Distribution Agreement

In presenting this thesis as a partial fulfillment of the requirements for a degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis in whole or in part in all forms of media, now or hereafter know, including display on the World Wide Web. I understand that I may select some access restrictions as part of the online submission of this thesis. I retain all ownership rights to the copyright of the thesis. I also retain the right to use in future works (such as articles or books) all or part of this thesis.

Carson Bohl 04/05/2023

Mental Health in Academia: Examining the Prevalence of Psychological and Institutional Correlates of Mental Wellbeing in Emory University Undergraduate Students

by

Carson Bohl

Dr. Lauren Christiansen-Lindquist, PhD, MPH

Advisor

Human Health

Dr. Lauren Christiansen-Lindquist, PhD, MPH

Advisor

Dr. Jeb Jones, PhD, MS, MPH

Committee Member

Dr. Amanda Freeman, PhD

Committee Member

2023

Mental Health in Academia: Examining the Prevalence of Psychological and Institutional Correlates of Mental Wellbeing in Emory University Undergraduate Students

by

Carson Bohl

Dr. Lauren Christiansen-Lindquist, PhD, MPH

Advisor

Human Health

An abstract of

a thesis submitted to the Faculty of Emory College of Arts and Sciences

of Emory University in partial fulfillment

of the requirements of the degree of

Bachelor of Arts with Honors

Human Health

2023

Abstract

Mental Health in Academia: Examining the Prevalence of Psychological and Institutional Correlates of Mental Wellbeing in Emory University Undergraduate Students

By Carson Bohl

The poor mental health of adolescents and young adults is increasingly recognized as a public health crisis. College students, in particular, are developmentally vulnerable to psychological distress and face distinct mental health challenges, including the process of adjustment and academic stressors. Recent work suggests that the prevalence of mental illness and other psychiatric outcomes may be increasing in college students, reflecting a substantial mental health burden on college campuses. These challenges arise in a developmental period that is critical for the formation of identity and self-regulatory capabilities, as well as healthy habits and behaviors that can improve psychological wellbeing and promote resilience. Thus, universities face a difficult challenge to effectively respond to students' mental health needs while delivering a high-quality education. Given the importance of emerging adulthood and the context of academia, this investigation analyzes the prevalence of psychological and institutional factors related to students' mental wellbeing in a sample of undergraduate students at Emory University. Respondents disclosed a number of conditions detrimental to mental health: depression (34%), anxiety (40%), burnout (87%), imposter syndrome (73%), self-harm (42%), and suicidal ideation (29%). A limited number of participants utilized the school's counseling and psychological services (25%), and those who did rated its quality as poor (M=4.9, SE=0.46; maximum score: 10). Implications of these findings and areas in which the university may develop interventions are discussed.

Mental Health in Academia: Examining the Prevalence of Psychological and Institutional Correlates of Mental Wellbeing in Emory University Undergraduate Students

by

Carson Bohl

Dr. Lauren Christiansen-Lindquist, PhD, MPH

Advisor

Human Health

A thesis submitted to the Faculty of Emory College of Arts and Sciences

of Emory University in partial fulfillment

of the requirements of the degree of

Bachelor of Arts with Honors

Human Health

2023

Acknowledgements

I am extremely grateful to my thesis advisor and mentor, Dr. Lauren Christiansen-Lindquist, for her support on this project and her guidance during my time at Emory. She has encouraged my growth as a social scientist in public health, expanded my knowledge of epidemiology, challenged me to think about data and research in new ways, and most importantly, shown me that faculty can prioritize and care for students' wellbeing. I would also like to thank Dr. Jeb Jones and Dr. Amanda Freeman for their time commitment, revision suggestions, and overall encouragement. Moreover, I want to express gratitude for my family and friends who encouraged me throughout this journey, and all members of the Translational Research in Affective Disorders (TReAD) Lab who enhanced my research skills and listened to me talk about this project for months.

Table of Contents

List of Tables (Appendix A)

Preamble

I would like to begin my thesis by acknowledging my biases as a student researcher, while also highlighting the strengths of my perspective and my interests in conducting this particular research. I am a college student who is studying college students; therefore, my schemas and biases will influence the way I conceptualize and approach mental health and wellbeing. Throughout this project, I have considered my capacity to project my own experiences to encapsulate the experience of college students around the U.S. Accordingly, I am questioning the generalizability of my claims, in hopes of teasing apart what is unique to my perspective and what seems to be supported by wider-scaled evidence and data. Even so, my biases are bound to influence my analyses. However, I do believe that it is important for me to share an honest perspective, as I have a unique opportunity to interact with this study population and to have experienced the same developmental trajectory. I have been collecting empirical data for the past 4 years and in reality, I noticed mental health and wellbeing deficits long before my college years, particularly in the context of academia. For example, I was a part of an accelerated program in high school that fostered a high-stress environment in which many students were anxious and overwhelmed. I noticed then that students commonly sacrificed their mental and physical health needs to meet standards of productivity. Upon matriculating to college, I found that many students endorsed severe psychological turmoil and suffered from often debilitating consequences of mental illness. I also noticed the stigma around mental illness and the gaps in resources available to students.

During and after the COVID-19 pandemic, I saw drastic shifts in individuals' behaviors and their outlooks on life. Rates of anxiety, depression, loneliness, and suicidal thoughts/behaviors seemed to have significantly increased. It is common for students to make

self-deprecating jokes about suicidal behaviors and deep psychological struggles. Comments about sacrificing physical exercise, sleeping, and eating in order to meet academic and social demands are almost ubiquitous. Additionally, it seems that students rarely talk positively about their assignments or coursework; many students are genuinely discontented by classroom requirements and/or their professors' expectations. In my experience at Emory, I have noticed a fundamental culture of grade obsession, productivity, and post-graduate success. People do not seem to be overly excited about the process of learning and engaging with new concepts and skills. While the mental health crisis of young people extends far beyond university life and academic culture, this investigation focuses specifically on undergraduate college students. I have conducted this research in hopes that institutions will become more aware of the mental health challenges that their students face, and will begin to more actively prioritize students' mental wellbeing. Without attention to this growing crisis, the current mental health landscape will continue to undermine our society's future health and prosperity. Furthermore, institutions and their communal attributes offer a unique opportunity to leverage the role of community in public mental health.

The data for this study were self-reported by a sample of 158 undergraduate students at Emory University. Undoubtedly, there will be questions about the validity of these data given the concerns that can arise when data are self-reported. However, we must acknowledge the stereotype that college students may have a propensity toward negative responses and a tendency to endorse greater psychological turmoil. In some ways, I think this reflects an unproductive view that college students' dissatisfaction is inherent in the condition of what it means to be a student and a young adult. Even if college students have a pessimistic bias or a likelihood to

identify problems, it is valuable to know their beliefs in order to consider the fundamental questions of "Why?" and "What does this reflect about an individual's psychological state?" Moreover, research suggests that perception is a major driver of psychology, health, and health behavior. Whether it be studies examining mindsets and the placebo effect or the predictive nature of self-rated health in mortality (Idler & Benyamini, 1997), the ultimate value lies in what the individual believes. Of course, in research, there are extraneous influences on how a person responds to any given question. However, I believe we must continue to appreciate the value of perception. At a basic level, our cognitive capabilities are driven by perception, and the way an individual thinks about the world fundamentally alters the way they operate within it. Furthermore, negative perceptions about one's self and the world are common in psychiatric disorders and mental health is often invisible to bystanders, so self-reported data are especially valuable in characterizing an individual's thoughts, feelings, and behaviors. This investigation uses self-reported data to better understand the mental health of college students at a single institution. To contextualize my research question, I present factors pertaining to why mental illness may be increasing in the U.S. to bring awareness to the complexity of psychological distress and to offer new perspectives on how we might think about approaching treatment and interventions to improve wellbeing.

Introduction

The poor mental health of adolescents and young adults is increasingly recognized as a public health crisis (Abrams, 2023). While a general deficit in wellbeing afflicts the entire college-age population, college students face distinct mental health challenges (Abdu-Glass et al., 2017). These challenges arise in a critical developmental period that has significant consequences for health and wellbeing across the lifespan (Wood et al., 2017). Thus, the purpose

of the current investigation is to analyze the prevalence of psychological and institutional correlates of mental health in a sample of undergraduate students. Institutional correlates are assessed to illustrate students' perceptions of the campus climate and to investigate contextual factors that may inform place-based interventions.

There is a general consensus in our society that mental health concerns are increasing in prevalence and severity (Sliwa, 2019). Every individual is likely to know at least one person, either a family member, peer, or acquaintance, who struggles with mental illness. In this sense, abnormal psychology feels nearly universal; this is particularly true for our nation's youth and young adults. In 2021, the National Institute of Mental Health reported that 34% of individuals aged 18-25 years experienced at least one mental illness in 2020 according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) compared to 23% of all U.S. adults (NIMH, 2021). Furthermore, in a prospective cohort study of 1,420 individuals from the southeastern U.S. followed from ages 9 to 21, 83% developed at least one psychiatric disorder according to the Child and Adolescent Psychiatric Assessment (ages 9 to 16) and the Young Adult Psychiatric Assessment (ages 19 and 21) (Copeland et al., 2011). Given these statistics, an important epidemiologic question is whether there has been a true increase in the prevalence of mental health issues, or if there is simply increased access to diagnostic labels, less stigma, and more awareness such that people are better able to identify psychological distress. While the current investigation will not and cannot assess this distinction, I explore shifts in the social and evolutionary processes that contribute to psychiatric disorders and our understanding of them, specifically in the United States. I first describe the developmental period of college students, and then set the stage for examining mental health conditions by 1) explaining an evolutionary biology perspective, and 2) providing a brief analysis of interconnected demographic transitions

that are rooted in sociocultural revolution and have altered the experience of young adulthood (those aged 18 to 25 years). I further describe the effects of capitalism and the function of information and social media in our society. The goal is to critically examine how our current sociopolitical structures may inhibit the fulfillment of certain human needs that fundamentally drive our capacity for mental wellbeing. The claims I make are theoretical in nature and are meant to incite reflection on the varying levels of systemic influence on mental health development.

Mental health is explored in the context of academia for two reasons: 1) academia retains its own sense of community with distinct social and political norms, ones that often undermine or contend with wellbeing, and 2) universities have a unique opportunity to offer mental health support to their students and could become an authority on effective approaches to promote mental wellness. Importantly, the experience of adolescence and college life differs significantly among individuals, due to underlying individual and cultural differences and the impacts of various social determinants of health (e.g., socioeconomic status, racial/ethnic identity, gender identity, and sexual orientation). Advancing collective mental wellbeing requires an understanding of the way that racism, poverty, and other forms of structural, state-sanctioned violence produce and precipitate health inequities. The current investigation does not answer these questions, but it does acknowledge that general, population-level claims will likely lack the nuance to describe the unique ways in which different individuals experience society. With this acknowledgement, let's begin by understanding the developmental phase of college students.

What is emerging adulthood?

To characterize the importance of wellbeing and to understand the factors that contribute to psychological distress, it is crucial to identify the norms and expectations of each developmental stage. Psychological theories of development often focus on the influence of

culture, both in terms of one's immediate social positioning (e.g., race and gender) and in the broader structures of society (e.g., economic and political circumstances), on the thoughts, feelings, and behaviors that comprise particular developmental periods. Hence, ideas of human development evolve with the progression of society and theories of development are influenced by the time and context in which they are developed.

In the 1950s, Erik Erikson outlined eight stages of psychosocial development, with each stage defined by distinct changes and challenges to one's personality and self-perception. While Erikson discusses development distinctly in adolescence and young adulthood, he also writes of prolonged adolescence as a period of 'psychosocial moratorium,' referring to a time in which young people suspend life responsibilities and explore their identity (Erikson, 1956). He characterizes the exploration of identity as a critical decision-making process to construct one's orientation in the world and garner a stable sense of self (Archer, 1989). Post-adolescence was further analyzed by Kenneth Keniston, who described 'youth' as a period of role experimentation defined by "tension between self and society" and "refusal of socialization" (Keniston, 1971). Keniston developed this theory at a time in which teens and young adults had actively been protesting America's involvement in the Vietnam War. Tension between self and society represents friction between aspects of one's identity and societal demands; these conflicts often require cognitive effort and influence the development of one's values and worldviews. The conflict between selfhood and existing social structures is common in emerging adulthood, and may stem from an individual's identity (e.g., race, gender, sexuality) and/or their values (e.g., climate activism, criminal justice reform, anti-racism). Cognitive effort is required because this tension encourages questioning and, potentially, modulating the way one perceives and acts in society.

In 2000, researcher Jeffrey Arnett argued for a distinctive period between adolescence and adulthood from ages 18 to 29, which he labeled as emerging adulthood. On a population level, the defining factor of emerging adulthood is its demographic variability, as individuals are less likely to be constrained by particular role requirements and are more likely to explore and experiment with different facets of life (Arnett, 2000). This is often associated with physical relocation, different occupations, new relationships, and questions regarding social and physical expressions of self. Common psychological characteristics of this period include identity exploration, developing emotional and relational fluency, self-focus, and setting expectations for future possibilities (Arnett, 2014). Distinct challenges include shifts in social roles, increased autonomy and need for self-sufficiency, peer and romantic relationships, and greater responsibility (Arnett, 2000; Sussman & Arnett, 2014). Arnett developed his theory of emerging adulthood in an era marked by Western socio-demographic and cultural transitions during the Third Industrial Revolution, just as Keniston's theory was inspired by a time in which more young people fought against and verbalized their qualms with social injustices.

Common to each of these theoretical frameworks is the idea that emerging adulthood is marked by increased volition and change catalyzed by the need to establish an enduring sense of self. These changes are often exciting, but important developmental milestones can also be associated with increased vulnerability to distress (Schiller et al., 2016). In sum, emerging adulthood consists of asking important questions about the world and seeking answers through a sort of intuitive science, in which evidence is accumulated to construct internal models of reality. Mental health challenges in this period can impair one's exploration and inhibit fulfillment of the emerging adult's unique needs (e.g., establishing identity, purpose, and orientation) (Schiller et al., 2016). Exploring and establishing identity are fundamental components of human flourishing

(Haslam et al., 2009). With this perspective, let's explore emerging adulthood and development in U.S. college students.

Emerging adulthood in college students

The undergraduate college experience is one of self-discovery. For many students, college includes the process of confronting beliefs and traditions introduced in childhood and adolescence, which may result in adopting new values and navigating the world in a different manner (Pascarella & Terenzini, 1991). In order to support students through emerging adulthood, it is important to understand the social and environmental influences on development. This is especially relevant as diversity increases in higher education; students come from various backgrounds and have differing needs.

In light of Erikson's theories of psychosocial development, Chickering and Reisser (1993) present seven vectors to elucidate common developmental challenges in college students. The seven vectors and a short description are listed below:

- *Developing Competence*: Gaining experience in physical, intellectual, and interpersonal situations to develop proficiency in accomplishing one's goals.
- *Managing Emotions*: Learning how to identify, accept, and regulate emotional processes.
- *Moving through Autonomy toward Interdependence:* Engaging in autonomous decision-making processes, often without reassurance or approval from others, in order to develop self-sufficiency.
- *Developing Mature Interpersonal Relationships:* Learning to appreciate individual psychological differences and establish meaningful, intimate relationships.
- *Establishing Identity*: Clarifying and stabilizing one's conceptions of their orientation in the world to form a crystallized sense of self.

- *Developing Purpose*: Developing a sense of intrinsic motivation that drives personal interests, life commitments, and career goals.
- *Developing Integrity*: Engaging in more complex moral thought, in which one considers others' perspectives to develop their values and weighs social responsibility with self-interest.

Each of these vectors is crucial for college students' development and wellbeing. Collectively, they showcase the complexity of humans' psychological needs and their cognitive processes. Importantly, however, the meaning and content of these vectors is influenced by an individual's lived experience, which inevitably intersects with one's social positioning and their cultural and political environment. Thus, development must be considered as a function of learning through reciprocal interaction between environmental systems and structures that ultimately shape an individual; this is the basis of Bronfenbrenner's ecological model (Bronfrenbrenner, 1994). The model is particularly useful for understanding the role of community structures in mental health (e.g., a university campus).

Bronfrenbrenner's theory argues that reciprocal interactions grow increasingly complex throughout development and impact individuals differently based on one's environment and their developmental stage (Bronfenbrenner, 1994). Of note, the interactions between self and environment are bidirectional. The theory consists of five systems that shape development and operate on different levels; the systems are each nested within each other and the innermost layer is believed to have the most direct influence (Bronfenbrenner, 1994). They are listed below, in order of innermost to outermost, with a brief explanation:

- Microsystem: A person's immediate surroundings, including family (caregiver relationships), school, and neighborhood (Berk, 2000).

- Mesosystem: Connections between microsystems, including work, school, recreation, and home (Backonja et al., 2014). These connections may conflict with expectations set by one's microsystem.
- Exosystem: Broader social systems in which the individual is not necessarily an active player, but is impacted by interactions between these systems and their microsystem (Berk, 2000). This includes economic factors, natural disasters, etc.
- Macrosystem: The overarching culture that includes the laws, norms, and available resources of the society (Berk, 2000).

  Chronosystem: Growth that accompanies the passage of time, including normative transitions for particular ages and unexpected disruptions (e.g., the death of a family member).

