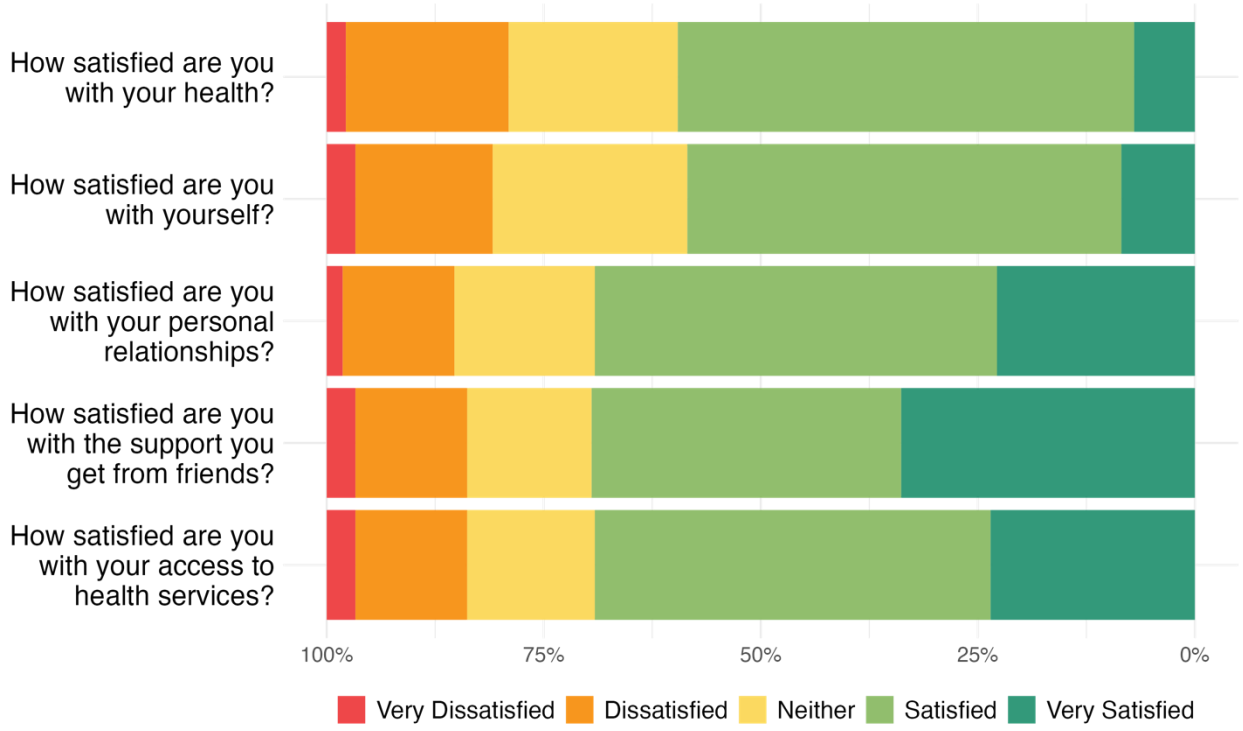
Quality of Life

The first section of the survey assessed quality of life using a few questions from the WHOQOL-BREF. The first question here asked students to rate their overall quality of life. Majority of respondents reported either a good (54%) or very good (29%) quality of life. The remaining portion of respondents reported neither poor nor good (15%) or poor (2%) quality of life. None of the participants selected that their quality of life was very poor. Next, five additional questions were asked regarding satisfaction with health, yourself, personal relationships, support from friends, and access to health services. The results from these are displayed in Figure 1. In general, it appears that the majority of respondents were either satisfied or very satisfied with these aspects of their lives. However, it is important to note that around 15% to 20% of respondents were dissatisfied or very dissatisfied with these aspects, which is

equivalent to 3 or 4 people out of every 20 individuals. In all, it appears that the sample has an overall positive outlook on their life and its associated factors.

Figure 1

Satisfaction with Quality of Life



Grief

The next section of the survey assessed the strength of grief experiences. Participants experienced a variety of loss events in the past five years; these events are displayed in Figure 2. The most common loss events were moving to a new residence or location (68%), losing a friendship or friend group (67%), the death of an extended family member (66%), or the death of a pet (50%). Some other notable loss events that some participants experienced were breaking up with a significant other (44%), serious illness or injury of a family member (40%), or a major change in financial status (32%). When participants identified the loss event with the most impact on their life, there were five events mainly chosen. These were the death of an extended

family member (18%), breaking up with a significant other (11%), losing a friendship or friend group (10%), and the death of a parent or sibling (9%), or the death of a pet (6%). These percentages are visualized in Figure 3. The rest of the loss events only represented 5% or less of participants each. Out of the most significant losses, 59% of respondents chose a non-death loss event. This is consistent with the findings of Cooley et al. (2010), where 68% of their participants chose a non-death loss as their most significant event in the last 12 months. Next, the grief scores were calculated for each person. The average score was 53.52 (*SD* = 10.89) with a median of 52 (*IQR* = 15). These scores ranged from minimal (4%), mild (51%), moderate (42%), or severe (4%) in classification.