Bronfenbrenner's ecological model provides a framework to conceptualize the complexity of mental health development and is useful for thinking about students in a college setting. For example, emerging adults who are entering intimate and romantic relationships are likely to experience thoughts, feelings, and emotions that are heavily influenced by early microsystem interactions (Danforth et al., 1991). Additionally, mesosystem interactions in college are associated with an introduction to novel social settings and increased exploration of various life paths (Killam & Degges-White, 2017). This sort of role experimentation is crucial to the development of self but comes with great potential for failure and anxiety (Killam & Degges-White, 2017). Navigating peer and romantic relationships and gathering information about the world can challenge an individual's self-esteem and sense of self. In terms of the chronosystem, the transition from high school to college is rife with opportunities for socialization that facilitate increased exposure to new perspectives and different types of information, which means that

opportunities to confront prior belief systems are abundant. This may also be the first time in which individuals experience symptoms of mental illness and have such high levels of personal responsibility. Moreover, it is important to consider these developmental influences in the context of academics. Different influences may include the emergence of new knowledge and beliefs that conflict with previously learned ideas; competing interests in one's social versus academic life; administrative policies or expectations; and the extent to which education is valued on an individual and societal level (Killam & Degges-White, 2017). These factors impact comfortability at school, motivation to complete work goals, and one's subsequent academic performance.

The seven aforementioned developmental challenges of college students provided by Chickering and Reisser (1993) are experienced by all individuals, but their impact on mental health is determined by reciprocal interactions between the self and one's environment at each stage of development. On a college campus, students from unique backgrounds form a community and are confronted with various socio-environmental influences on the formation of identity. This concept forms the basis of Weidman's model of undergraduate socialization, which describes how characteristics of a student's background (e.g., socioeconomic status, values) and their familial/parental relationships influence the process of socialization during college and impact subsequent socialization outcomes (e.g., career choices, lifestyle preferences) (Weidman, 1989). Overall, these developmental challenges and the process of socialization showcase that emerging adulthood can be distressing, but is crucial for navigating human necessities like identity, worldview, and social relationships.

Today's emerging adults are often viewed as lazy and selfish; however, Arnett argues that they are actually quite persevering and interested in making the world a better place. They

are tasked with pondering fundamental human concepts and questioning society in order to improve it, which presents psychological challenges and reinforces tension between self and society. The questions that students ask to make sense of themselves and their positioning in the world rely on learning information from one's environment; hence, individuals in emerging adulthood are sensitive and particularly attuned to society. Importantly, influences on mental health expand significantly for college students in this sensitive period, such that students engage more with broader social and systemic norms. Therefore, I believe that understanding mental health during this period requires an analysis of sociocultural and demographic changes that influence the context of development and affect psychological outcomes and our conceptions of them. My view that the process of identity formation is uniquely challenging for today's college students compared to past generations is based on these sociocultural and demographic changes. Before presenting this analysis, I will describe an evolutionary approach in psychiatry that relies heavily on biomedical research findings. These perspectives are presented in consideration of the individual level of the model above, which impacts how an individual perceives and responds to environmental influences.

Evolutionary roots of psychopathology: a psychoneuroimmunology perspective

In our ancestral past, humans evolved alongside pathogens in a microbial world, an environment that ultimately shaped our responses to stress, physical injury, and fear (Raison & Miller, 2017). Foreign invaders, like parasites and bacteria, represented threats to our chances of survival. The physiological response to these threats involves activation of the immune system to promote wound healing and infection clearing (Raison & Miller, 2017). Upon injury, white blood cells are activated and inflammatory cytokines are produced to initiate the innate immunity pathway (Eklund, 2009). This response is also associated with certain behaviors that were adaptive to attenuate the impact of injury and increase the likelihood of survival, including

common symptoms of depression like psychomotor slowing, anhedonia, and fatigue (Raison & Miller, 2017). In this environment, crosstalk between the brain and immune system was established, such that central neurotransmitter processes impact immune responses and inflammation influences neuroendocrine function. Importantly, research has shown that psychosocial stress (e.g., a fear of negative evaluation from others) elicits an immune response that increases circulating concentrations of the pro-inflammatory cytokine, interleukin-6 (Pace et al., 2006). This immune response is exaggerated in individuals who have experienced early life stress (i.e., a form of adversity or trauma) and the strength of the response predicts future likelihood of developing depression, such that a greater increase in pro-inflammatory cytokines to psychological stress is associated with greater subsequent increases in depressive symptoms (Aschabcher et al., 2012). Moreover, increased expression of pro-inflammatory cytokines and their receptors is found in patients with major depressive disorder (Raison & Miller, 2017). The finding that psychosocial stress activates an immune response is consistent with evolutionary processes whereby individuals who were most likely to fear and avoid threats were most likely to survive. It has been hypothesized that depressive behaviors, like avoidance of social situations and anhedonia, stem from the body's need to shunt energy resources, while anxiety symptoms, like hypervigilance and fear, are rooted in the need to protect oneself and prevent future exposure to threat (Miller & Raison, 2016). Since these behaviors result from evolutionarily adaptive physiological responses, it follows that the genes responsible for conferring risk to depression and anxiety were more likely to be passed on to future generations (Miller & Raison, 2016). However, society has transformed significantly since our ancestral days. We no longer face the immediate threat of a saber tooth tiger and we have invented a host of sanitation practices to protect from infection. In the absence of "traditional immunological checks and balances," a

balance that was leveraged by non-lethal microorganisms like commensal and symbiotic microbiota, humans exhibit an inflammatory bias with widespread immune dysregulation and a tendency toward chronic low-grade inflammation (Miller & Raison, 2016; Rook et al., 2015). Thus, it is believed that inflammation plays a significant role in conferring risk for depression and other mental disorders as a result of evolutionarily established pathways for communication between the brain and the immune system. Furthermore, persistent low-grade inflammation drives risk for chronic diseases including type II diabetes, Alzheimer's disease, atherosclerosis, and cancer (Handschin & Spiegelman, 2008). The relationship between mental and physical health and the current high rates of chronic disease also suggest the importance of proactively supporting mental health in early developmental stages (e.g., adolescence and emerging adulthood) to attenuate future risk of poor health outcomes. Understanding engagement of neural pathways consistent with the stress and immune response is one important way to characterize risk factors for mental illness. For example, research finds that both social isolation and short sleep duration (among other risk factors for depression) are associated with increased expression of pro-inflammatory genes (Cacioppo et al., 2015; Smagula et al., 2016).

While this psychoneuroimmunology perspective is relevant and contributes significantly to our understanding of social and biological factors that increase risk for mental illness, the conceptualization of mental disorder through biomedicine has dominated psychiatric research. Biological underpinnings of disease are easier to quantify and manipulate for research purposes, while the fluidity and often subjective nature of social processes are more difficult to classify scientifically. Despite the influence of social processes on mental health, research in psychiatry and wellbeing has mostly utilized a biomedical perspective that often overlooks the role of sociopolitical structures and social inequality in mental illness. In consideration of

Bronfenbrenner's Ecological Systems Theory, the following sections seek to understand how the social, political, and economic organization of our society may influence our nation's widespread mental health crisis. I will first present important demographic shifts that inform how we conceptualize the process of socialization for young adults in our current society.

Cultural/societal revolutions

As proposed by Keniston and Arrnett, the developmental principles of emerging adulthood must be considered in light of contextual factors. In his 2014 book, *Emerging Adulthood: The Winding Road from the Late Teens through the Early Twenties/Edition Two*, Arnett describes four major cultural revolutions in the 1960s and 1970s that set the framework for the early 2000s: the technology revolution; the sexual revolution; the women's movement; and the youth movement (Arnett, 2014). These revolutions are presented briefly below:

Technology Revolution

The technology revolution refers to the Digital or Third Industrial revolution, which includes more than the advent of cell phones and networks for social media. In industrialized countries, advances in technology shifted the work economy from a focus on manufacturing to an emphasis on service, as machines replaced manufacturing jobs that humans previously conducted (Arnett, 2014). Consequently, most jobs began to require an information-based education that prioritized specialized training in information and technology (Arnett, 2014). As a result, higher-level education was emphasized as the primary path to garner the knowledge and skills necessary to obtain an occupation in society, resulting in more individuals attending university.

Sexual Revolution

The sexual revolution was inspired by the invention of birth control in 1964, which made it possible to have sexual intercourse with substantially less concerns about pregnancy (Arnett, 2014). As a result, it was more widely accepted that young people did not have to marry in order

to pursue sexual relationships. While society often still imposes standards regarding the permissibility of sex, there is a growing acceptance that young people engage in various sexual relations prior to marriage. The sexual revolution may also be seen as acceptance that sex can be an end in itself (i.e., sex as pleasure), rather than a means to an end (i.e., sex for childbearing or marriage). Hence, the revolution was ultimately one of liberation, which challenged traditional moral values applied to sexual behavior and debunked myths that sex is sinful. Additionally, it encouraged profound shifts in views of homosexuality; our society has increasingly recognized that sexuality is a spectrum and the number of people who openly identify as queer has grown exponentially. The benefits of sexual liberation were outlined by psychoanalyst, Wilhelm Reich, who argued that sexual repression by one's family or the state was destructive to wellbeing (Reich & Wolfe, 1963).

Women's Movement

The women's movement refers to social and structural changes in the way that women occupy space in society. Leading up to the 1970s, society imposed strict standards on young women to marry a man and embrace the role of a domestic housewife (Arnett, 2014). On average, women were less likely to attend college and their options for employment were severely restricted (Arnett, 2014). Women were taught to measure their self-worth as a function of their adherence to social roles as wives (to men) and mothers, which encouraged early marriage and parenthood. However, the women's movement focused on liberation from the confinement of society's oppressive standards. It pushed for women to be seen and valued wholly as individuals, and not simply in relation to men. As a result, women now have more access to educational and employment opportunities and are more encouraged to view their life possibilities as endless, rather than restricted by the need to marry and become a parent.

Therefore, young women in modern America experience emerging adulthood much differently compared to 60 years ago.

Youth Movement

The fourth revolution is the youth movement, through which youth have developed a general apprehension toward adulthood by embracing the endless possibilities of being young. In the 1950s, young people viewed adulthood as an exciting opportunity to settle down and develop stability in the workforce. This may be due to the influence of growing up during the Great Depression and World War II; their perception of socioeconomic turmoil likely enhanced their expected value of the reward of securing a job and a home (Arnett, 2014). In contrast, today's youth tend to view adulthood as a loss of spontaneity and conceptualize adult responsibilities as problems for the future. This also coincides with assuming a more active role in questioning society and expressing discontent with injustices.

In combination, these revolutions have inspired significant demographic shifts, including more individuals obtaining higher education and the delayed initiation of marriage and parenthood. For example, 8% of individuals in the US aged ≥ 25 years graduated from college in the 1960s, and now the number has risen to 38% (Census.Gov, 2021). Additionally, the median age of marriage increased seven years from 1960 to 2009 to between 28 and 30 (Hemez, 2020). Consequently, there are more opportunities available to emerging adults and they have an increased ability to explore life possibilities. Furthermore, with revolution, there are people in opposition and those who are left out. Revolutions can inspire societal changes that facilitate access to human rights, but these changes and accompanying social and economic mobility do not extend equally to all people, such that progress for minoritized and intersectional identities is designed to be much slower. Those who oppose revolution tend to leverage discrimination and oppression, and those who are excluded tend to already suffer from discrimination, which further

exacerbates health disparities and deepens societal tensions. In the current highly polarized cultural and political climate, questions of morality, purpose, and identity perplex young adults (Furedi, 2021). Accordingly, role experimentation is associated with unique challenges, such as identity confusion, low self-esteem, and obstacles to obtaining resources. These shifts must be examined in the context of our evolving capitalistic society.

Capitalism

In the 1966 book, *Monopoly Capital,* by Paul Baran and Paul Sweezy, it is argued that monopoly capitalism cannot "provide the foundations of a society capable of promoting the healthy and happy development of its members" (Baran & Sweezy, 1966). Capitalism is an inherently social system that profoundly alters the nature and purpose of relationships in a society (Streeck, 2016). Under capitalism, work and free time are controlled by consumerism and competition, which encourages materialism and individualism (Greenfield, 2009). Many individuals do not find pleasure in their occupations; they are often overworked, underpaid, or undervalued, and are consequently dispassionate about their work (Matthews, 2020). High rates of stress and fatigue often co-occur with a lack of motivation, and accordingly, leisure increasingly evolves as a form of passive enjoyment rather than intellectual engagement (Baran & Sweezy, 1966). The attachment of one's identity to their adherence to capitalistic norms of productivity drains passion and precipitates fatigue; as a result, leisure is often filled with a more passive and less inquisitive consumption of media through books, television, and films. At its core, capitalism favors profit over people and thus, effort expenditure becomes at least partially based on the extent to which our engagement with a particular thought process will either maintain or improve our social/material positioning. In the most extreme form of capitalism, pleasure, intellectual inquiry, and creativity become destroyed while individualism and materialism prosper. Research suggests that materialism is associated with lower overall

happiness and less life satisfaction (Chancellor & Lyubomirsky, 2011). Sociologist David Matthews argues that there is incompatibility between "capitalism's ruthless pursuit of profit and … the essential needs of people" (Matthews, 2020). Importantly, the ravaging pursuit of profit encourages behaviors that are detrimental to the core of human wellbeing (e.g., not sleeping, sacrificing one's physical needs for work, stress, etc.). For example, sleep concerns are an increasingly important public health issue; from 1985-2012, there has been a 31% increase in the number of U.S. adults sleeping 6 hours per night, and in 2009, 29% of U.S. adults slept 6 hours or fewer each night (Ford et al., 2015; Krueger & Friedman, 2009). For adults aged 18 to 64 years, the recommended number of hours of sleep is 7 to 9 hours; short sleep duration can have detrimental impacts on one's physical and mental health and is highly associated with depression (Benca & Peterson, 2008). While capitalism is not the sole influencer of the declining sleep health in the U.S., it must be a contributor to our tendency to sacrifice our mental health needs for the sake of being productive.

Baran and Sweezy also argue that the long-term effects of capitalism's emphasis on competition and exploitation culminate in the insufficiency of human relationships (Baran & Sweezy, 1966). Deep human connections grow rare. For example, social interaction in our society has mostly become frivolous, with a focus on maintaining acquaintances and engaging in a mutual "falsity of pleasantness" (Baran & Sweezy, 1966). The falsity of pleasantness in social interaction exists to ensure that individuals have time, effort, and motivation at their disposal to work and earn money, but it ultimately detracts from valuing the human emotional experience and developing deep human connection. We are often trained to maintain psychological distance from vulnerable and emotionally taxing concepts to preserve energy for productivity. The draining of authenticity and meaning from social interaction leads to artificial human

connections and an unstable sense of collectivity. This sense of belonging is crucial to psychological flourishing but is increasingly difficult to achieve in our society. Instead, loneliness and isolation are common, even while in physical proximity to others. In 2019, a survey of over 10,000 U.S. adults found that 61% met criteria for loneliness, and for those aged 7 to 24 years, the number rises to 79% (Nemecek, 2020). This is a stark contrast to only 11% of U.S. adults who met criteria for loneliness in the 1970s (Columbia Mailman School of Public Health, 2022). The determinants of loneliness include insufficient social support, infrequent meaningful social interaction, and a lack of balance in one's everyday life (Nemecek, 2020). Many professionals are framing this as the "loneliness epidemic" and are calling for national public health efforts (see Crowe et al., 2022) to alleviate the burden.

In conclusion, socioeconomic systems like capitalism do alter human behavior and decision-making and thus, can have grave consequences for a population's wellbeing. I cannot and would not argue that capitalism is the sole reason for our nation's current mental health state; however, it contributes to social and economic inequality and significantly influences culture and human values. Importantly, capitalism has also progressed technological innovation, leading to an excess flow of information, consistent virtual interaction with online profiles, and the perception that one's attention is consistently demanded and observed by others (Matthes et al., 2020). These shifts are characterized here as an "information overload" (Matthes et al., 2020).

Information Overload

Perhaps the most prominent and cherished product of our capitalistic society is the rapidity and permeability of technological innovation. Today's youth are introduced to the ubiquitous digital world in early stages of infancy and by adolescence, they are actively scrolling the world wide web. Technology, particularly social media, must be examined in our nation's youth mental health crisis. In a developmental period marked by exploring one's identity and

sense of self, social media and its psychological impacts are particularly influential. Information is more easily accessible than ever. In 2015, reports suggest that 92% of adolescents were online daily, 89% were members of a social networking site, and 88% had access to a cell phone (Lenhart, 2015). With easy access to technology and a web of all types of information, the phenomenon of information overload (IO) is increasingly relevant. IO refers to a mismatch between environmental demands and one's available resources to respond to those demands (Eppler & Mengis, 2004); in the context of media, it can be conceptualized as an overabundance of information and technological input with which we are expected to process and respond to. Research indicates that perceived IO is associated with psychological outcomes including psychological stress (Matthes et al., 2020; Reinecke et al., 2017), fatigue (Cao & Sun, 2018), anxiety (Bawden & Robinson, 2009), negative affect (LaRose et al., 2014), and diminished work performance (Karr-Wisniewski & Lu, 2010). One moderating variable between IO and these negative outcomes may be the phenomenon of instant gratification, whereby rewards that are more distant in the future are valued less than those that are expected instantly, and the pleasure associated with reward is expected more immediately. Instant gratification is often conceptualized as impulsivity and may provide the foundations for overindulgence. With easy access to multiple streams of information, humans are conditioned via instrumental learning to seek instant gratification. When we use technology, we develop a sense of control over the world as we pursue transactions and upgrades, make clicks and choices, and decide what we do and do not want to see (Roberts, 2014). Technology operates on data feedback systems and algorithms meant to provide an individual with the most salient and engaging information (Nili & Barros, 2022). The iPhone tracks users' activity and subsequently provides them with information that is uniquely suited to please and entertain. These algorithms are meant to provide arousing stimuli

that produce hedonic responses and contribute to the addictive nature of media consumption. It provides one with the illusion that the world operates to fulfill their needs and makes individuals less tolerant and patient in the real world. In fact, Paul Roberts describes the digital world as a "socioeconomic system that is almost too good at giving us what we want" (Roberts, 2014). Want becomes mistaken for need.

I conceptualize instant gratification as an artificial hacking of natural mechanisms of wellbeing. Humans often rely on the digital world as a distraction from the real world, as it offers moments of instantaneous pleasure or interest and an escape from society. The view that technological mechanisms short-circuit evolutionarily developed pathways for wellbeing (phrase from Dr. Raison) can be considered in light of research illustrating that social connection and self-regulatory capacity are significant contributors to states of wellbeing.

Social media can provide the perception that one is engaging in human interaction while scrolling through pictures, videos, or tweets. In effect, the value of real-world social interaction is diminished. This falsehood of social media serves to undermine human engagement and motivation for behaviors crucial to wellbeing, like those that promote belonging and connection. Moreover, self-regulatory capacity, which refers to the ability to exercise conscious control over one's thoughts and emotions, is associated with positive mental health outcomes (Gagnon et al., 2016). Instant gratification perpetuates a bias toward unsustainable short-term benefits rather than long-term, future-oriented success (Dorjee, 2021) and therefore, undermines our self-regulatory capacities. These capacities are crucial to the domain of cognitive control, which includes self-motivation, focus, attention management, behavioral adaptation, and goal-directed behavior (Dorjee, 2021). The ability to exert control over one's thought processes, update information, and shift mental frameworks plays a significant role in emotional regulatory

abilities and wellbeing (Pruessner et al., 2020). The ease with which we can access the digital world and its library of information weakens our ability to self-regulate and leads to health deficits. Moreover, it is important to consider social media's impact on cognition and self-development.

Social media transforms our schemas about the world and the way we think about social interaction, human connection, and our daily activities (Nesi et al., 2018). It provides a platform for direct comparison to a vast sea of other individuals, who present profiles about themselves including their accomplishments, habits, routines, personalities, and relationships (Vogel et al., 2015). An individual's perceived social status is based on the degree of engagement that they attract. Due to humans' innate ability to learn about influences on social relationships in physical and digital environments, they develop conceptions of worth based on social media interaction and engagement. Inevitably, certain physical and personality characteristics become viewed as better or more desirable than others; in many cases, social norms are reinforced and recreated.

As mentioned earlier, adolescence and emerging adulthood are crucial years for the development of an identity that often corresponds with one's orientation and purpose in life. Questions that are salient and common in this period, like those regarding body image, self-esteem, social connectedness, and virtue, are often gauged via social comparison. Social comparison is used to assist self-evaluation (Festinger, 1954), self-enhancement (Gruder, 1971; Wills, 1981), and self-improvement (Lockwood & Kunda, 1997). However, in the digital age, social comparison is easier than ever and more likely to lead to feelings of insufficiency or low self-esteem, particularly because social media is curated to promote unrealistic expectations of perfection. Evidence suggests that upward social comparison is common because individuals tend to present themselves in a positive light online (Nadkarni & Hofmann, 2012; Rosenberg &

Egbert, 2011). Numerous studies show that upward social comparison via social media is associated with rumination and depression (Feinstein et al., 2013), diminished self-esteem (Kalpidou et al., 2011), lower self-evaluation (Haferkamp & Kramer, 2011), and reduced wellbeing (Kross et al., 2013). The process by which social media diminishes self-esteem may be conceptualized as a digital negative reward prediction error (prediction exceeds outcome) (Schultz, 2022), as the actual reward we receive from self-evaluation is lower than what we expect based on our internal models of the world around us. The need for instant gratification and the unfulfilling nature of social comparison may breed self-centeredness; it becomes more difficult to engage with situations (people, environments, thought processes) that do not directly and immediately gratify us. As a result, we have strayed further away from collective definitions of wellbeing and toward individual pursuits of happiness. Social media further perpetuates individualism and materialism, while thwarting deep human connection and the active consumption of intellectually engaging and liberating media. These effects may never be more apparent than in the current generation of young people who grew up in a society dominated by technology.

Emerging adulthood in our modern society

Although Keniston coined the phrase in 1971, "tension between self and society" is an ongoing challenge for today's emerging adults. This tension stems from social, economic, cultural, and political changes largely driven by the prosperity of capitalism, technology, and social media. There are significant health disparities that are etched into the inner workings of some of the very systems that govern these changes, including politics, business, academia, and medicine. These disparities are widened by structural violence in the form of racial and socioeconomic oppression. Young adults are becoming increasingly aware of the ways in which institutions have historically contributed to wide-scaled inequities due to their prominent

contributions to racism and socioeconomic segregation. I argue that this socio-political framework is crucial to understand why right now, many of the critical features of emerging adulthood represent sources of psychological distress and require extensive psychological demand. The questions underlying identity formation and role experimentation are increasingly difficult to explore. Many of the major professional fields are often seen as driven to fulfill economic desires while failing to promote positive mental health. Thus, young people must weigh their life passions against legitimate concerns about income and occupational health. They are often forced to balance the pros and cons of assuming a job within an unhealthy and exploitative system in hopes of enacting future societal change, but with the caveat that their health and wellbeing is likely to suffer. Furthermore, American politics, a potentially fruitful way to progress our society, is full of unrest and polarization. This political environment precipitates numerous psychological, social, emotional, and even physical health consequences (Smith et al., 2019). In 2019, a random sample of 800 U.S. adults were surveyed and researchers found that approximately 40% experienced stress and 20% reported fatigue, depression, or losing sleep a*s a result of politics* (Smith et al., 2019). The adverse effects of politics negatively correlated with age. Another survey in 2022 found that 76% of Americans considered the future of the U.S. as a significant source of stress, 66% indicated that stress was incited by the current political climate, and 60% reported that national social divisiveness caused them stress (Bethune, 2022). Additionally, for significant sources of stress in their lives, 75% indicated violence and crime, 83% indicated inflation, 9% reported the economy, and 66% reported monetary struggles (Bethune, 2022).

On top of political polarization, the impending threat of climate change induces psychological stress, and is associated with climate-related disasters that increase risk for adverse

mental health outcomes including post-traumatic stress disorder, depression, and bipolar disorder (Padhy et al., 2015). Furthermore, major societal issues including the global COVID-19 pandemic, climate change, gun violence, and widely broadcasted police brutality toward Black individuals create social chaos, can exacerbate social and political division, and negatively impact individual and collective wellbeing (Chang & DeJonckheere, 2018; Mastroianni, 2022). For example, scholars developed a climate change anxiety scale with two subscales including cognitive emotional impairment and functional impairment, and found that both subscales were significantly positively associated with symptoms of major depressive disorder and generalized anxiety disorder among 284 emerging adults in the U.S. (Schwartz et al., 2022). Due to the prevalence of these societal concerns and the inequities they reflect, stable and trusted political systems are important to offer citizens hope for relief and reform. For young adults growing up in this social and political climate, there are pressing demands to solve global problems, enact change, and progress society forward in a just and equitable manner. These demands and the concerns from which they originate incite stress and anxiety about the world and the future, leaving emerging adults vulnerable to severe mental health challenges. As college students are commonly referred to as society's investment in the future, this phenomenon may also be exaggerated in the context of academia. The following section will describe the potential impacts of academia on students' mental health.

Academia

As mentioned earlier, the value of receiving an undergraduate degree is increasingly emphasized and more individuals are obtaining higher education than ever before. Many older individuals claim that college was 'the best four years of their lives.' I would argue that, on average, current college students and recent graduates do not echo the same sentiment. An important part of understanding mental health in college students is analyzing the role of an

institution and its norms. In our capitalistic society, universities have begun to operate more like businesses; their primary goal is to generate revenue streams, which can contend with the more traditional motivation to expand and nurture young people's minds (Santamaria, 2020). Academic culture increasingly prioritizes research productivity because success on these metrics attracts revenue and prestige; thus, a culture of high stress, competition, and insufficient work-life balance has ensued. In particular, college students face a wide variety of academic demands and stressors on top of social and extracurricular activities. Many students drown in work and become accustomed to emphasizing productivity and hard work over their mental, emotional, and physical health needs. Major life adjustments and developmental milestones occurring alongside an extreme pressure to succeed in academic and social settings is a source of psychological distress.

National surveys indicate that academic stress is highly common; for example, in the 2013 National College Health Assessment, 87% of college students reported that they felt "overwhelmed by all [they] had to do" (National College Health Assessment, 2013) and in 2020, 87% of college students reported academics as a significant source of stress (Bethune, 2022). The available literature suggests that the following variables are associated with academic stress: financial concerns, social interaction, lack of social support, time management issues (Wilks, 2008), enormous amounts of work, unfavorable pedagogical approaches (Varghese et al., 2015), as well as high expectations from parents or students themselves (Ang & Huan, 2006). High stress, and more particularly chronic stress, is associated with anxiety, depression, burnout, and overall diminished wellbeing (Carter et al., 2006; Kessler, 1997). This academic culture can also precipitate feelings of imposter syndrome and perpetuate mental health stigma, as students feel that everyone around them is productive and successful. Moreover, those with pre-existing

psychological struggles are more susceptible to the negative effects of academic stress (Cleary et al., 2011). Hence, the relationship between institutional factors and mental health is often bidirectional, as institutional correlates can perpetuate psychological distress and psychological distress can exacerbate one's sensitivity to the effects of various institutional factors. While there are important individual differences in sensitivity to stressful life events and their subsequent impact, a population perspective reveals that college students experience high levels of stress and are vulnerable to its detrimental effects.

As I have now outlined a framework for understanding socio-political stressors and described the cultural context of academia, I will focus specifically on mental health outcomes in college students and present data to conceptualize the need for the current study.

Current research on mental health in college students

College years are quite unique and important for asking big questions about the world, formulating worthy dreams for the future, and contemplating one's greater life purpose. Students attend university for a safe place to ask these questions and seek intellectual answers. However, this journey can be significantly inhibited by mental wellness deficits, which occur while students are vulnerable to psychiatric disorders due to their brain's immature developmental state. Of note, 50% of lifetime mental disorders are onset by mid-adolescence and 75% are onset by the mid-twenties (Kessler et al., 2005). In 2017, Dr. Beresin, the director of the MGH Clay Center for Young Healthy Minds, wrote that approximately 73% of students experience a mental health crisis during their college years, almost half of college students had a psychiatric disorder in the past year, and almost one-third of students report feeling so depressed that they had trouble functioning (Abdu-Glass et al., 2017). Estimates suggest that approximately 60% of U.S. college students have a mental health condition (Lipson et al., 2022). In a cross-sectional survey of 14,348 first-year students in eight countries, the prevalence of at least one mental disorder was

38%; major depressive disorder (MDD) and generalized anxiety disorder (GAD) were the most common disorders, with a lifetime prevalence of 21% and 19%, respectively (Auerbach et al., 2019). These findings are fairly consistent with data from the Healthy Minds Study of 3,556 undergraduate and graduate students from four American universities, in which the prevalence of MDD and GAD was 25% and 20%, respectively, followed by 18% for an eating disorder (Lipson & Eisenberg, 2017). Moreover, 19% of students met criteria for at least two mental health conditions, aligning with a host of psychiatric research suggesting that mental disorders commonly co-occur, with estimates of comorbidity as high as 79% (Kessler et al., 1994). In addition to the high prevalence of mental disorders, the severity and complexity of issues with which students present informs the growing concern surrounding students' lack of wellbeing. In the 2014 National Survey of College Counseling Centers, 94% of 275 directors surveyed believed that the number of students with severe psychological disorders had increased in the past year (Gallagher, 2015). Moreover, suicide is the second leading cause of death among college students, with approximately 1,100 suicides on college campuses each year (Wilcox et al., 2010).

There are a few longitudinal studies that showcase increases in the prevalence of mental health outcomes in college students in recent years. Among 610,543 undergraduate respondents from the National College Health Assessment, there was a 47% increase in intentional-self injury, 24% increase in anxiety, 34% increase in depression, 76% increase in suicidal ideation, and 58% increase in suicide attempts from 2007-2018 (Duffy et al., 2019). From 2009-2014, there was a 30% increase in the number of students seeking treatment at college counseling centers (Xiao et al., 2017). Importantly, the need for greater support significantly exceeds the money and resources currently allocated toward treatment efforts (Xiao et al., 2017). This is a

substantial concern given that psychological disorders are often debilitating, substantially decrease quality of life and overall wellbeing, and correlate with future social and economic consequences. They are associated with worse academic performance, including 0.2 to 0.3 point reductions in GPA (Bruffaerts et al., 2018) and increased risk of dropping out before graduation (Eisenberg et al., 2009), as well as adverse outcomes in adulthood, including emotional and physical health concerns (Scott et al., 2016), relationship problems (Kerr & Capaldi, 2011), and higher risk of labor market marginalization (Niederkrotenthaler et al., 2014; Goldman-Mellor et al., 2014). Furthermore, psychological disorders can hinder the process of developing healthy habits that correspond to wellness and resilience across the lifespan; for example, depression is associated with smoking, insufficient sleep, unhealthy eating habits, and greater sedentary behavior (Doom & Haeffel, 2013; Allgöwer et al., 2001). Therefore, it is important to identify individuals at high risk for negative mental health outcomes and understand the contributing factors. As the prevalence of mental health concerns increase, college students are calling upon university administrators to pursue a more active role in supporting students' wellbeing. Universities have a unique opportunity to support the growth and development of their students by responding to the burgeoning mental health crisis, but they must first understand the precipitating factors.

Common stressors

The transition from high school to college is challenging and can be associated with physical relocation into a novel sociocultural context. As such, college students face a variety of mental health challenges during the process of adjustment and throughout their undergraduate years. One review found that common concerns reported by college students include academic anxiety around class expectations and grades (e.g., exams and presentations); general stress and anxiety; depression; relationship problems; eating concerns; loneliness and homesickness; low

self-confidence and self-esteem; difficult managing transitions and making complicated decisions; experiencing traumatic events like rape, assault, and abuse; alcohol and drug use; concerns with sex and sexuality; self-harm; suicidal thoughts; anger management; and anxiety regarding one's appearance (Kumaraswamy, 2013). Body image concerns are increasingly reported as college students are vulnerable to social comparison and negative self-evaluation (Crocker & Wolfe, 2001). Other common sources of stress include romantic relationships, financial difficulties, and fulfilling life responsibilities (Yang et al., 2021). Furthermore, academic stress significantly reduces motivation and inhibits academic achievement (Pascoe et al., 2020). As rates of stress, anxiety, and depression increase, symptoms including loss of appetite, sleep difficulties, inability to concentrate, apathy, and poor physical hygiene are also increasing and further contributing to distress (Mofatteh, 2021).

In addition, this study is particularly relevant in the aftermath of the COVID-19 pandemic. Evidence from college students suggests that the COVID-19 pandemic resulted in substantial increases in stress, anxiety, depression, and suicidality (Husky et al., 2020; Li et al., 2020; Patsali et al., 2020). One must acknowledge the widespread impact of social isolation and political unrest during COVID-19, including high rates of loneliness and impaired social interaction. While the pandemic's effects are not directly studied, this investigation is conducted following major impacts of the COVID-19 pandemic.

Why this study?

The purpose of the previous sections is to illustrate the need for current research on the mental health of college students. Arguably, the U.S. is experiencing a widespread mental health crisis, marked by high rates of mental illness and a collective lack of mental wellbeing. College students are a vulnerable population, partially because more adolescents are experiencing psychological distress and therefore, more students who have pre-existing mental health

concerns are entering college. For example, the percentage of pre-college adolescents who have a major depressive episode rose 47% from 2007 to 2019 and the suicide rate rose 60% from 2007 to 2018 (HRSA Mental and Behavioral Health: NSCH data brief; NVSS statistics). Furthermore, the developmental period of emerging adulthood and the vocation of college leaves students vulnerable, particularly in the context of our evolving society with the effects of capitalism, information overload and social media, and the culture of academia. Although more students continue to face deficits in mental wellness, college counseling centers remain inaccessible to a large portion of students. In 2021, the Association for University and College Counseling Center Directors (AUCCCD) distributed an annual survey to 329 university counseling center directors (Gorman et al., 2021). One hundred and six (33%) counseling directors reported that there were no psychiatric providers on campus and the average student utilization rate across campuses was 12.2%, which represented an increase in demand for 86% of institutions compared to 2020 (Gorman et al., 2021). Moreover, the average wait time for a student to receive their first therapy appointment was between 7 and 14 days (Gorman et al., 2021). Many of the mental health services on college campuses are not proportionally accessed and use of these services may leave the individual vulnerable to stigma; hence, there is a significant unmet need.

With this understanding, this investigation seeks to identify the prevalence and correlates of psychological distress and mental wellbeing in a sample of undergraduate students at a private U.S. university. Rather than using clinically validated scales to identify the presence of a mental illness, the study focuses more on understanding sources of stress, institutional factors, and influences on health behavior. Current research rarely ties in the social, psychological, cultural, and systemic aspects of mental health in college students, which may be partially due to analysis of aggregated data across multiple universities (i.e., different social and cultural contexts).

However, this study analyzes mental wellbeing at one institution, so it is able to assess satisfaction with features and policies of the institution along with levels of social support, financial security, imposter syndrome, and academic burnout. Data on each of these constructs can help inform tailored interventions to improve student satisfaction and wellbeing.