Figure 2

Most Common Loss Events Experienced by Participants

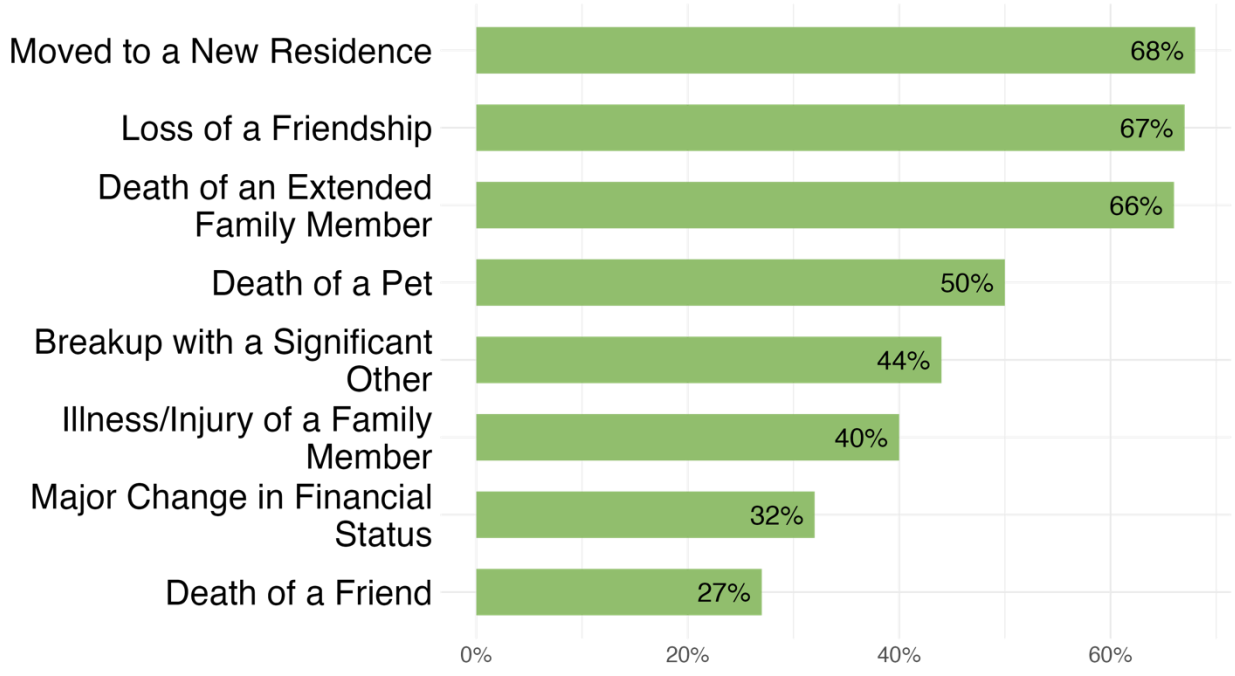
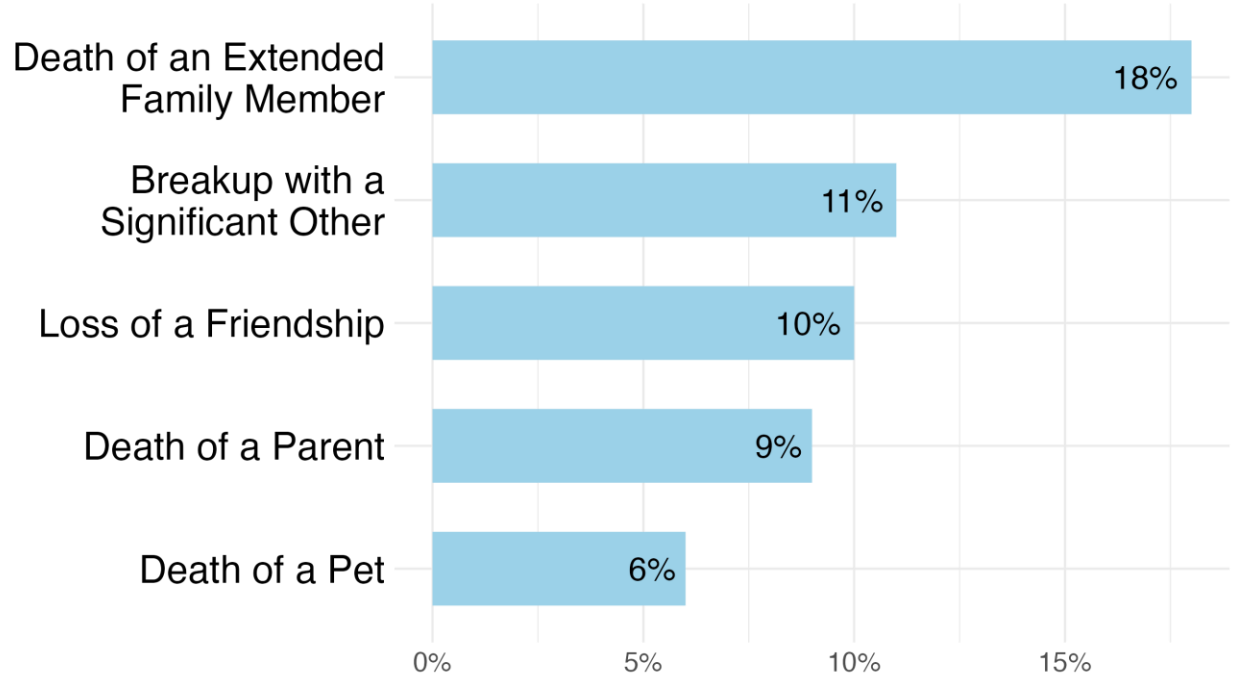