Methods

Study Location

The web-based survey was made available to undergraduate students at Emory University, a private, predominantly White institution (PWI) located in the Southeastern sector of the U.S. Emory resides in an urban area with a residential campus of approximately 15,909 students, of which 8,155 are undergraduates (Emory University Office of Institutional Research and Decision Support, 2022). The Emory Institutional Review Board approved all procedures for obtaining informed consent and protecting human participants. Study procedures were also supported by a grant from the Emory Undergraduate Research program.

Data Collection Procedures

The survey was designed in REDCap Version 12.2.0. Questions were developed in light of past research, including national investigations like The Healthy Minds Study and the National College Health Assessment. The precise measures used and constructs studied are listed below and included in Appendix B. The survey was open from October 1st through December 1st, 2022; this window allowed for the survey to be available during the Fall break and midterm exam weeks, while closing prior to the final exam period. To recruit participants, posters were placed in and around various campus buildings, digital fliers were sent to professors and department leadership for distribution, and were additionally disseminated to various club GroupMe chats and posted on Instagram. All recruitment materials included a QR code that linked to the REDCap survey. Each participant who completed the survey was entered into a

raffle for a $5 e-gift card that was available for 200 total students. E-gift cards were made available and distributed via TangoCard, an online platform that offers a catalog of rewards from a variety of businesses. Prior to completing the survey, participants signed an online consent form detailing the purpose of the research and all potential risks. Throughout the survey, content warnings were present to note that some questions were sensitive and personal, and that respondents could skip any questions. The survey was expected to take approximately 15 minutes; upon completion, participants were able to download a .pdf of both on-campus and external mental health resources.

Survey Measures

To organize measures into specific categories, four domains were developed. The four domains include the following topics:

1. Influences on stress
    a. Sources of stress and health behaviors
    b. Loneliness
    c. Economic Factors
2. Academic-related stress
    a. Student wellbeing
    b. Academic burnout
    c. Imposter syndrome (IS)
3. Psychopathology
    a. Mental health diagnoses
    b. Suicidal thoughts and behaviors (STBs)
    c. Non-suicidal self-injury (NSSI)
4. Institutional factors

a. Emory Counseling and Psychological Services (CAPS) Use and Satisfaction
b. Satisfaction with attributes of the university and institutional support
c. Campus climate for diverse groups

A brief overview of the measures that comprise each of these domains is described below, followed by a description of the validated scales used in this survey.

1. Influences on stress

To assess barriers and facilitators of positive mental health, participants indicated whether a given factor facilitated or impaired their mental health and rated the extent of either facilitation or impairment on a scale from 0 (to an extremely small extent) to 10 (to an extremely large extent). Factors included friendships/social life, family relationships, academic performance, sleep schedule, and exercise habits, among others. Additionally, participants indicated the extent to which a list of items affected their level of stress, including mental health and academic workload but also climate change, gun violence, and U.S. government and politics (Columbia Wellbeing Report, 2020). Moreover, loneliness was measured using the UCLA 3-item Loneliness Scale (UCLA-3).

A portion of the items mentioned above investigate the influence of health behaviors like drug use, sleep, and eating habits. Drug use was further assessed by asking whether participants had ever used various substances – for those who had, they were asked to indicate whether they had used each substance since entering Emory and/or in the last 30 days. Sleep duration was measured via an open-ended self-report question: “On average, how many hours of sleep do you get per weekday night during the school year?” (Healthy Minds Study, 2022)

Several questions probed the impacts of socioeconomic status and economic stress. Participants indicated their current level of financial stress and listed the average number of

hours they work and volunteer during the school year (Center for Collegiate Mental Health Standardized Dataset). Participants were asked how often they struggled to pay for basic necessities like rent, clothing, food, and transportation while at Emory (Columbia Well-Being Report, 2020). Lastly, to index food insecurity, respondents indicated how often it was true that they could not afford to eat balanced meals or the food that they bought did not last and they couldn't afford to buy more (Healthy Minds Study, 2022; Hager et al., 2010).

2. Academic-related Stress

While a few of the aforementioned questions target the impact of academics on stress, academic-related stress is also conceptualized through three pre-existing scales, including the Student Subjective Wellbeing Questionnaire (SSWQ), the Clance Imposter Phenomenon Scale (CIPS), and the Oldenburg Burnout Inventory (OLBI). These scales assess severity of student wellbeing, imposter syndrome, and burnout, respectively. More extensive detail regarding these constructs is presented in *Validated Scales.* In addition, participants were presented with a variety of potential stressors and were asked to indicate whether each negatively impacted their work performance and/or productivity in the last 12 months (National College Health Assessment, 2022). The items generally focused on psychological influences like stress, fatigue, motivation, body image, trauma, discrimination, and violence in one's home.

3. Psychopathology

The psychopathology domain contains specific questions about sexual assault, NSSI, suicidal ideation and attempt, and psychiatric disorders. NSSI refers to the intentional destruction of one's bodily tissues without suicidal intent, and includes cutting, burning, biting, scratching, and punching or banging oneself (Klonsky et al., 2014). Psychiatric disorders were assessed as a lifetime diagnosis of a mental illness either by a health professional or via self-diagnosis.

4. Institutional Factors

Various questions inquired about Emory's campus climate. Participants rated their level of satisfaction on a 5-point Likert scale ranging from very dissatisfied to very satisfied with numerous campus attributes and policies, including, among others, the cost of food on campus, number of free sessions at Emory's CAPS, and diversity of faculty. Individuals also responded with the degree to which they agree with a list of statements that collectively assess the mental health climate at Emory (Healthy Minds Study, 2022). Moreover, the survey probed use and perceived quality of Emory's CAPS. Finally, participants indicated whether they believed the campus environment was hostile or welcoming for a list of historically vulnerable students, including racial/ethnic and gender/sexual minorities, as well as those with disabilities (adapted from the climate for diverse groups scale in Hutchinson et al., 2008).

Validated Scales

Student wellbeing was assessed via the SSWQ, a 16-item scale that measures student subjective wellbeing with 4 subscales: joy of learning, school connectedness, educational purpose, and academic efficacy (Renshaw et al., 2015; Renshaw, 2022). It measures the frequency with which one has experienced wellbeing in the past month in the context of being a student; higher scores indicate greater, or more frequent, wellbeing. The total SSWQ score can range from 16 to 64 and is categorized as follows: 16 to 23= almost never, 24 to 30= sometimes, 40 to 55= often, and 56 to 64= almost always. The scale has shown high internal consistency (α range: 0.75 to 0.92) and latent construct reliability (H range: 0.77 to 0.92) in Turkish adolescents (Renshaw & Arslan, 2016). Despite the sample being college students, the SSWQ was chosen over the scale adapted for college students titled the College SSWQ (CSSWQ). The SSWQ was prioritized as the items are better suited to measure the extent to which one enjoys learning and feels inspired by an educational purpose. The academic satisfaction and college gratitude

subscales on the CSSWQ are less likely to capture variation in student experience with the current sample. For example, a question assessing the extent to which one believes that school matters and should be taken seriously (SSWQ) was prioritized over one assessing thankfulness for one's college education (CSSWQ).

Imposter syndrome was assessed via the CIPS, a 20-item scale that measures the extent to which an individual endorses characteristics consistent with imposter syndrome (Clance, 1985). A higher score indicates a greater extent to which one is suffering from feelings of IS. Total scores range from 20 to 100 and are categorized as follows: <40= few imposter characteristics, 41 to 60= moderate imposter characteristics, 61 to 80= frequent imposter feelings, >80= often, intense imposter feelings. Based on previous literature and clinical interviews, a score of 63 or greater indicates an individual with IS (Levant et al., 2020). The scale has high internal consistency (α range: 0.84 to 0.96) and shows discriminant validity with measures of depression, self-esteem, and social anxiety (Mak et al., 2019; Holmes et al., 1993; Chrisman et al., 1995). Imposter syndrome is a psychological phenomenon characterized by the feeling that one has made it into their present position of success or achievement as a result of error or luck; an individual feels as though they are a fraud and have deceived others into believing they are intelligent (Clance & Imes, 1978; Leach et al., 2019). The scale incorporates the following constructs: fear of evaluation, fear of not being able to repeat success, and fear of being less capable than others (Chrisman et al., 1995).

Academic burnout was assessed via the OLBI, a 16-item scale that measures symptoms of burnout with two subscales: exhaustion and disengagement (Bakker & Demerouti, 2007). Scores range from 16 to 64 and previous literature indicates that scores ≥ 35 suggest that one is experiencing burnout (Summers et al., 2020). Reliability estimates for the exhaustion and

disengagement subscales, respectively, range from α=0.74-0.85 and α=0.73-0.85 (Demerouti & Bakker, 2008; Demerouti et al., 2003; Halbesleben & Demerouti, 2005; Sonnentag et al., 2010; Timms et al., 2012). Factorial validity of the scale was confirmed in German and American samples (Demerouti et al., 2002; Halbesleben & Demerouti, 2005). A higher score on this inventory suggests a greater propensity to experience symptoms of burnout. Exhaustion refers to overwhelming physical, affective, and cognitive strain, while disengagement refers to developing negative attitudes about work and distancing oneself from its content (Bakker & Demerouti, 2007).

Loneliness was assessed using the UCLA-3, which measures an individual's feelings of isolation, lack of companionship, and being left out (Hughes et al., 2004). The frequency with which one endorses these feelings indicates their degree of loneliness. Participants rate items on a 3-point scale: 1= Hardly Ever, 2= Some of the Time, and 3= Often. The maximum possible score is 9 and the minimum is 3: scores ≥ 6 classify an individual as lonely (UCLA Loneliness Scale, 2004). The scale shows high internal consistency (α range: 0.84 to 0.96), high test-retest reliability over a 12-month period (r=0.73), and convergent validity with other related measures (Deckx et al., 2014). Loneliness occurs when one's need for social intimacy and connection is unmet (Baumeister & Leary, 1995) and is believed to be a core component of self-esteem, mood shifts, anxiety, anger, optimism, dysphoria, social support, and sociability (Berscheid & Reis, 1998; Shaver & Brennan, 1991).

Socio-Demographic Questions

Participants reported their age, gender, race/ethnicity, sexual orientation, year in school, enrollment status, cumulative GPA, major, living situation, disability status, and religious affiliation. To index socioeconomic status, participants indicated the highest level of education

completed by parents or guardians, whether their family receives any sort of public assistance from the government, and whether they are the first in their family to attend college.

Data Cleaning Procedures

For the purpose of analyzing mental health variables based on total sleep time, the number of hours of sleep on weekday nights was dichotomized into categories representing less than or ≥ 7 hours of sleep. Seven hours was chosen as the cutoff due to its clinical relevance, as the minimum recommended amount of sleep is 7 hours (Watson et al., 2015). Since the survey allowed participants to identify specific forms of self-harm, a new variable was created to indicate whether a participant engaged in one or more forms of self-harm. Similarly, participants could identify whether they had been diagnosed with any of the listed psychiatric disorders, and a sum of the number of diagnoses that an individual endorsed was computed to address comorbidity. Then, an additional variable was created for participants who reported at least one diagnosis. The same procedure was conducted for self-diagnoses. To test the impacts of depression and anxiety, an additional variable was coded for individuals who endorsed both conditions.

Furthermore, to increase the number of cases in individual cell counts, responses on four matrices that represented varying degrees of the same construct were collapsed together (e.g., “to a very small” and “to a small” extent can be represented by “a small extent”). These were created as additional variables so that original responses were preserved.

Distinct categories were also created to examine the effects of racial background, sexual orientation, and gender identity. A variable was coded for multiracial participants who endorsed multiple racial identities (n=12). Ethnicity was considered solely for participants who only endorsed Latinx/Hispanic identity; participants who identified as White and of Latinx origin

(n=5) and those who identified as Asian and of Latinx origin (n=2) were categorized as White and Asian, respectively. Racial groups were not separated by ethnicity due to the small sample size. Sexual orientation was coded into a dichotomous variable to compare heterosexual and any LGBTQIA+ identity. Gender identity was coded into a variable with three levels: male, female, and any other gender identities (e.g., non-binary, genderqueer or genderfluid).

Data Analysis

Survey data was downloaded from REDCap into Microsoft Excel version 16.53 and then imported into R studio version 2022.12.0-353 and IBM SPSS Statistics version 28.01. Univariate statistics were conducted; for all continuous variables, mean and standard error were calculated and for all categorical variables, frequencies and percentages were computed. The Wilks-Shapiro test was used to test each continuous variable for a normal distribution. Log-transformation was applied to non-normally distributed data. Prevalence ratios were calculated to compare the prevalence of a given outcome based on presence or lack of exposure. Bivariate correlational analyses were conducted to assess associations between continuous variables. Independent-samples t-tests were run to compare means of numeric variables in each group of a dichotomous categorical variable. ANOVA was used to compare means when the independent variable contained more than 2 levels (e.g., gender).

Results

Sample demographics

In total, 158 students responded to the survey and 121 provided complete responses (i.e., made it through the entire survey, including completion of the demographic portion of the survey). All relevant socio-demographic characteristics of the sample are listed in table 1 (see Appendix A). The mean age was 20 years old; participants primarily identified as female (74%)

and White (53%); 41% identify as a member of the LGBTQIA+ community; 15% report that their family receives public assistance; 19% identify as first-generation college students; and 34% are 4th year undergraduates.

Univariate Statistics

1. Influences on Stress

Barriers and Facilitators. The most prevalent facilitators of mental health were friendships/social life (73%), family relationships (68%), and exercise habits (58%). The most prevalent impairments to mental health were sleep schedule (77%), eating habits (72%), and academic performance (70%). Moreover, the mental health facilitators that were rated as most influential include: social life, academic performance, sleep schedule, and family relationships (See Table 2 in Appendix A). Impairments to mental health that were rated as most influential include: family relationships, romantic/intimate relationships, friendships/social life, and exercise habits (See Table 3 in Appendix A).

Sources of Stress. The most significant sources of stress (moderate or large extent) included academic workload expectations (98%), mental health (88%), the COVID-19 pandemic (69%), U.S. government and politics (68%), and gun violence (65%). An overwhelming majority of participants reported that academic workload expectations (85%) and mental health concerns (70%) impacted their stress levels to a large extent. Additionally, 44% and 38% of the sample indicated that economic factors related to housing and food, respectively, impacted their stress to a moderate or large extent (See table 4 in Appendix A for all items).

Loneliness. The mean score on the UCLA-3 was 6.23 (SE=0.17). A majority (66%) of the sample met criteria to be classified as 'lonely,' which refers to the subjective experience of an insufficient social network (Vassar & Crosby, 2008). Loneliness is conceptualized as experiencing a lack of companionship and feeling left out or isolated from others.

Health Behaviors. The mean reported number of hours of sleep during weekdays was 6.6 hours (SE=0.106). Under half (41%) of participants reported sleeping less than 7 hours on weekday nights. Over three-quarters (77%) of participants report that their mental health is impaired by their sleep schedule, 72% by eating habits, and 42% by exercise habits. In terms of drug use, the most commonly used substance was marijuana/cannabis; 38% of the sample reported ever using marijuana. Of those, 94% used marijuana since entering Emory and 52% used in the last 30 days. Additionally, 12% of the sample reported ever using non-prescription stimulants. Of those, 33% used since entering Emory and 13% used in the last 30 days.

Economic Factors. Slightly less than a third (29%) of participants reported that their current financial situation was always or often stressful. Often or always experiencing difficulty paying for basic necessities like food, clothing, housing/rent, or transportation was reported by 7% of participants, while 23% experienced this concern sometimes. Moreover, 23% indicated that it was either often or sometimes true that they bought food which did not last and could not afford to buy more, while 30% indicated that it was often or sometimes true that they could not afford to eat balanced meals (See Table 5 in Appendix A).

2. Academic-related Stress

Work Productivity. Participants reported experiencing a variety of stressors that negatively impacted their work performance and productivity (See Table 6 in Appendix A for each item assessed). The most commonly reported stressors included: difficulty concentrating or staying focused (77%), stress (75%), a lack of motivation (74%), feeling too tired (73%), poor sleep quality (64%), and symptoms of anxiety (63%). Although less commonly reported, 30% of the sample reported trauma or feeling traumatic emotions, 29% reported body image concerns, and 23% reported physical pain as negative influences on work performance. Among students who experienced a given issue, items that were most likely to be considered impairments to work

performance included: difficulty concentrating or staying focused (80%), a lack of motivation (78%), feeling too tired (76%), stress (75%), and symptoms of anxiety (66%). Overall, the reported 12-month prevalence of experiencing body image concerns, financial stress, trauma, and discrimination was 81%, 54%, 54%, and 34%, respectively.

Student Wellbeing. On average, students reported often or almost always experiencing academic-related wellbeing (M= 46.03, SE= 0.69). Greater wellbeing was reported on the educational purpose and academic efficacy subscales compared to both joy of learning and school connectedness. Individual items reveal that students generally seem interested in what they are doing at school (66% say often or almost always), but do not enjoy working on class projects and assignments (59% say almost never or sometimes). Academics were rated as highly important; 94% of students either often or almost always felt it was important to do well in their classes and 89% endorsed that school matters and should be taken seriously. Over half (51%) of participants felt that they almost never or only sometimes belonged at school and 47% felt they almost never or only sometimes could be themselves at school (See Table 7 in Appendix A for all individual items and Table 8 for summary statistics).

Imposter Syndrome. The mean imposter phenomenon sum was 70.1 (SE=1.24) out of a total possible score of 100. 73% of participants met criteria to be classified as feeling like an imposter (See Table 8 in Appendix A). Individuals experiencing IS endorse feelings that arise from the belief that one does not deserve their current success, including fear of evaluation, fear of not repeating success, and fear of being less capable than others.