Figure 3

Most Significant Loss Events Chosen by Participants



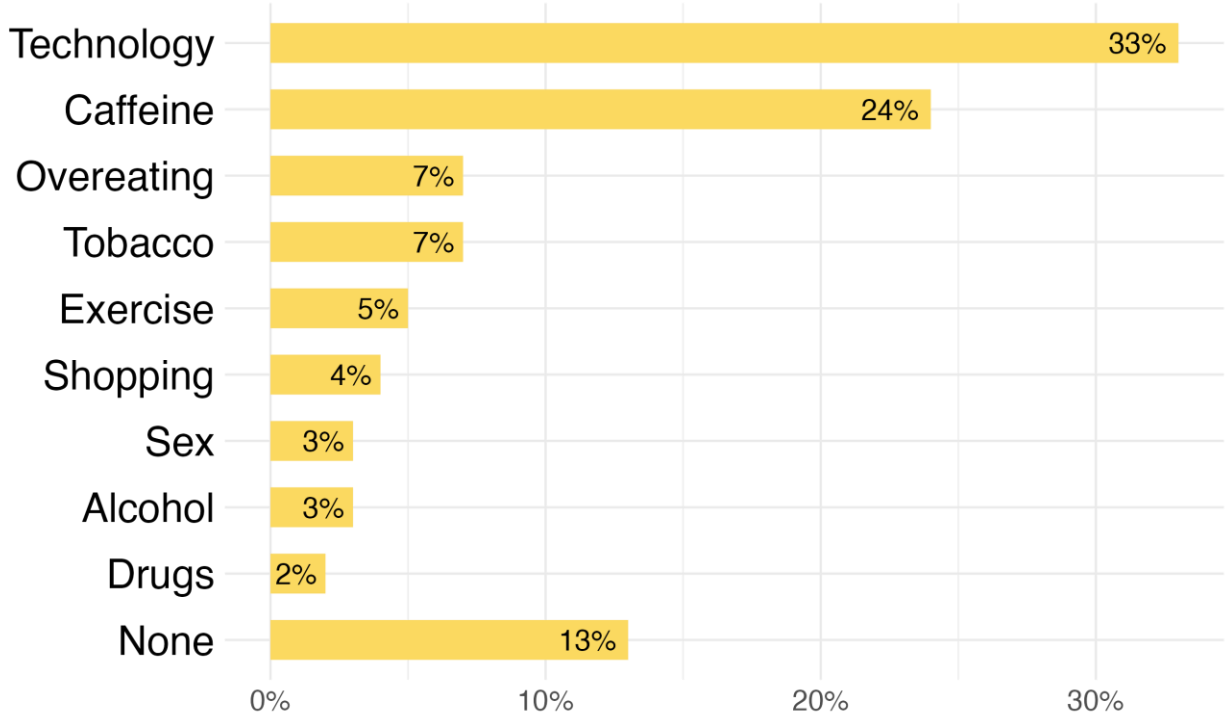
Addiction

The final section of the survey assessed the severity of addictive behaviors. Over 80% of participants fell into the no addiction categories for alcohol, tobacco, drugs, gambling, sex, and exercise. It appears that less individuals overall are struggling with these behaviors or substances. Next, the highest addiction scores were determined for each person. The average score was 8.65 (*SD* = 4.24) with a median of 8 (*IQR* = 7). These scores ranged from mild (29%), moderate (32%), or severe (26%) in classification. Only a small portion of participants had no classifying score in any addictive behavior (13%). The most common addictions among the highest scores were technology (33%) and caffeine (24%). Using tobacco (7%) and overeating (7%) were also notable among the highest addiction scores. The entire list of highest addiction categories are presented in Figure 4. None of the participants had their highest score in the

gambling category. Among the highest scores, 52% of participants had the most severe dependence to a behavioral addiction.