Burnout. On the burnout inventory, the mean score was 42.3 (SE= 0.63) out of a maximum of 62. Eighty-seven percent of individuals experienced significant levels of burnout

(See Table 8 in Appendix A). Burnout is defined as high levels of exhaustion and a cynical/unmotivated attitude toward work.

3. Psychopathology

Psychiatric Disorder. Mental health diagnoses are presented in table 9 in Appendix A. The three most commonly endorsed lifetime diagnoses from a mental health professional include anxiety disorders (40%), depression (34%), and neurodevelopmental disorders (12%). These disorders are also the most prevalent in terms of self-diagnoses, but estimates are much higher (59%, 45%, and 24%, respectively). Additionally, 10% of participants had been diagnosed with an eating disorder, while 19% self-identified with eating disorder pathology. The greatest discrepancy between professional and self-diagnosis was for anxiety disorders (25 more individuals self-identify with an anxiety disorder). Ultimately, the prevalence of any psychiatric diagnosis was high; 52% of the sample reported at least one diagnosis from a mental health professional and 74% of students reported that they self-identify with at least one mental health diagnosis. Thirty-seven percent of the sample reported diagnosis of two or more disorders, and of the individuals who indicated at least one mental health diagnosis, 72% endorsed two or more disorders.

Sexual Assault. Students reported their experiences with sexual assault during their time at Emory; 12% of students reported experiencing sexual assault since becoming a student, 5% reported that they were not sure, and 2% preferred not to say. Similarly, 6% of students reported that someone had sexual contact with them when they were unable to provide consent and 7% of students suspected this had happened (13% combined).

Self-harm and Suicide. Forty-two percent of participants engaged in at least one form of self-inflicted harm in the past four years. The most highly endorsed forms of self-harm include scratching one's self (24%), pulling one's hair (20%), punching or banging one's self (19%),

interfering with wound healing (18%), and cutting one's self (15%). Moreover, in the past four years, 29% of students indicated that they had seriously considered attempting suicide and 9% attempted suicide.

4. Institutional Factors

Counseling Services. A quarter (25%) of participants attended an appointment with Emory's CAPS and the mean rating was 4.93 (SE=0.460) out of 10. Of the participants who did not attend CAPS, 33% reported that they did not need it, 43% did not attend because they had heard negative things, 5% were on the waitlist, and 15% received therapy elsewhere. Three individuals indicated another reason for not attending and provided qualitative responses, including the following: "Didn't know about it," "Didn't want others to know," and "Too much work to get an appointment." Regarding students' general perception of CAPS, 76% of students had mostly heard negative opinions about the quality of CAPS, 2% heard mostly positive opinions, 9% reported an even mix, and 12% had heard nothing.

Campus Satisfaction. Students' satisfaction with attributes of Emory's campus was collected to identify potential influences on stress and mental health (See Table 10 in Appendix A). A majority of participants were dissatisfied with the cost of attendance (85%), cost of food on campus (67%), cost of a parking pass (63%), the limited number of free sessions at Emory's CAPS (54%), mental health support (58%), and quality of mental health services (52%).

Mental Health Climate. See table 11 in Appendix A for students' level of agreement with numerous statements regarding the mental health climate at Emory. A majority (77%) of students disagree that there is a good support system on campus for students going through difficult times and 78% agree that they tend to keep feelings to themselves when they feel depressed or sad. Over half of students (54%) feel that students' mental and emotional wellbeing is a priority; 79% agree that students are working to promote mental health on campus, but most

(73%) disagree that the administration is listening to students' concerns regarding health and wellness. Moreover, the campus environment negatively impacted mental health for 75% of participants and body image for 55% of participants.

Inclusivity. Generally, students rated the campus climate as welcoming for diverse groups of individuals (see Table 12 in Appendix A). Over half (62%) of respondents believe that the campus is welcoming for racial/ethnic minority students, and 77% believe it is welcoming for gay, lesbian, and bisexual students. The largest percentages of perceived hostility on campus were for students of low socioeconomic status (33%) and students with disabilities (21%).

Bivariate Associations

Factors associated with Sleep and Loneliness

Hours of sleep were positively associated with student wellbeing and GPA (r=0.46; r=0.365), negatively associated with burnout (r=-0.284), and not associated with IS. Sleeping fewer than seven hours a night was associated with reduced student wellbeing, educational purpose, academic efficacy, joy of learning, and school connectedness, and marginally greater burnout scores (See Table 13 in Appendix A). Mean hours of sleep were not significantly different in individuals with diagnosed anxiety or depression.

Higher scores of loneliness correlated with greater burnout, greater IS, and reduced student wellbeing (r=0.323; r=0.293; r=-0.363). Lonely participants reported diminished student wellbeing, joy of learning, and school connectedness, and higher levels of burnout and imposter syndrome (see Table 14 in Appendix A). The prevalence of loneliness was higher among participants with a lifetime diagnosis of anxiety compared to the prevalence of loneliness among those without a lifetime diagnosis of anxiety (PR= 1.27, 95% CI: 1.01, 1.59), but no association was found between loneliness and depression.

Academic Stress

Students whose academic performance impaired their mental health had significantly lower GPAs compared to those who viewed their academic performance as a facilitator (M=3.9, SE=0.03; M=3.6, SE=0.06). Moreover, burnout scores were positively correlated with IS (r=0.324) and negatively correlated with student wellbeing and GPA (r=-0.442; r=-0.289). The prevalence of IS among individuals who experience burnout is meaningfully higher than the prevalence of IS among individuals without burnout (PR= 1.85, 95% CI: 1.003, 3.412). Those who felt like imposters exhibited significantly less student wellbeing, academic efficacy, and joy of learning, and higher burnout scores (see Table 14 in Appendix A).

Psychopathology

Participants who reported any mental health diagnosis had significantly higher IS scores. Specifically, professional diagnosis of depression and anxiety were individually associated with increased prevalence of IS (PR=1.44, 95% CI: 1.20, 1.72; PR=1.30, 95% CI: 1.07, 1.58). Neither professionally diagnosed depression nor anxiety were significantly associated with mean scores of student wellbeing or burnout; however, self-diagnosed depression was associated with higher burnout and lower student wellbeing scores ((M=44.6, SE=0.97; M=40.4, SE=0.75) (M=43.0, SE=1.20; M=47.9, SE=0.78)). Moreover, lifetime diagnoses of depression and anxiety by a healthcare professional were individually associated with increased four-year prevalence of engaging in non-suicidal self-injury (PR=1.79, 95% CI: 1.21, 2.65; PR=2.40, 95% CI: 1.58, 3.65). Moreover, engaging in any form of self-harm was associated with greater prevalence of suicidal ideation (PR=2.86, 95% CI: 1.58, 5.16), but was not associated with suicidal attempt.

Socio-Demographic variables

Comparing mean scores of the aforementioned variables by socio-demographic factors is limited in the current investigation by a small sample size. For example, 23 participants identified as first-generation, 18 reported that their family received public assistance, eleven

were a part of Greek Life organizations, and four students identified as transgender. First-generation students exhibited reduced student wellbeing, school connectedness, and academic efficacy, and higher prevalence of loneliness and imposter syndrome (PR=1.35, 95% CI: 1.09, 1.67; PR=1.24, 95% CI: 1.04, 1.47). No differences were found on the burnout scale. Moreover, crude counts and prevalence rates of depression, anxiety, any mental illness, loneliness, burnout, and imposter syndrome were stratified by race/ethnicity (See Table 16 in Appendix A), sexual orientation (See Table 17 in Appendix A), and gender identity (See Table 18 in Appendix A). Due to the small sample size, statistical analyses of sociodemographic data are not presented to avoid developing erroneous conclusions about disparities on campus and the multi-faceted experiences of minority students.

Discussion

The purpose of this investigation was to examine the prevalence of psychological and institutional correlates of mental health in a sample of undergraduate college students. Participants reported high rates of imposter syndrome (IS), burnout, loneliness, non-suicidal self-injury (NSSI), and psychiatric disorder. Participants generally found the quality of mental health services on campus to be inadequate, and reported that the campus environment had negative impacts on their mental health. Positively, a majority of students believed that students are working to promote mental health on campus and reported that the campus climate was generally welcoming for diverse groups of students.

Mental Health

Overall, this investigation illustrates that a multitude of factors contribute to mental health challenges in college students. Eighty-seven percent of students met criteria for burnout, seventy-three percent for imposter syndrome, and sixty-six percent for loneliness. Lifetime diagnoses of depression (34%) and anxiety (40%) were highly prevalent; forty-two percent of

students committed NSSI in the past four years; nearly thirty percent of students report seriously considering suicide and nearly ten percent attempted suicide in the past four years. Lifetime prevalence estimates for depression, anxiety, obsessive-compulsive or related disorders (OCD), neurodevelopmental disorders (e.g., ADHD), eating disorders, and substance use disorders were higher in this sample compared to the prevalence among 103,749 undergraduate and graduate students in the 2021 Healthy Minds Study (HMS). In addition, there were substantial discrepancies between professional and self-diagnosis for nearly every disorder assessed in which more individuals self-identified with a given diagnosis than were diagnosed professionally; this discrepancy may indicate a lack of access to means of formal diagnoses and suggests that self-diagnoses may be an important way to index psychiatric symptoms.

Importantly, the NSSI prevalence reflects both more extreme (e.g., cutting) and less extreme (e.g., scratching) forms of self-harm; still, the prevalence of self-injury (42%) in our sample exceeds the reported lifetime prevalence of NSSI (17%) in a 2006 sample of 3,000 American university students (Whitlock et al., 2006). NSSI is believed to stem from numerous sources, including self-criticism, the hope to attenuate overwhelming negative emotions, and/or a desire to create physical representations of emotional distress; it is also associated with suicidal behaviors and suicidal attempts (Klonsky et al., 2014). The four-year prevalence of suicidal ideation (29%) was higher in this investigation compared to the 18% lifetime-prevalence estimate among 15,010 undergraduate students from 70 universities across the U.S. in 2009 (Drum et al., 2009). We caution against direct comparisons between the present and past investigations, as different prevalence estimates are likely due to changes over time. The CDC reports that the national suicide rate among young people aged 10 to 24 years increased 57% from 2007 to 2018, from 6.8 per 100,000 to 10.7 (Curtin, 2020). In addition, the risk for suicidal

ideation among college-aged individuals was exacerbated during the COVID-19 pandemic; one investigation of 5,412 U.S. adults in 2020 found that the prevalence of suicidal ideation over the past 30 days was 26% in 18- to 24-year-olds, compared to 11% of all adults (Xiao et al., 2021).

Nevertheless, the increasing national estimates of suicidal ideation and the four-year prevalence of suicidal ideation (29%) and suicidal attempt (9%) in the current sample suggest that suicidal thoughts and behaviors in college students are a substantial concern, reflecting the debilitating burden of mental illness. In sum, these estimates further inform the need to thoroughly examine major sources of stress that impair wellbeing and increase risk for psychopathology. The following sections will briefly explore the influence of academic stress, social relationships, economic stability, and institutional factors on students' mental health.

Academic Stress

From a psychological and academic perspective, the high prevalence of burnout (87%) and imposter syndrome (73%) needs to be addressed. While academia may be inherently challenging, these estimates suggest a concerning level of academic stress and disengagement. The positive association between burnout and imposter syndrome may be at least partially explained by a stigma of insufficiency and fear of inadequacy that permeates academia. Previous studies have found a significant relationship between perfectionism in higher education and IS, implicating the role of competitive academic environments in the imposter phenomenon (Lee et al., 2021). Competitive academic environments may 1) increase demand and stress that contributes to burnout, and 2) perpetuate doubts that one is not deserving or capable of their current position in academic spaces. Burnout emerges when individuals are exposed to high stress, high demand environments with inadequate resources, and its major consequence is a loss of motivation (Bakker & Demerouti, 2007; Maslach et al., 2001; Freudenberger, 1974).

Given students' reported level of academic stress, the present institutional setting seems to be a high stress, high demand environment, at least for the current sample. On average, students reported the following: academic workload expectations were substantial sources of stress; academic performance impaired mental health; and motivational and concentration deficits, fatigue, and general stress and anxiety were common barriers to productivity. Given participants' roles as college students with numerous responsibilities, the prevalence of stress and its negative impact on work performance may perhaps be expected or unsurprising. Therefore, it is difficult to interpret the severity of these barriers to productivity and the level of impairment they may have caused. Furthermore, students report that the campus environment negatively impacts their mental health, do not believe there is a strong support system to help cope with mental health challenges on campus, and tend to keep sad and depressed feelings to themselves. Thus, the prevalence of burnout, IS, anxiety, and motivational and concentration deficits may be directly linked to a destructive academic culture and insufficient resources to cope with stress. There is a need to address academic-related stressors at the individual and institutional level. These concerns may be influenced by both negative dispositional beliefs and the social, cultural, and political norms at an institution. Important considerations include: how the university can respond to high levels of burnout and imposter syndrome, how to teach students to value learning but not tie their self-worth to academics, and how to help students prioritize their mental and emotional wellbeing. Moreover, two additional factors that may exacerbate stress or buffer its impact include social relationships and financial stability.

Social Connection

Social relationships play a crucial role in positive and negative mental health outcomes in emerging adulthood. They may be particularly influential in college because they are informational in nature, offering an exchange of resources and knowledge that leads to an

increased understanding of one's self, interpersonal interactions, and societal structures. Interestingly, while friendships and family relationships were the most commonly endorsed facilitators of mental health, the three most influential impairments to mental health were family relationships, romantic relationships, and friendships. Familial, peer, and romantic relationships may provide a crucial sense of belonging and community but can also be challenging and emotionally demanding. Moreover, the prevalence of loneliness (66%) in this sample suggests relational challenges, a lack of companionship, and feelings of isolation. Loneliness can be detrimental to psychological wellbeing and is associated with depression, anxiety, eating disorders, sleep concerns, and suicidal ideation and attempts (Mann et al., 2017). Previous research indicates that loneliness, from a resource perspective, stems from a lack of social, emotional, and economic support (Özdemir & Tuncay, 2008). Although 78% of respondents reported that they tend to keep sad and depressed feelings to themselves, 50% of respondents reported that the campus climate encourages open discussion around mental health. This finding suggests that students may feel comfortable discussing mental health more generally on campus, but are less likely to express their own depressed feelings. Determinants of these contrasting beliefs should be further explored. Approaches to improve students' sense of belonging, foster a greater sense of community on campus, increase conversation regarding mental health challenges, and allow students more time to engage in meaningful social relationships may be effective in reducing loneliness and attenuating its consequences.

Financial Stress

A primary concern for many college students is financial stress due to economic insecurity. Financial burden is an especially important consideration given the rising costs of tuition, housing, and food, and should be top of mind at universities given targeted recruitment for a more diverse student body, which includes those from financially disadvantaged

backgrounds. The prevalence of economic stress in the current sample was substantial enough to draw attention. Nearly 30% of the sample reported that their financial situation was often or always stressful; 55% indicated that their financial status impaired their mental health; and 67% endorsed dissatisfaction with the cost of food on campus and 63% with the cost of a parking pass. Moreover, nearly one-third of participants often or sometimes could not afford to eat balanced meals and could not pay for necessities like food, clothing, rent, and transportation. Given that financial stress can detract from academic motivation, induce anxiety, and burden the process of adjustment, low-income students are a vulnerable population on college campuses (Robb, 2017; Jones et al., 2018; Kahn et al., 2019). Not only are these students dealing with the stressors of meeting their basic human needs, but nearly 33% endorsed external stressors related to financial struggles, noting that Emory's campus climate is hostile for students of low socioeconomic status (SES). In addition, another vulnerable population on college campuses is first-generation students, who may also endorse financial difficulties. In fact, first-generation students reported greater imposter syndrome and less student wellbeing.

Historically, and even currently, universities tend to serve socioeconomically privileged populations due to structural barriers that retain classism in higher education. The finding that Emory is perceived as hostile for low SES students may be explained by the cost of social and academic opportunities, cost of tuition, and/or cost of living on campus and in Atlanta. As universities actively recruit first-generation and low-income high school students, they must adapt the available resources for social and economic support during college. These resources should include access to affordable food, housing, and equitable academic opportunities.

Institutional Factors

Despite the high prevalence of burnout, imposter syndrome, and psychiatric disorders, only a quarter of students reported having attended an appointment at Emory's counseling

services. Nearly 15% reported that they received therapy elsewhere, but 48% did not utilize services because they had either heard negative things or were on the waitlist. Students generally heard negative opinions about the quality of CAPS, suggesting they may not pursue care due to the expectation that their experience will be negative or insufficient. In fact, forty-three percent of students who needed mental health services did not receive them and did not access CAPS because they had heard negative things about its quality. Moreover, a majority of students feel that the campus environment negatively influences their mental and emotional health (75%) and do not believe that the administration is listening to students' mental health concerns (73%). These institutional factors suggest a need to 1) promote mental health dialogue between students and the administration and faculty, and 2) reform current systems to create more robust and sustainable mental health counseling and support resources. The following section will discuss areas for intervention in light of the current findings.

Interventions

The current data on mental health in college students suggest a growing need for institutional and structural reform to deliver more effective mental health care and foster a culture that prioritizes student wellbeing. This investigation of undergraduate students at a single university may offer insights on areas for systems improvement.

Improving treatment and support for mental illness requires both early identification of individuals at high-risk and early intervention (McGorry & Mei, 2018). Intervention during emerging adulthood has the potential to reduce the future social and economic burden associated with mental illness (Wood et al., 2017). These interventions are important preventive methods to improve collective wellbeing and must be tailored to target developmental functions during emerging adulthood (Wood et al., 2017). Currently, too many college students do not receive the support that they need to thrive and flourish. In fact, a study of 2,188 college students found that

only 19% of individuals who met criteria for any psychiatric disorder in the past 12-months had utilized mental health services (Blanco et al., 2008). Another investigation of students at 26 campuses around the U.S. found that only 36% of individuals with mental health problems received treatment in the past year (Eisenberg et al., 2011). Outside of the university setting, quality mental health care and treatment is expensive and largely inaccessible in the U.S. This gap in access to treatment highlights the unique and vulnerable situation that U.S. college students find themselves in; not only are they in a critical developmental stage, but they are also embedded in a system that requires them to commit intense time and effort to academic and extracurricular demands. They are asked to learn and retain information and ponder perplexing questions about the world and its future. These are fundamental aspects of the college experience and exposure to stress is common while students are in a vulnerable developmental state. Given the challenges associated with accessing mental health care outside of the university setting, efforts to improve students' access to mental health services are crucial.

Past research suggests that emotional distress can be attenuated in college students by enhancing adaptive social and emotional skills, improving self-perception, and developing supportive interpersonal relationships (Bouteyre et al., 2007; Burris et al., 2009; Pritchard et al., 2007). Interventions to improve students' mental health tend to focus on one of two approaches, either psychoeducation or skills-training. Psychoeducational interventions rely on the premise that increasing knowledge of healthy behaviors and outlining the detriments of unhealthy habits is sufficient to inspire behavioral changes. Skills-training, however, systematically teaches students cognitive, behavioral, social, and emotional skills to improve coping abilities and communication. Psychoeducational interventions are generally viewed as less successful in inspiring meaningful long-term changes to behavior, but can increase knowledge and modify

attitudes (Conley et al., 2015). They may be particularly suited to increase students' knowledge of health behaviors in domains like sleep, exercise, and nutrition. For example, an internet-based educational module on sleep health called Sleep to Stay Awake (sleeptostayawake.org) effectively modified behavior and reduced distress in a sample of 254 college students (Hershner & O'Brien, 2018). Students receiving the intervention terminated electronic use earlier, kept a more consistent sleep schedule, and reported less depression. Thus, teaching students about the fundamental correlates of mental health is one method to increase wellbeing. However, psychoeducational interventions are limited such that increasing knowledge without concomitantly improving access to skills or resources is generally inadequate (Conley et al., 2015).

Skills-training interventions, on the other hand, have shown greater promise in college students (Conley et al., 2015). For example, an investigation of 134 U.K. university students revealed greater improvements in emotional self-efficacy and aspects of emotional intelligence in individuals who underwent an 11-week emotional skills training workshop compared to a control group (Pool & Qualter, 2012). The emotional skills training workshop was offered as a class and taught students how to perceive, understand, and manage emotions through mini-lectures, case studies, videos, role play, and discussion. Importantly, successful skills-training programs include supervised practice over multiple sessions, not simply a discussion or presentation of ideas. Skills-training programs with supervision, like the emotional skills training workshop, have been shown to reduce depression, anxiety, and stress, improve self-perception and social-emotional skills, and ease adjustment (Conley et al., 2015). Programs that have the potential to foster important skills in college students include those focused on cognitive restructuring, relaxation, mindfulness, conflict resolution, coping skills, and communication.

Improving skills in these domains may reduce the negative impacts of psychological distress and increase resilience. Skills-training may be delivered to an individual or in group settings, through class sessions, counseling, or extracurricular activities. Mindfulness, meditation, and cognitive-based compassion therapy interventions may be utilized to reduce stress, improve focus, and stimulate self-compassion (Ko et al., 2017). These interventions could teach effective ways to buffer the impacts of motivational and concentration deficits, feelings of loneliness, and anxiety. Additional interventions may utilize cognitive restructuring to target imposter syndrome and burnout by promoting healthier perceptions of academia and self-worth. However, both psychoeducational and skills-training interventions put the onus on individuals to enact change, while largely ignoring the role of place and setting in mental health. Moreover, a major limitation of these interventions is that they require time and effort that students often cannot devote. Students' lack of engagement with these interventions is not because they are lazy or disinterested, but rather because they have limited time due to academic and extracurricular demands, and will often prioritize meeting deadlines and juggling responsibilities over their own wellbeing.

Setting-based approaches to mental health acknowledge that wellbeing is influenced by daily experiences and interactions based on one's environmental, social, economic, organizational, and cultural circumstance; thus, they aim to improve the setting in which one lives and works (Fernandez et al., 2016). Potential approaches on college campuses include changes to assessment strategies, curriculum, and policies (Conley et al., 2015). For example, faculty may create attendance and homework policies that are more lenient to mental health challenges and consider novel ways to assess students' academic progress. Moreover, efforts to promote student empowerment by stimulating mental health discussions, raising awareness, and

providing resources can be effective in reducing stigma and creating a more open environment (Mousavi et al., 2018). Currently, however, evidence is lacking regarding the efficacy of setting-based interventions to promote mental health in undergraduate students. Insights from this investigation reveal important institutional factors in one university setting, including the cost of food on campus and the diversity of food options. Some elements of the university setting hinder students' wellbeing. Setting-based approaches may be the most effective in addressing these concerns.

One potentially beneficial approach would be to establish a centralized mental health support center, a building dedicated to improving the wellbeing of students, staff, and faculty at the university. A center solely for the benefit of mental health and wellbeing could reduce stigma, promote wellness as a priority, host a safe space for students to discuss their psychological struggles, and centralize various resources. Resources may include wellness rooms, sensory rooms, art and music therapy spaces, napping pods, a campus clothing exchange, food pantry, spaces for meditation and prayer, CAPS, the Office of Health Promotion, and Accessibility and Disability Services. The primary goal would be to increase the quantity and effectiveness of communication between students and administration regarding mental health needs, providing students with a designated place to share their experiences and offer suggestions for improvement. Representatives from the Office of Health Promotion would act as the primary liaison between the student body and the administration. Students would also be able to find support during times in which they struggle to afford basic necessities like clothing, food, transportation, etc. Additionally, the center would provide a larger space for therapy and counseling sessions to allow the university to hire more clinicians and implement supervised skills-training programs. Student clubs focused on mental health would have a space to conduct

meetings, host community events, and invite speakers. This dedicated space would elevate the profile of wellness at the university, making students more aware of the mental health resources on campus and more likely to access care. Establishing such a center would afford the opportunity to reimagine the on-campus counseling resources (CAPS).

The data suggest that CAPS needs to rebrand its presence on campus to improve their reputation among the student body. Ideally, CAPS would be built as a fully functioning clinic, and would not impose a limit on the number of free therapy sessions available to students. Additional trainings could be offered to therapists, in relation to important identity factors (e.g., race, culture, and religion) and common struggles that college students face, including relational challenges, body image, motivational deficits, anxiety, and questions regarding one's sense of self. Moreover, CAPS could extend their focus beyond mental health deficits to provide information on healthy coping strategies, imposter syndrome in academia, and how to recognize and respond to symptoms of burnout. Given that stigma can deter students' help-seeking, CAPS could also offer contact- and education-based interventions, which have demonstrated efficacy in reducing personal stigma, improving attitudes toward treatment, and fostering intentions to seek formal treatment (Kosyluk et al., 2016). These changes, among others, could contribute to more robust and efficient counseling resources on campus.

Limitations

This study is not without limitations. First, data were collected from a relatively small sample of students (n=158), representing only 2% of Emory's total undergraduate population. Generally, demographic characteristics of our sample are comparable to Emory's undergraduate population (Emory University Office of Institutional Research and Decision Support, 2022). Despite similarities in these characteristics, there remains the potential for selection or

nonresponse bias, in which students who responded to the survey are different in meaningful ways from those who did not respond.

In fact, it is possible that students with mental health concerns were more likely to complete the survey than those who had not experienced significant mental health problems. They may be more likely to notice the recruitment flyers and would be more eager and willing to report their concerns. If this were the case, we can infer that the prevalence estimates from this sample may be an overestimate of the true prevalence in the Emory undergraduate population. Second, due to the influence of individual and contextual differences across campuses, these results may not be generalizable to students at other American universities. Additionally, some questions were specifically tailored to Emory University and would not be applicable in different settings. Third, this investigation was limited in its ability to address mental health disparities due to the small counts in individual categories; although there were few statistically significant differences across socio-demographic characteristics, we cannot assume this means that there are not racial and socioeconomic inequalities on campus. Future research should continue to examine mental health disparities on college campuses, with a particular focus on students from underrepresented minority groups.

In addition to questions about selection bias and generalizability, there could be measurement error for some of the variables that we considered. Participants' self-reported average sleep duration may be influenced by recall bias and the frequency of their reported duration is unclear. Furthermore, participants identified negative impacts on their work performance in a 12-month period, which prevents elucidating the frequency or duration of these stressors. For example, a participant's work performance could have been negatively impacted by a lack of sleep on only one day or the concern could have been experienced every day for 12

months. Additionally, participants reported whether a given factor impaired or facilitated their mental health; this dichotomous response does not capture the likely event that individuals experience factors as both positive and negative, depending on context. Moreover, the SSWQ contains a few items that measure academic success and academic value, which do not assess wellbeing holistically. For example, a high percentage of students reported that it was important to do well in their classes, that school matters, and that they are successful students, but this may represent a learned value of education rather than genuine wellbeing. In fact, on the student wellbeing scale, participants generally reported experiencing joy of learning and school connectedness less often than educational purpose and academic efficacy, suggesting that higher levels of student wellbeing may be driven by endorsement of items related to the value of education, rather than genuine joy of being a student and learning. Nevertheless, one may argue that valuing education is a correlate of wellbeing, particularly in the student role. It is important to assess wellbeing irrespective of academic performance because many students sacrifice mental health needs to maintain academic success as a consequence of measuring health as a function of achievement.

Conclusions and Future Directions

Indeed, universities face a difficult challenge to meet their goals of delivering a high-quality, potentially rigorous education while also understanding and addressing students' mental health needs. Institutions have high expectations for students to work and learn, but these expectations cannot exist without consideration for students' wellbeing. College students are a uniquely vulnerable population as they confront the challenges of emerging adulthood and navigate facets of their identity and worldview. Students arrive at university excited to learn fascinating concepts, meet new people, explore professional environments, and learn more about themselves. They generally have high expectations of themselves to accomplish lofty goals and

make a difference in the world. However, deficits to wellbeing in this period can significantly hinder the young person's journey of exploration and self-discovery, and their ability to achieve their academic goals. This investigation highlights critical domains in which universities may develop interventions to address some of the psychological challenges that current students face. Key findings include the high prevalence of imposter syndrome, academic burnout, loneliness, suicidal thoughts, and self-injury.

Building upon these insights, future research is necessary to identify facilitators and barriers to mental health in academic environments. Qualitative methods should be employed to investigate psychosocial and institutional influences on self-esteem, social connectedness, intrinsic motivation, body image, and more. In-depth qualitative interviews may also be useful to understand precipitating factors and primary motivators for engaging in self-harm. Furthermore, longitudinal studies that follow students from early high school through college are needed to provide critical temporal information regarding the experience of psychiatric symptoms. We cannot be sure whether estimates from this investigation reflect prevalent conditions or incident cases with onsets sometime after arriving at university. In addition, individual and situational factors associated with the development of academic burnout and imposter syndrome should be studied. An important area of future work is further assessing the sources and consequences of academic stress and academic workload expectations, which have implications for mental health, learning, and engagement. Institutional contexts should also be studied to improve our understanding of the way that institutions as systems can be both facilitators and barriers to wellbeing; investigating mental health in staff and faculty is important to characterize the various influences that contribute to the complexity of wellbeing deficits in academia. It is vital that these future directions also employ an equity-based perspective and analyze the experience of

traditionally underrepresented minority groups in higher education, who often face insurmountable barriers on college campuses.

In support of the need for cultural shifts in academia to prioritize mental health and wellbeing, a portion of the mental health concerns reported in this study, particularly burnout and imposter syndrome, may be distinctly associated with systemic aspects of academia that have curated a toxic culture of productivity and prestige. The vocation of being an emerging adult has dramatically shifted since the mid to late 1900s and thus, institutions must adapt in response to the evolution of students' needs and expectations. While universities may be shamed for their role in the student mental health crisis, they are ultimately not responsible; however, they provide a unique context and opportunity to effect positive change on the mental health and wellbeing of those in emerging adulthood. Now is the time to work toward critical reform to preserve the primary goal of higher education, which should be to nurture and expand young people's minds. This goal must be achieved through prioritizing mental health and psychological wellbeing on college campuses so that students are able to grow into caring and healthy adults who make the world a better place.

Works Cited

Abdu-Glass, Eliza, et al. "The College Mental Health Crisis: A Call for Cultural Change - Part 2." MGH Clay Center for Young Healthy Minds, 6 Mar. 2017, www.mghclaycenter.org/parenting-concerns/college-mental-health-crisis-call-cultural-change-part-2/.

Abrams, Z. (2023). Kids' mental health is in crisis. Here's what psychologists are doing to help. Apa.org; American Psychological Association. https://www.apa.org/monitor/2023/01/trends-improving-youth-mental-health#:~:text=In%20the%2010%20years%20leading

Allgöwer, A., Wardle, J., & Steptoe, A. (2001). Depressive symptoms, social support, and personal health behaviors in young men and women. *Health Psychol*, *20*(3), 223-227.

American College Health Association. American College Health Association-National College Health Assessment III: Undergraduate Student Reference Group Executive Summary Spring 2022. Silver Spring, MD: American College Health Association; 2022.

Ang, R. P., & Huan, V. S. (2006). Academic Expectations Stress Inventory: Development, Factor Analysis, Reliability, and Validity. *Educational and Psychological Measurement*, *66*, 522-539. https://doi.org/10.1177/0013164405282461

Archer, S. L. (1989). The status of identity: reflections on the need for intervention. *J Adolesc*, *12*(4), 345-359. https://doi.org/10.1016/0140-1971(89)90059-6

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. American Psychologist, 55(5), 469–480. https://doi.org/10.1037/0003-066X.55.5.469

Arnett, J. J. (2014). *Emerging Adulthood: The Winding Road from the Late Teens Through the Twenties*. Oxford University Press. https://books.google.com/books?id=MGuJBAAAQBAJ

Aschbacher, K., Epel, E., Wolkowitz, O. M., Prather, A. A., Puterman, E., & Dhabhar, F. S. (2012). Maintenance of a positive outlook during acute stress protects against pro-inflammatory reactivity and future depressive symptoms. *Brain Behav Immun*, *26*(2), 346-352. https://doi.org/10.1016/j.bbi.2011.10.010

Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Green, J. G., Hasking, P., Lee, S., Lochner, C., McLafferty, M., Nock, M. K., Petukhova, M. V., Pinder-Amaker, S., Rosellini, A. J., Sampson, N. A., Vilagut, G.,

Zaslavsky, A. M., & Kessler, R. C. (2019). Mental disorder comorbidity and suicidal thoughts and behaviors in the World Health Organization World Mental Health Surveys International College Student initiative. *Int J Methods Psychiatr Res*, *28*(2), e1752. https://doi.org/10.1002/mpr.1752

Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Green, J. G., Hasking, P., Murray, E., Nock, M. K., Pinder-Amaker, S., Sampson, N. A., Stein, D. J., Vilagut, G., Zaslavsky, A. M., Kessler, R. C., & Collaborators, W. W.-I. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. *J Abnorm Psychol*, *127*(7), 623-638. https://doi.org/10.1037/abn0000362

Backonja, U., Hall, A. K., & Thielke, S. (2014). Older Adults' Current and Potential Uses of Information Technologies in a Changing World: A Theoretical Perspective. *Int J Aging Hum Dev*, *80*(1), 41-63. https://doi.org/10.1177/0091415015591109

Backhaus, Autumn Loreene, "The College Experience: Exploring the Relationships among Student Socioeconomic Background, Experiences of Classism, and Adjustment to College" (2009). Public Access Theses and Dissertations from the College of Education and Human Sciences. 56. https://digitalcommons.unl.edu/cehsdiss/56

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, *22*(3), 309-328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*(3), 209-223. https://doi.org/10.1108/13620430810870476

Baran P. A. & Sweezy P. M. (1966). Monopoly capital; an essay on the American economic and social order. Monthly Review Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497.

Bawden, D., & Robinson, L. (2009). The dark side of information: overload, anxiety and other paradoxes and pathologies. *Journal of Information Science*, *35*(2), 180-191.

Benca, R. M., & Peterson, M. J. (2008). Insomnia and depression. *Sleep Med*, *9 Suppl 1*, S3-9. https://doi.org/10.1016/s1389-9457(08)70010-8

Berk, L. E., Barr, B. N., & Principe, G. F. (2000). *Child Development*. Allyn & Bacon, Incorporated. https://books.google.com/books?id=mamtwo9ZanQC

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In *The handbook of social psychology, Vols. 1-2, 4th ed.* (pp. 193-281). McGraw-Hill.