Figure 4

Highest Addiction Score Categories for Participants



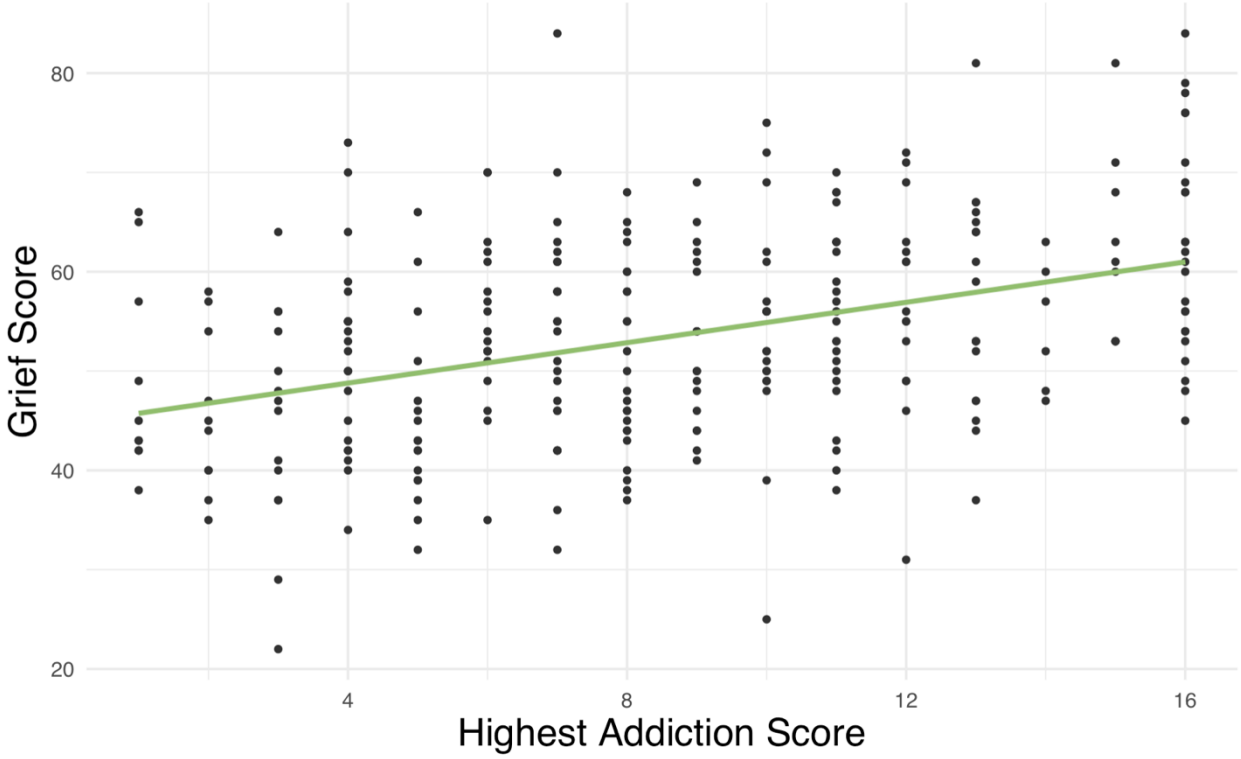
Hypothesis Testing

To analyze the research questions, statistical tests were conducted. Since parametric tests were used, assumptions must be met prior to analysis. Firstly, the sample was randomly selected. Since $n = 272$ is < 10% of the population, it is reasonable to assume the samples are independent of each other. The sample is also sufficiently large ($n >= 30$), so the sample means will be normally distributed, as described by the central limit theorem. Therefore, the sample is generally appropriate for parametric hypothesis testing. Test-specific assumptions will be mentioned with their respective tests.

The first test is performed to determine if there is a linear relationship between grief and addiction scores. Using Pearson's correlation test, there is a moderate positive correlation between grief and addiction scores, $r(270)=.3958$, $p < .001$. There is enough evidence to reject the null hypothesis and conclude that there is a linear correlation between grief and addiction. This relationship is represented visually in Figure 5. While the association is not strong, it appears that grief scores tend to increase as addiction scores increase.

Figure 5

Scatterplot of Grief and Addiction Scores



The second test asks if the strength of grief experiences differ by the level of addiction. An ANOVA (analysis of variance) test was used here, which assumes a homogeneity of variances. Levene's test indicated equal variances, $F(3, 268) = 0.2735$, $p = .8445$, so the assumption was met. A One-Way ANOVA test, there is a significant main effect on grief scores

by the addiction level, $F(3, 268) = 14.56$, $p < .001$. There is enough evidence to reject the null hypothesis and conclude that there is a difference in the strength of grief experiences by the addiction classification. Next, a post-hoc test was conducted to understand the relationship further. A Tukey test was performed and there were significant differences between the addiction groups: none and moderate, none and severe, mild and severe, and moderate and severe. These differences and their *p* values are listed in Table 2. The mean grief scores by addiction level displayed in a bar chart in Figure 6. It appears that the grief scores increase as the addiction goes up, with no addiction ($M = 46.29$, $SD = 10.01$) as the lowest, followed by mild ($M = 51.50$, $SD = 10.45$), then moderate ($M = 53.42$, $SD = 9.54$), and finally severe ($M = 59.29$, $SD = 10.58$).