Bethune, S. (2022). Stress in America 2022. Apa.org. https://www.apa.org/news/press/releases/stress/2022/concerned-future-inflation

Blanco, C., Okuda, M., Wright, C., Hasin, D. S., Grant, B. F., Liu, S. M., & Olfson, M. (2008). Mental health of college students and their non-college-attending peers: results from the National Epidemiologic Study on Alcohol and Related Conditions. Archives of general psychiatry, 65(12), 1429–1437. https://doi.org/10.1001/archpsyc.65.12.1429

Bouteyre, E., Maurel, M., & Bernaud, J.-L. (2007). Daily hassles and depressive symptoms among first year psychology students in France: the role of coping and social support. *Stress and Health*, *23*(2), 93-99. https://doi.org/10.1002/smi.1125

Bronfenbrenner, U. (1994). Ecological models of human development. In International Encyclopedia of Education, Vol. 3, 2nd. Ed. Oxford: Elsevier.

Bruffaerts, R., Mortier, P., Kiekens, G., Auerbach, R. P., Cuijpers, P., Demyttenaere, K., Green, J. G., Nock, M. K., & Kessler, R. C. (2018). Mental health problems in college freshmen: Prevalence and academic functioning. *J Affect Disord*, *225*, 97-103. https://doi.org/10.1016/j.jad.2017.07.044

Burris, J. L., Brechting, E. H., Salsman, J., & Carlson, C. R. (2009). Factors associated with the psychological well-being and distress of university students. *J Am Coll Health*, *57*(5), 536-543. https://doi.org/10.3200/JACH.57.5.536-544

Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: clinical import and interventions. *Perspect Psychol Sci*, *10*(2), 238-249. https://doi.org/10.1177/1745691615570616

Cao, X., & Sun, J. (2018). Exploring the effect of overload on the discontinuous intention of social media users: An SOR perspective. *Computers in Human Behavior*, *81*, 10-18.

Carter, J. S., Garber, J., Ciesla, J. A., & Cole, D. A. (2006). Modeling relations between hassles and internalizing and externalizing symptoms in adolescents: a four-year prospective study. *Journal of Abnormal Psychology*, *115*(3), 428.

Chancellor, J., & Lyubomirsky, S. (2011). Happiness and thrift: When (spending) less is (hedonically) more. *Journal of Consumer Psychology*, *21*(2), 131-138.

Chang, T., & DeJonckheere, M. (2018). It's not just you - politics is stressing out America's youth. Ihpi.umich.edu. https://ihpi.umich.edu/news/its-not-just-you-politics-stressing-out-americas-youth

Chickering, A. W., & L. Reisser, L. (1993). Education and identity (2nd ed.). San Francisco: Jossey-Bass.

Chrisman, S. M., Pieper, W., Clance, P. R., Holland, C., & Glickauf-Hughes, C. (1995). Validation of the Clance imposter phenomenon scale. *Journal of personality assessment*, *65*(3), 456-467.

Clance, P. R. (1985). Clance impostor phenomenon scale. *Personality and Individual Differences*.

Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, research & practice*, *15*(3), 241.

Cleary, M., Walter, G., & Jackson, D. (2011). "Not always smooth sailing": mental health issues associated with the transition from high school to college. *Issues Ment Health Nurs*, *32*(4), 250-254. https://doi.org/10.3109/01612840.2010.548906

Conley, C. S., Durlak, J. A., & Kirsch, A. C. (2015). A Meta-analysis of universal mental health prevention programs for higher education students. *Prev Sci*, *16*(4), 487-507. https://doi.org/10.1007/s11121-015-0543-1

Copeland, W., Shanahan, L., Costello, E. J., & Angold, A. (2011). Cumulative prevalence of psychiatric disorders by young adulthood: a prospective cohort analysis from the Great Smoky Mountains Study. *J Am Acad Child Adolesc Psychiatry*, *50*(3), 252-261. https://doi.org/10.1016/j.jaac.2010.12.014

Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychol Rev*, *108*(3), 593-623. https://doi.org/10.1037/0033-295x.108.3.593

Crowe, C. L., Liu, L., Bagnarol, N., & Fried, L. P. (2022). Loneliness prevention and the role of the Public Health system. *Perspect Public Health*, 17579139221106579. https://doi.org/10.1177/17579139221106579

Curtin S. C. (2020). State Suicide Rates Among Adolescents and Young Adults Aged 10-24: United States, 2000-2018. National vital statistics reports : from the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, 69(11), 1–10.

Danforth, J. S., Anderson, L., Barkley, R. A., & Stokes, T. F. (1991). Observations of parent-child interactions with hyperactive children: Research and clinical implications. *Clinical Psychology Review*, *11*(6), 703-727.

Deckx, L., van den Akker, M., & Buntinx, F. (2014). Risk factors for loneliness in patients with cancer: a systematic literature review and meta-analysis. *Eur J Oncol Nurs*, *18*(5), 466-477. https://doi.org/10.1016/j.ejon.2014.05.002

del Cerro Santamaría, G. (2020). Challenges and drawbacks in the marketisation of higher education within neoliberalism. *Rev. Eur. Stud.*, *12*, 22.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Ebbinghaus, M. (2002). From mental strain to burnout. *European Journal of Work and Organizational Psychology*, *11*, 423-441. https://doi.org/10.1080/13594320244000274

Demerouti, E., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, *18*, 296-307.

Doom, J. R., & Haeffel, G. J. (2013). Teasing apart the effects of cognition, stress, and depression on health. *Am J Health Behav*, *37*(5), 610-619. https://doi.org/10.5993/ajhb.37.5.4

Dorjee, D. (2021). The Covid-19 pandemic, political polarisation, climate change and the useless class: Why fostering wellbeing capacities should be part of the solution. https://mindrxiv.org/qtkyr/

Drum, D. J., Brownson, C., Burton Denmark, A., & Smith, S. E. (2009). New data on the nature of suicidal crises in college students: Shifting the paradigm. Professional Psychology: Research and Practice, 40(3), 213–222. https://doi.org/10.1037/a0014465

Duffin, E. (2022). Educational attainment in the U.S. 1960-2021. (n.d.). Statista. https://www.statista.com/statistics/184260/educational-attainment-in-the-us/#:~:text=In%202020%2C%20about%2037.9%20percent

Duffy, M. E., Twenge, J. M., & Joiner, T. E. (2019). Trends in Mood and Anxiety Symptoms and Suicide-Related Outcomes Among U.S. Undergraduates, 2007-2018: Evidence From Two National Surveys. *J Adolesc Health*, *65*(5), 590-598. https://doi.org/10.1016/j.jadohealth.2019.04.033

Eisenberg, D., Golberstein, E. & Hunt, J. (2009). Mental Health and Academic Success in College. The B.E. Journal of Economic Analysis & Policy, 9(1). https://doi.org/10.2202/1935-1682.2191

Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *Am J Orthopsychiatry*, *77*(4), 534-542. https://doi.org/10.1037/0002-9432.77.4.534

Eisenberg, D., Hunt, J., Speer, N., & Zivin, K. (2011). Mental health service utilization among college students in the United States. *J Nerv Ment Dis*, *199*(5), 301-308. https://doi.org/10.1097/NMD.0b013e3182175123

Eklund, C. M. (2009). Proinflammatory cytokines in CRP baseline regulation. *Adv Clin Chem*, *48*, 111-136. https://doi.org/10.1016/s0065-2423(09)48005-3

Eppler, M. J., & Mengis, J. (2004). The Concept of Information Overload: A Review of Literature from Organization Science, Accounting, Marketing, MIS, and Related Disciplines. *The Information Society*, *20*(5), 325-344. https://doi.org/10.1080/01972240490507974

Erikson, E. H. (1956). The problem of ego identity. *J Am Psychoanal Assoc*, *4*(1), 56-121. https://doi.org/10.1177/000306515600400104

Feinstein, B. A., Hershenberg, R., Bhatia, V., Latack, J. A., Meuwly, N., & Davila, J. (2013). Negative social comparison on Facebook and depressive symptoms: Rumination as a mechanism. *Psychology of Popular Media Culture*, *2*(3), 161.

Fernandez, A., Howse, E., Rubio-Valera, M., Thorncraft, K., Noone, J., Luu, X., Veness, B., Leech, M., Llewellyn, G., & Salvador-Carulla, L. (2016). Setting-based interventions to promote mental health at the university: a systematic review. *Int J Public Health*, *61*(7), 797-807. https://doi.org/10.1007/s00038-016-0846-4

Festinger, L. (1954). A theory of social comparison processes. *Human relations*, *7*(2), 117-140.

Ford, E. S., Cunningham, T. J., & Croft, J. B. (2015). Trends in Self-Reported Sleep Duration among US Adults from 1985 to 2012. *Sleep*, *38*(5), 829-832. https://doi.org/10.5665/sleep.4684

Freudenberger, H. J. (1974). Staff burn-out. *Journal of social issues*, *30*(1), 159-165.

Furedi, F. (2021). 100 years of identity crisis: culture war over socialisation. De Gruyter.

Gagnon, M.-C., Durand-Bush, N., & Young, B. W. (2016). Self-regulation capacity is linked to wellbeing and burnout in physicians and medical students: Implications for nurturing self-help skills. *International Journal of Wellbeing*, *6*, 101-116.

Gallagher, R. P. (2015). National survey of college counseling centers 2014. http://d-scholarship.pitt.edu/28178/1/survey_2014.pdf

Goldman-Mellor, S. J., Caspi, A., Harrington, H., Hogan, S., Nada-Raja, S., Poulton, R., & Moffitt, T. E. (2014). Suicide attempt in young people: a signal for long-term health care and social needs. *JAMA Psychiatry*, *71*(2), 119-127.

Gorman, K., Bruns, C., Chin, C., Fitzpatrick, N., Koenig, L., E., Leviness, P., & Sokolowski, K. (2021). Annual Survey for Reporting Period. https://www.aucccd.org/assets/documents/Survey/2021-22%20Annual%20Survey%20Report%20Public%20FINAL.pdf

Greenfield, P. M. (2009). Linking social change and developmental change: shifting pathways of human development. *Dev Psychol*, *45*(2), 401-418. https://doi.org/10.1037/a0014726

Gruder, C. L. (1971). Determinants of social comparison choices. *Journal of Experimental Social Psychology*, *7*(5), 473-489.

Haferkamp, N., & Krämer, N. C. (2011). Social comparison 2.0: Examining the effects of online profiles on social-networking sites. *CyberPsychology, behavior, and social networking*, *14*(5), 309-314.

Hager, E. R., Quigg, A. M., Black, M. M., Coleman, S. M., Heeren, T., Rose-Jacobs, R., Cook, J. T., Ettinger de Cuba, S. A., Casey, P. H., Chilton, M., Cutts, D. B., Meyers, A. F., & Frank, D. A. (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*, *126*(1), e26-32. https://doi.org/10.1542/peds.2009-3146

Halbesleben, J. R. B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress*, *19*(3), 208-220. https://doi.org/10.1080/02678370500340728

Handschin, C., & Spiegelman, B. M. (2008). The role of exercise and PGC1alpha in inflammation and chronic disease. *Nature*, *454*(7203), 463-469. https://doi.org/10.1038/nature07206

Haslam, S. A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well-being: An emerging agenda for applied psychology. *Applied Psychology: An International Review*, 58(1), 1–23. https://doi.org/10.1111/j.1464-0597.2008.00379.x

Hemez, P. (2020). Distributions of age at first marriage, 1960-2018. Family Profiles, FP-20-09. Bowling Green, OH: National Center for Family & Marriage Research. https://doi.org/10.25035/ncfmr/fp-20-09

Hershner, S., & O'Brien, L. M. (2018). The Impact of a Randomized Sleep Education Intervention for College Students. *J Clin Sleep Med*, *14*(3), 337-347. https://doi.org/10.5664/jcsm.6974

Holmes, S. L., Roedder, B. S., & Flowers, L. A. (2004). Applying Student Development Theory to College Students' Spiritual Beliefs. *The College Student Affairs Journal*, *23*, 130-145.

Holmes, S. W., Kertay, L., Adamson, L. B., Holland, C., & Clance, P. R. (1993). Measuring the impostor phenomenon: A comparison of Clance's IP Scale and Harvey's IP Scale. *Journal of personality assessment*, *60*(1), 48-59.

Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A Short Scale for Measuring Loneliness in Large Surveys: Results From Two Population-Based Studies. *Res Aging*, *26*(6), 655-672. https://doi.org/10.1177/0164027504268574

Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, *102*, 152191.

Hutchinson, S. R., Raymond, K. J., & Black, K. R. (2008). Factorial invariance of a campus climate measure across race, gender, and student classification. *Journal of Diversity in Higher Education*, *1*(4), 235.

Idler, E. L., & Benyamini, Y. (1997). Self-rated health and mortality: a review of twenty-seven community studies. *J Health Soc Behav*, *38*(1), 21-37.

Jones, P. J., Park, S. Y., & Lefevor, G. T. (2018). Contemporary college student anxiety: The role of academic distress, financial stress, and support. Journal of College Counseling, 21(3), 252-264.

Kahn, M., Solomon, P., & Treglia, D. (2019). Risk and protective factors explaining first-year college adjustment. Journal of The First-Year Experience & Students in Transition, 31(1), 29-50.

Kalpidou, M., Costin, D., & Morris, J. (2011). The relationship between Facebook and the well-being of undergraduate college students. *CyberPsychology, behavior, and social networking*, *14*(4), 183-189.

Karr-Wisniewski, P., & Lu, Y. (2010). When more is too much: Operationalizing technology overload and exploring its impact on knowledge worker productivity. *Computers in Human Behavior*, *26*(5), 1061-1072.

Keniston, Kenneth. (1971).Youth and dissent: the rise of a new opposition. New York: Harcourt Brace Jovanovich

Kerr, D. C., & Capaldi, D. M. (2011). Young men's intimate partner violence and relationship functioning: long-term outcomes associated with suicide attempt and aggression in adolescence. *Psychol Med*, *41*(4), 759-769. https://doi.org/10.1017/s0033291710001182

Kessler, R. C. (1997). The effects of stressful life events on depression. *Annual Review of Psychology*, *48*(1), 191-214.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*, *62*(6), 593-602. https://doi.org/10.1001/archpsyc.62.6.593

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H. U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry*, *51*(1), 8-19. https://doi.org/10.1001/archpsyc.1994.03950010008002

Killam WK, Degges-White S. College Student Development : Applying Theory to Practice on the Diverse Campus / Wendy K. Killam, Suzanne Degges-White, Editors. (Killam WK, Degges-White S, eds.). Springer Publishing Company; 2017.

Klonsky, E. D., Victor, S. E., & Saffer, B. Y. (2014). Nonsuicidal self-injury: what we know, and what we need to know. *Can J Psychiatry*, *59*(11), 565-568. https://doi.org/10.1177/070674371405901101

Ko, C. M., Grace, F., Chavez, G. N., Grimley, S. J., Dalrymple, E. R., & Olson, L. E. (2018). Effect of Seminar on Compassion on student self-compassion, mindfulness and well-being: A randomized controlled trial. *Journal of American College Health*, 66(7), 537–545. https://doi.org/10.1080/07448481.2018.1431913

Kosyluk, K. A., Al-Khouja, M., Bink, A., Buchholz, B., Ellefson, S., Fokuo, K., Goldberg, D., Kraus, D., Leon, A., Michaels, P., Powell, K., Schmidt, A., & Corrigan, P. W. (2016). Challenging the Stigma of Mental Illness Among College Students. *The Journal of Adolescent Health,* 59(3), 325–331. https://doi.org/10.1016/j.jadohealth.2016.05.005

Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., Shablack, H., Jonides, J., & Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. *PloS one*, *8*(8), e69841.

Krueger, P. M., & Friedman, E. M. (2009). Sleep duration in the United States: a cross-sectional population-based study. *Am J Epidemiol*, *169*(9), 1052-1063. https://doi.org/10.1093/aje/kwp023

Kumaraswamy, N. (2013). Academic stress, anxiety and depression among college students: A brief review. *International Review of Social Sciences and Humanities*, *5*(1), 135-143.

LaRose, R., Connolly, R., Lee, H., Li, K., & Hales, K. D. (2014). Connection overload? A cross cultural study of the consequences of social media connection. *Information Systems Management*, *31*(1), 59-73.

Leach, P. K., Nygaard, R. M., Chipman, J. G., Brunsvold, M. E., & Marek, A. P. (2019). Impostor Phenomenon and Burnout in General Surgeons and General Surgery Residents. *J Surg Educ*, *76*(1), 99-106. https://doi.org/10.1016/j.jsurg.2018.06.025

Lee, L. E., Rinn, A. N., Crutchfield, K., Ottwein, J. K., Hodges, J., & Mun, R. U. (2021). Perfectionism and the Imposter Phenomenon in Academically Talented Undergraduates. *Gifted Child Quarterly*, *65*(3), 220-234. https://doi.org/10.1177/0016986220969396

Lenhart, A., 2015. Teens, Social Media & Technology Overview 2015, Pew Research Center: Internet, Science & Tech. United States of America. Retrieved from https://policycommons.net/artifacts/619187/teens-social-media-technology-overview-2015/1600266/

Levant, B., Villwock, J. A., & Manzardo, A. M. (2020). Impostorism in third-year medical students: an item analysis using the Clance impostor phenomenon scale. *Perspect Med Educ*, *9*(2), 83-91. https://doi.org/10.1007/s40037-020-00562-8

Li, W., Yang, Y., Liu, Z.-H., Zhao, Y.-J., Zhang, Q., Zhang, L., Cheung, T., & Xiang, Y.-T. (2020). Progression of mental health services during the COVID-19 outbreak in China. *International Journal of Biological Sciences*, *16*(10), 1732.

Lipson, S. K., Jones, J. M., Taylor, C. B., Wilfley, D. E., Eichen, D. M., Fitzsimmons-Craft, E. E., & Eisenberg, D. (2017). Understanding and promoting treatment-seeking for eating disorders and body image concerns on college campuses through online screening, prevention and intervention. *Eating Behaviors*, *25*, 68-73.