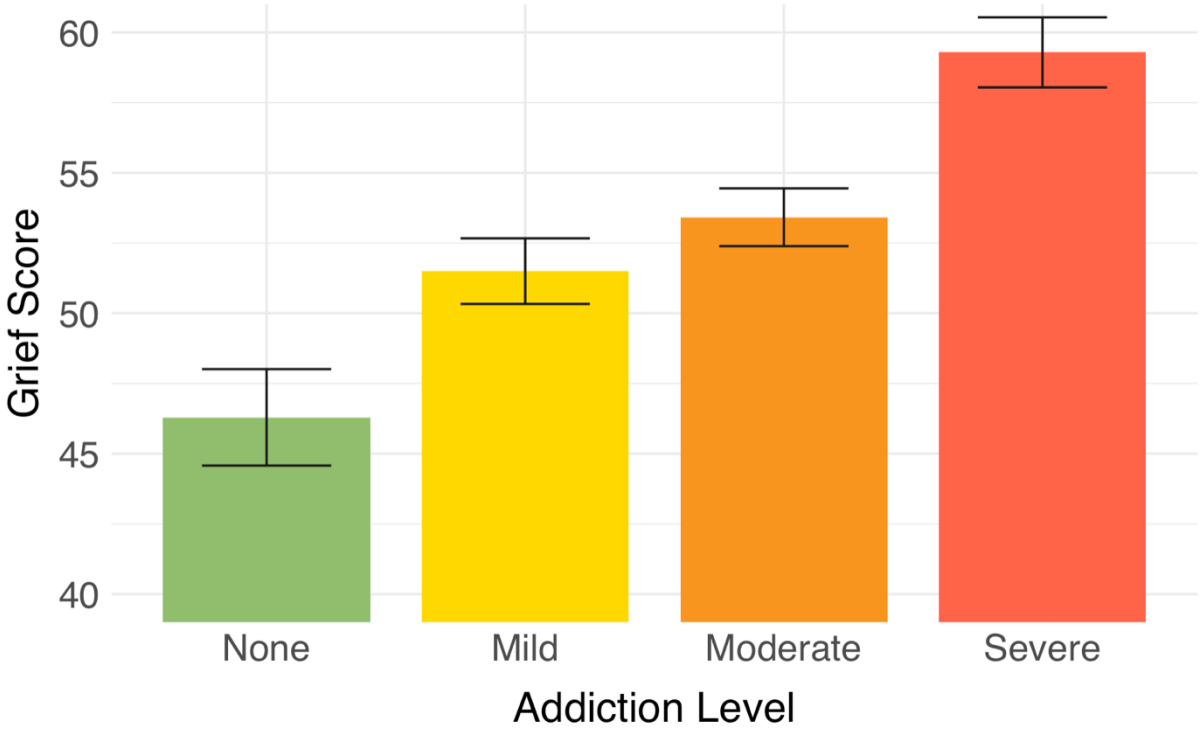
Table 2

Tukey Test Results

			95% Confidence Interval	
Group	Mean Difference	Significance	Lower Bound	Upper Bound
None-Mild	-5.21	.0614	-10.58	0.17
None-Moderate	-7.12	.0034	-12.44	-1.81
None-Severe	-12.99	.0000	-18.46	-7.54
Mild-Moderate	-1.92	.6168	-6.00	-2.16
Mild-Severe	-7.79	.0000	-12.06	-3.53
Moderate-Severe	-5.87	.0020	-10.07	-1.68

Figure 6

Bar Chart of Grief Scores by Addiction Level



The third test asks if there is a difference in the strength of grief experiences between those with death (n = 112) and non-death (n = 160) losses. To conduct a two-sample t-test here, homogeneity of variances is needed. Levene's test indicates equal variances, $F(1, 270) = 2.6774$, $p = .1029$, so the assumption was met. A t-test displays that there was not a significant effect for loss type, $t(270) = 0.59$, $p = .56$. There is not enough evidence to reject the null hypothesis and conclude that there is a difference in the grief scores between individuals with death and non-death losses. The mean grief scores for each group is represented in Figure 7. The grief scores for death losses (M = 53.98, SD = 10.13) and non-death losses (M = 53.19, SD = 11.41) were nearly the same.

Figure 7

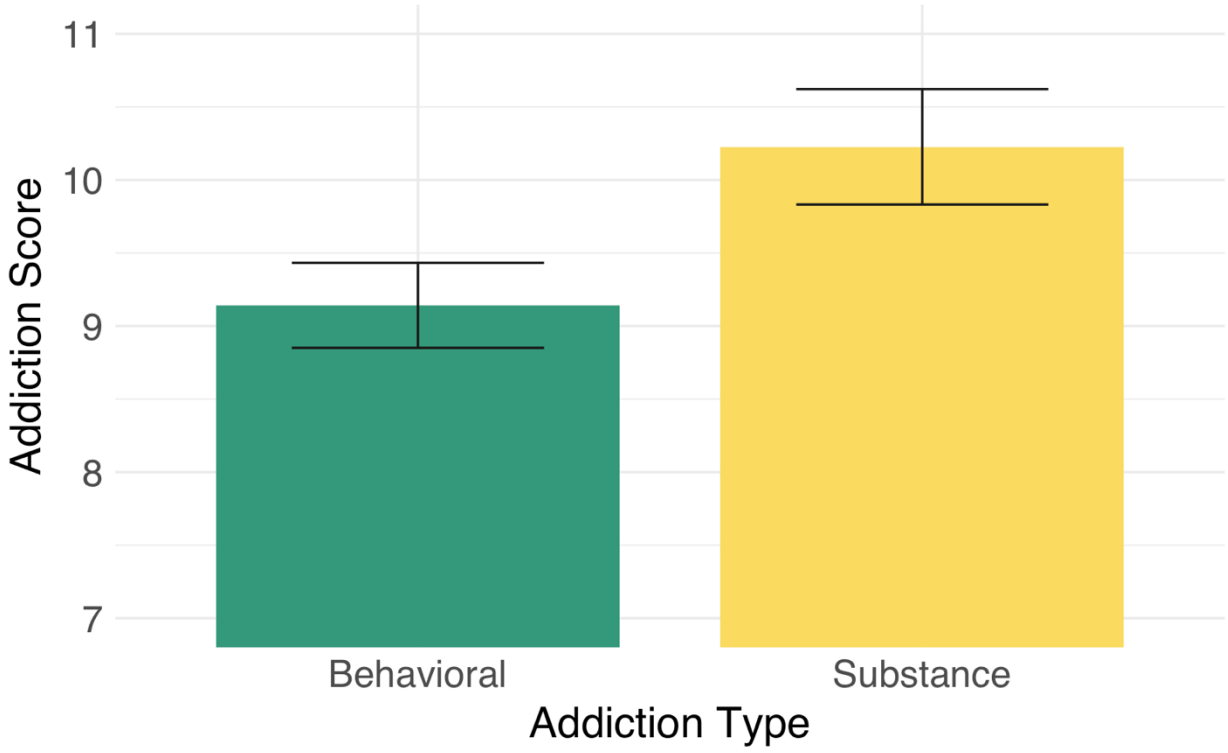
Grief Scores Between Death and Non-Death Losses

The fourth test asks if there is a difference in the severity of addiction scores between individuals with behavioral addictions (n = 141) and substance addictions (n = 97). For a two-sample t-test, homogeneity of variances is required. Levene's test indicates equal variances, $F(1, 236) = 1.9545$, $p = .1634$, so the assumption was met. Individuals who classified in the no addiction category (n = 34) were excluded from this test. A two-sample t-test indicates that there is a significant difference in the scores by addiction type, $t(236) = -2.26$, $p = .02$. There is enough evidence to reject the null hypothesis and conclude that there is a difference in addiction severity between behavioral and substance addictions. The mean addiction scores for the groups are displayed in Figure 8. The substance addiction scores (M = 10.23, SD = 3.89) are higher than the

behavioral addiction scores (M = 9.14, SD = 3.46) by about one point on a sixteen-point scale. However, the effect size measured by Cohen's d is small (d = 0.30).

Figure 8

Addiction Scores Between Behavioral and Substance Addictions



Discussion

Findings

The purpose of this study was to increase understanding of the relationship between grief and addiction while using a sample of college students. The sample was fairly representative of the student population at EKU with regard to age and gender, which were the only two demographics collected. The majority of participants self-reported their quality of life as good or very good in all aspects included in the survey. These results were unusual, as it would be expected that more participants would rate their quality of life lower. Since mental health

problems are prevalent among college students, the information from these questions could be inaccurate. Participants' responses could be an overestimation, as individuals may feel better about their life on that particular day. It is unclear how accurate these responses may be.

The first research question explores if there is a linear relationship between grief and addiction. In this sample of college students, there was a moderate, positive correlation between the scores of the grief and addiction measures. As the strength of an individual's highest addiction increases, it appears that their grief experience increases as well. While this correlation is not particularly high at 0.3958, it should be noted that there are many factors that could contribute to the experiences of grief or addiction. If we could account for potential confounding variables such as mental health, perceived stigma, and social support, then we could likely develop a better picture of the data.

The second question asks if there is a difference in the strength of grief experiences by the level of addiction. An ANOVA test found that there was a significant difference in the grief scores by the addiction level categories. Upon further analysis, the grief scores tend to increase as the level of addiction increases. The Tukey test indicates that there is not a significant difference between each of the levels; however, it does display a gradual increase in grief scores. This further supports the correlation found in the first research question.

Next, the third research question asks if there is a difference in the strength of grief experiences between individuals who chose their most significant experience as a death loss and those who chose a non-death loss. There was not a significant difference noted between the grief scores of participants with death or non-death losses. It appears that the impact of grief in both death and non-death losses is similar. This is understandable, as both death and non-death losses

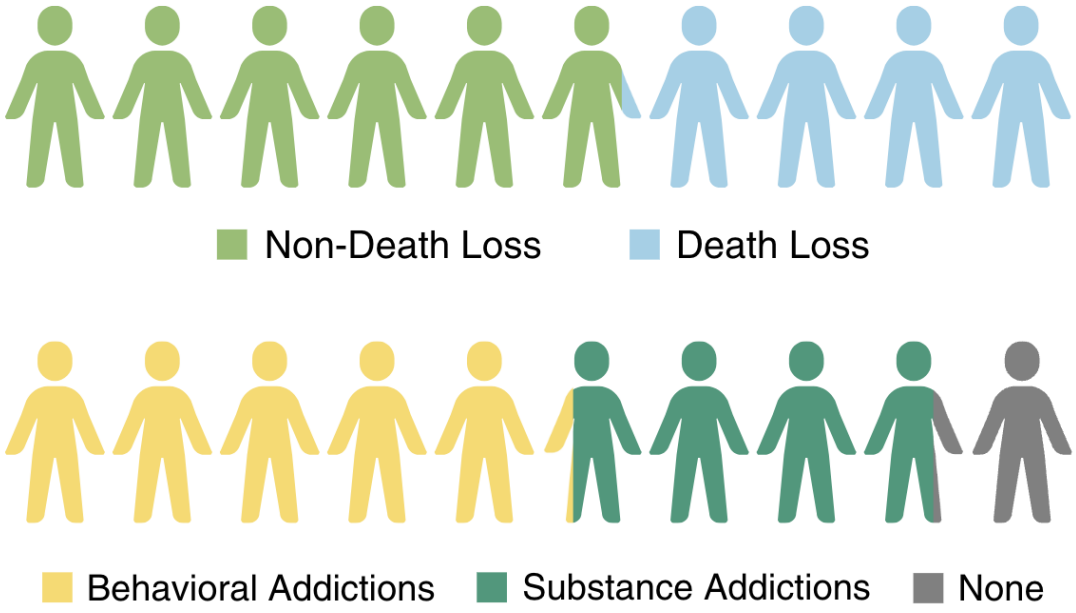
have a considerable impact on people's lives. While it could be thought that death losses would be more significant, this research indicates that non-death losses are just as impactful.

Lastly, the fourth research question asks if there is a difference between the severity of addiction between individuals with behavioral addictions and those with substance addictions. There was a significant difference between behavioral addiction and substance addiction scores, with substance addictions being about a point higher on a 16 point scale. The effect size here was small, so this difference does not have outside applications. Even though this is not a large difference, it does represent how the physical dependence of substances could lead to stronger addictions. Since behavioral addictions were still close in score to substance addictions, this displays the power that psychological dependance can have on its own. More research would need to be conducted to learn how behavioral and substance addictions compare, as the results from this study are not conclusive.

It is also worth noting that non-death losses and behavioral addictions were more common than their counterparts, as displayed in Figure 9. Around 6 out of 10 college students chose one of the non-death losses as their most significant grief experience. This is compared to around 4 in 10 who chose a death loss. Similarly, over 1 in 5 people had their highest score in a behavioral addiction, while less than 1 in 4 had their highest score in a substance addiction. This stresses the importance of future research regarding non-death losses and behavioral addictions, as they are impacting a majority of college students.

Figure 9

Proportions of Grief and Addiction Types Among Participants



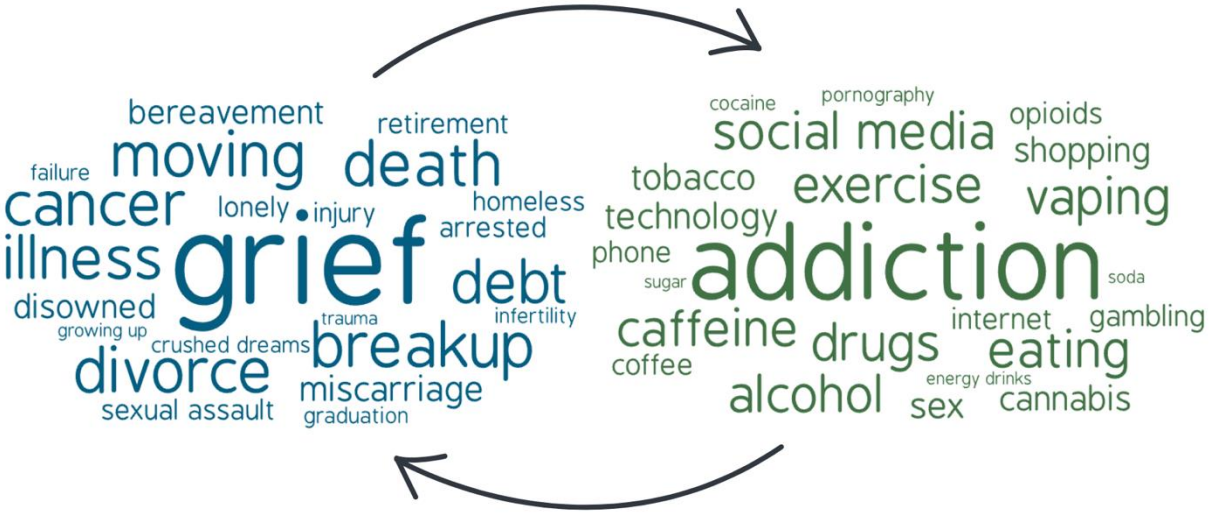
Implications

The results of this study provide some key notes on grief and addiction. First, it provides evidence of a relationship between grief and addiction, which has not been researched previously. There appears to be a moderate correlation between grief and addiction severity. While the information here cannot prove a causal relationship, there is considerable evidence to suggest this. The theory following this study is that grief and addiction are in a positive feedback loop. Everyone will experience losses throughout their life, whether it is the death of a loved one or another non-death loss. As individuals go through losses in their lives, they may cope with behaviors or substances. Eventually, an overreliance on behaviors or substances to cope with loss can lead to the development of addictions. As these dependencies become more severe, it can lead to negative outcomes in a person's life, which often result in losses. From there, the cycle can repeat again. While many people may not develop grief or addiction disorders, it is thought

that everyone experiences this cycle on some level. The basic theory of this feedback loop is presented visually in Figure 10. Any of the losses can lead to addictive behaviors to cope with strong feelings of grief; any of the addictive behaviors can create negative consequences of loss.

Figure 10

Feedback Loop Between Grief and Addiction



Next, this study increases knowledge on how grief and addiction impact college students. Both non-death losses and behavioral addictions were more common than death losses and substance addictions, respectively. This indicates that grief and addiction experiences could be impacting many more college students than researchers have previously indicated, as those studies usually only focus on death losses and substance addictions. As a result, it is possible that all college students are impacted by grief or addiction in some way during their time in school. This may provide some explanation to the current mental health crisis on college campuses, as students are experiencing a myriad of troubles (Lipson, 2022).

Finally, this study could be used to provide better support to college students. Psychology services should be readily available and accessible to students on college campuses at no

additional cost to the student. In addition, it could be beneficial to have support groups so students can share their grief and addiction experiences. As of the Spring 2024 semester, there are group therapy sessions offered at the sample university (EKU) for students who are coping with grief from a death loss and students who are impacted by family substance use. This is a great first step to helping college students navigate these experiences, but it could be expanded upon in the future.

Limitations

There are a few limitations to this study that could be improved upon in future research. To begin, the survey questions related to quality of life may not have been the best measure for this survey. Even though it appears that many college students are negatively affected by grief and addiction, it seems that most students still report a good quality of life. It is possible that students are still able to have a positive outlook on their lives while experiencing grief and addiction. However, it seems that students could be overestimating their quality of life. Another questionnaire with more specific questions related to mental health would be beneficial. This would also allow for exploration in mental health as a confounding variable between grief and addiction outcomes.

Another limitation of this study is the response rate. Only 23% (n = 348) of people in the random sample completed the survey, with only 18% (n = 272) being valid responses. This likely occurred because the survey was only open for approximately two weeks. Furthermore, the survey was sent to university emails, where the message may have been viewed as spam or ignored entirely. Extending the collection period and sending out multiple follow up emails could increase the response rate for subsequent studies. Offering incentives would not be an

ethical approach, as participants should not be coerced to share private information related to grief and addiction, even in an anonymous format.

The final limitation to note is that the answers to the survey are self-reported. College students may not feel comfortable sharing private information, especially since this survey asks personal questions related to grief and addiction experiences. This could explain why the response rate and completion rate of the survey was lower than anticipated. The anonymous nature of the survey likely helped students feel more comfortable in sharing, so some of this response bias is mitigated.

Future Research

This study sheds light into common difficulties among college students. It appears that many individuals are struggling with non-death losses and behavioral addictions, which are not addressed enough in research. More research should be conducted to learn how people are impacted by these experiences, as they are significantly impacting many college students. Likewise, more research should also be conducted to learn about the relationship between grief and addiction. This study has noted an association between the two experiences, but further information is needed to understand how they correlate. Finally, more research should be conducted with other populations. Even though the results of this study can only be generalized to college students, it is likely that adults could be cycling through grief and addiction. It would be beneficial to research grief and addiction with this group to see if the relationship is still present. In all, there are many future avenues of research that could be explored in the fields of grief and addiction.

Conclusion

Grief and addiction are complicated life experiences that impact everyone. Death or non-death losses, along with substance or behavioral addictions, can disrupt lives and take a toll on individuals' mental health. This study displays the widespread impact of these factors on college students' lives. Furthermore, this study discovers a potential relationship between grief and addiction, since the two variables have a positive correlation. The statistical evidence and reasoning in this paper point to a feedback loop between grief and addiction. It appears that grief and addiction can amplify the experiences of each other. This is problematic, as college students who struggle with one of these factors is likely struggling with the other factor as well. Consequently, it is necessary that awareness is brought to this topic and the stigma is broken. If people can lean on those around them for support, the pain of grief and addiction can be alleviated.

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