Lipson, S. K., Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M., & Eisenberg, D. (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021. *Journal of Affective Disorders*, *306*, 138-147. https://doi.org/https://doi.org/10.1016/j.jad.2022.03.038

Lockwood, P., & Kunda, Z. (1997). Superstars and me: Predicting the impact of role models on the self. *Journal of Personality and Social Psychology*, *73*(1), 91.

Mah, C. D., Kezirian, E. J., Marcello, B. M., & Dement, W. C. (2018). Poor sleep quality and insufficient sleep of a collegiate student-athlete population. *Sleep Health*, 4(3), 251–257. https://doi.org/10.1016/j.sleh.2018.02.005

Mak, K. K. L., Kleitman, S., & Abbott, M. J. (2019). Impostor Phenomenon Measurement Scales: A Systematic Review. *Front Psychol*, *10*, 671. https://doi.org/10.3389/fpsyg.2019.00671

Mann, F., Bone, J. K., Lloyd-Evans, B., Frerichs, J., Pinfold, V., Ma, R., Wang, J., & Johnson, S. (2017). A life less lonely: the state of the art in interventions to reduce loneliness in people with mental health problems. *Soc Psychiatry Psychiatr Epidemiol*, *52*(6), 627-638. https://doi.org/10.1007/s00127-017-1392-y

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*(1), 397-422.

Mastroianni, B. (2022). How Social and Political Issues Affect Mental Health of LGBTQ+ Youth. Healthline. https://www.healthline.com/health-news/how-social-and-political-issues-affect-the-mental-health-of-lgbtq-youth

Matthes, J., Karsay, K., Schmuck, D., & Stevic, A. (2020). "Too much to handle": Impact of mobile social networking sites on information overload, depressive symptoms, and well-being. *Computers in Human Behavior*, *105*, 106217. https://doi.org/https://doi.org/10.1016/j.chb.2019.106217

Matthews, D. (2020). A Theory of Mental Health and Monopoly Capitalism. *Monthly Review*, 22-36. https://doi.org/10.14452/MR-071-10-2020-03_3

McGorry, P. D., & Mei, C. (2018). Early intervention in youth mental health: progress and future directions. Evidence-based mental health, 21(4), 182–184. https://doi.org/10.1136/ebmental-2018-300060

McIntyre, J. C., Worsley, J., Corcoran, R., Harrison Woods, P., & Bentall, R. P. (2018). Academic and non-academic predictors of student psychological distress: the role of social identity and loneliness. Journal of mental health (Abingdon, England), 27(3), 230–239. https://doi.org/10.1080/09638237.2018.1437608

Miller, A. H., & Raison, C. L. (2016). The role of inflammation in depression: from evolutionary imperative to modern treatment target. *Nat Rev Immunol*, *16*(1), 22-34. https://doi.org/10.1038/nri.2015.5

Mistler, B. J., Reetz, D. R., Krylowicz, B., & Barr, V. (2012). The association for university and college counseling center directors annual survey. *Retrieved from Association for University and College Counseling Center Directors website: http://files. cmcglobal. com/Monograph_2012_AUCCCD_Public. pdf*.

Mofatteh, M. (2021). Risk factors associated with stress, anxiety, and depression among university undergraduate students. *AIMS Public Health*, *8*(1), 36-65. https://doi.org/10.3934/publichealth.2021004

Mousavi, M., Sohrabpour, Z., Anderson, E., Stemig-Vindedahl, A., Golden, D., Christenson, G., Lust, K., & Buhlmann, P. (2018). Stress and Mental Health in Graduate School: How

Student Empowerment Creates Lasting Change. *Journal of Chemical Education*, 95, 11, 1939-1946. https://doi.org/10.1021/acs.jchemed.8b00188

Nadkarni, A., & Hofmann, S. G. (2012). Why do people use Facebook? *Personality and Individual Differences*, *52*(3), 243-249.

NAMI, the National Alliance on Mental Illness Written by Darcy Gruttadaro and Dana Crudo Designed by Dana Crudo. (2012). College Students Speak: A Survey Report on Mental Health A SURVEY REPORT ON MENTAL HEALTH. https://www.nami.org/getattachment/About-NAMI/Publications-Reports/Survey-Reports/College-Students-Speak_A-Survey-Report-on-Mental-Health-NAMI-2012.pdf

National Institute of Mental Health. (2022). Mental illness. National Institute of Mental Health. https://www.nimh.nih.gov/health/statistics/mental-illness

Nemecek, D., (2020). LONELINESS AND THE WORKPLACE. Cigna 2020 U.S. Report. https://www.cigna.com/static/www-cigna-com/docs/about-us/newsroom/studies-and-reports/combatting-loneliness/cigna-2020-loneliness-report.pdf

Nesi, J., Choukas-Bradley, S., & Prinstein, M. J. (2018). Transformation of Adolescent Peer Relations in the Social Media Context: Part 1-A Theoretical Framework and Application to Dyadic Peer Relationships. *Clin Child Fam Psychol Rev*, *21*(3), 267-294. https://doi.org/10.1007/s10567-018-0261-x

Niederkrotenthaler, T., Tinghög, P., Alexanderson, K., Dahlin, M., Wang, M., Beckman, K., Gould, M., & Mittendorfer-Rutz, E. (2014). Future risk of labour market marginalization in young suicide attempters—a population-based prospective cohort study. *International journal of epidemiology*, *43*(5), 1520-1530.

Nili, A., & Barros, A. (2022). Salient design features that your social media platform needs: The case of online communities of interest. First Monday, 27(3). https://doi.org/10.5210/fm.v27i3.11831

Özdemir, U., & Tuncay, T. (2008). Correlates of loneliness among university students. *Child and Adolescent Psychiatry and Mental Health*, *2*. https://doi.org/10.1186/1753-2000-2-29

Pace, T. W., Mletzko, T. C., Alagbe, O., Musselman, D. L., Nemeroff, C. B., Miller, A. H., & Heim, C. M. (2006). Increased stress-induced inflammatory responses in male patients with major depression and increased early life stress. *Am J Psychiatry*, *163*(9), 1630-1633. https://doi.org/10.1176/ajp.2006.163.9.1630

Padhy, S. K., Sarkar, S., Panigrahi, M., & Paul, S. (2015). Mental health effects of climate change. *Indian J Occup Environ Med*, *19*(1), 3-7. https://doi.org/10.4103/0019-5278.156997

Pascarella, E. T., & Terenzini, P. T. (1991). How college affects students: Findings and insights from twenty years of research. San Francisco, CA: Jossey-Bass.

Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International Journal of Adolescence and Youth*, *25*(1), 104-112.

Patsali, M. E., Mousa, D. V., Papadopoulou, E. V. K., Papadopoulou, K. K. K., Kaparounaki, C. K., Diakogiannis, I., & Fountoulakis, K. N. (2020). University students' changes in mental health status and determinants of behavior during the COVID-19 lockdown in Greece. *Psychiatry Res*, *292*, 113298. https://doi.org/10.1016/j.psychres.2020.113298

Pool, L.D., & Qualter, P. (2012). Improving emotional intelligence and emotional self-efficacy through a teaching intervention for university students. Learning and Individual Differences, 22(3), 306-312. https://doi.org/https://doi.org/10.1016/j.lindif.2012.01.010

Pritchard, M. E., Wilson, G. S., & Yamnitz, B. (2007). What predicts adjustment among college students? A longitudinal panel study. *Journal of American College Health*, *56*(1), 15-22.

Pruessner, L., Barnow, S., Holt, D., Joormann, J., & Schulze, K. (2020). A Cognitive Control Framework for Understanding Emotion Regulation Flexibility. *Emotion*, *20*, 21–29. https://doi.org/10.1037/emo0000658

Raison, C. L., & Miller, A. H. (2017). Pathogen-Host Defense in the Evolution of Depression: Insights into Epidemiology, Genetics, Bioregional Differences and Female Preponderance. *Neuropsychopharmacology*, *42*(1), 5-27. https://doi.org/10.1038/npp.2016.194

Reich, W., & Wolfe, T. P. (1963). The Sexual Revolution: Toward a Self-Regulating Character Structure. Farrar, Straus and Giroux. https://books.google.com/books?id=OUK1xwEACAAJ

Reinecke, L., Aufenanger, S., Beutel, M. E., Dreier, M., Quiring, O., Stark, B., Wölfling, K., & Müller, K. W. (2017). Digital stress over the life span: The effects of communication load and internet multitasking on perceived stress and psychological health impairments in a German probability sample. *Media Psychology*, *20*(1), 90-115.

Renshaw, T. L., & Arslan, G. (2016). Psychometric Properties of the Student Subjective Wellbeing Questionnaire With Turkish Adolescents: A Generalizability Study. *Canadian Journal of School Psychology*, *31*(2), 139-151. https://doi.org/10.1177/0829573516634644

Renshaw, T. L., Long, A. C., & Cook, C. R. (2015). Assessing adolescents' positive psychological functioning at school: Development and validation of the Student Subjective Wellbeing Questionnaire. *School psychology quarterly*, *30*(4), 534.

Renshaw, T. L. (2022). Student Subjective Wellbeing Questionnaire (SSWQ). https://doi.org/10.17605/OSF.IO/K25YF

Researchers Call for National Public Health Effort to Prevent Loneliness | Columbia Public Health. (2022). Www.publichealth.columbia.edu. https://www.publichealth.columbia.edu/public-health-now/news/researchers-call-national-public-health-effort-prevent-loneliness

Robb, C. A. (2017). College Student Financial Stress: Are the Kids Alright? Journal of Family and Economic Issues, 38(4), 514-527. https://doi.org/10.1007/s10834-017-9527-6

Roberts, P. (2014). *The Impulse Society: America in the Age of Instant Gratification*. Bloomsbury Publishing. https://books.google.com/books?id=zkhxAwAAQBAJ

Rosenberg, J., & Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. Journal of computer-mediated communication, 17(1), 1-18.

Rook, G. A., Lowry, C. A., & Raison, C. L. (2015). Hygiene and other early childhood influences on the subsequent function of the immune system. *Brain Res*, *1617*, 47-62. https://doi.org/10.1016/j.brainres.2014.04.004

Schiller, M., Hammen, C. C., & Shahar, G. (2016). Links among the self, stress, and psychological distress during emerging adulthood: Comparing three theoretical models. Self and Identity, 15(3), 302–326. https://doi.org/10.1080/15298868.2015.1131736

Schwartz, S. E., Benoit, L., Clayton, S., Parnes, M. F., Swenson, L., & Lowe, S. R. (2022). Climate change anxiety and mental health: Environmental activism as buffer. Current Psychology, 1-14.

Schultz W. (2016). Dopamine reward prediction error coding. *Dialogues in clinical neuroscience*, *18*(1), 23–32. https://doi.org/10.31887/DCNS.2016.18.1/wschultz

Scott, K. M., Lim, C., Al-Hamzawi, A., Alonso, J., Bruffaerts, R., Caldas-de-Almeida, J. M., Florescu, S., de Girolamo, G., Hu, C., de Jonge, P., Kawakami, N., Medina-Mora, M. E., Moskalewicz, J., Navarro-Mateu, F., O'Neill, S., Piazza, M., Posada-Villa, J., Torres, Y., & Kessler, R. C. (2016). Association of Mental Disorders With Subsequent Chronic Physical Conditions: World Mental Health Surveys From 17 Countries. *JAMA Psychiatry*, *73*(2), 150-158. https://doi.org/10.1001/jamapsychiatry.2015.2688

Shaver, P. R., & Brennan, K. A. (1991). Measures of depression and loneliness. In *Measures of personality and social psychological attitudes.* (pp. 195-289). Academic Press. https://doi.org/10.1016/B978-0-12-590241-0.50010-1

Sliwa, Jim. "Mental Health Issues Increased Significantly in Young Adults over Last Decade." Https://Www.apa.org, 14 Mar. 2019, www.apa.org/news/press/releases/2019/03/mental-health-adults.

Smagula, S. F., Stone, K. L., Fabio, A., & Cauley, J. A. (2016). Risk factors for sleep disturbances in older adults: Evidence from prospective studies. *Sleep Med Rev*, *25*, 21-30. https://doi.org/10.1016/j.smrv.2015.01.003

Smith, K. B., Hibbing, M. V., & Hibbing, J. R. (2019). Friends, relatives, sanity, and health: The costs of politics. PloS one, 14(9), e0221870. https://doi.org/10.1371/journal.pone.0221870

Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: the role of psychological detachment. *Journal of Applied Psychology*, *95*(5), 965.

Strauss, G. P. (2021). A Bioecosystem Theory of Negative Symptoms in Schizophrenia. *Front Psychiatry*, *12*, 655471. https://doi.org/10.3389/fpsyt.2021.655471

Streeck, W. (2016). How will capitalism end? : essays on a failing system. In cadmus.eui.eu. Verso. https://cadmus.eui.eu/handle/1814/44305

Summers, R. F., Gorrindo, T., Hwang, S., Aggarwal, R., & Guille, C. (2020). Well-Being, Burnout, and Depression Among North American Psychiatrists: The State of Our Profession. *Am J Psychiatry*, *177*(10), 955-964. https://doi.org/10.1176/appi.ajp.2020.19090901

Sussman, S., & Arnett, J. J. (2014). Emerging Adulthood: Developmental Period Facilitative of the Addictions. *Eval Health Prof*, *37*(2), 147-155. https://doi.org/10.1177/0163278714521812

Timms, C., Brough, P., & Graham, D. (2012). Burnt-out but engaged: the co-existence of psychological burnout and engagement. *Journal of Educational Administration*, *50*(3), 327-345.

Varghese, S. (2015). Positive impact on learning curves of students by introducing information communication technology in teaching methodology. *International Journal of Education Planning and Administration*, 5(1), 41-50.

Vassar, M., & Crosby, J. W. (2008). A reliability generalization study of coefficient alpha for the UCLA loneliness scale. *J Pers Assess*, *90*(6), 601-607. https://doi.org/10.1080/00223890802388624

Vogel, E. A., Rose, J. P., Okdie, B. M., Eckles, K., & Franz, B. (2015). Who compares and despairs? The effect of social comparison orientation on social media use and its outcomes. *Personality and Individual Differences*, *86*, 249-256. https://doi.org/https://doi.org/10.1016/j.paid.2015.06.026

Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., Buysse, D., Dinges, D. F., Gangwisch, J., Grandner, M. A., Kushida, C., Malhotra, R. K., Martin, J. L., Patel, S. R., Quan, S. F., & Tasali, E. (2015). Joint Consensus Statement of the American Academy of Sleep Medicine and Sleep Research Society on the Recommended Amount of Sleep for a Healthy Adult: Methodology and Discussion. *Sleep*, *38*(8), 1161-1183. https://doi.org/10.5665/sleep.4886

Weidman, J. C. (1989). Undergraduate socialization: a conceptual approach. In Higher education: handbook of theory and research. Edited by Smart, John C. Vol. V, pp. 289-322. New York: Agathon Press.

Whitlock, J., Eckenrode, J., & Silverman, D. (2006). Self-injurious behaviors in a college population. *Pediatrics*, *117*(6), 1939-1948. https://doi.org/10.1542/peds.2005-2543

Wilcox, H. C., Arria, A. M., Caldeira, K. M., Vincent, K. B., Pinchevsky, G. M., & O'Grady, K. E. (2010). Prevalence and predictors of persistent suicide ideation, plans, and attempts during college. *J Affect Disord*, *127*(1-3), 287-294. https://doi.org/10.1016/j.jad.2010.04.017

Wilks, S. E. (2008). Resilience amid Academic Stress: The Moderating Impact of Social Support among Social Work Students. *Advances in Social Work*, *9*, 106-125.

Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin*, *90*(2), 245.

Wood, D., Crapnell, T., Lau, L., Bennett, A., Lotstein, D., Ferris, M., & Kuo, A. (2017). Emerging Adulthood as a Critical Stage in the Life Course. In N. Halfon (Eds.) et. al., Handbook of Life Course Health Development. (pp. 123–143). Springer.

Xiao, H., Carney, D. M., Youn, S. J., Janis, R. A., Castonguay, L. G., Hayes, J. A., & Locke, B. D. (2017). Are we in crisis? National mental health and treatment trends in college counseling centers. *Psychol Serv*, *14*(4), 407-415. https://doi.org/10.1037/ser0000130

Xiao, Y., Hinrichs, R., Johnson, N., McKinley, A., Carlson, J., Agley, J., & Yip, P. S. F. (2021). Suicide Prevention Among College Students Before and During the COVID-19 Pandemic: Protocol for a Systematic Review and Meta-analysis. *JMIR Research Protocols*, 10(5), e26948. https://doi.org/10.2196/26948

Yang, C., Chen, A., & Chen, Y. (2021). College students' stress and health in the COVID-19 pandemic: The role of academic workload, separation from school, and fears of contagion. *PloS one*, *16*(2), e0246676. https://doi.org/10.1371/journal.pone.0246676

Appendix A: Tables of Results

Table 1. Socio-demographic characteristics, Emory University Undergraduate Students (n=121), 2022

Sociodemographic Variable	Frequency	Percentage
Gender		
Male	20	16
Female	90	74
Non-Binary	4	3
Genderqueer	4	3
Prefer not to respond	2	2
Other	2	2
Transgender		
Yes	4	3
No	114	94
Prefer not to disclose	3	3
Sexual Orientation		
Homosexual	--	--
Lesbian	6	5
Queer	7	6
Bisexual	26	22
Pansexual	4	3
Asexual	2	2
Heterosexual	71	59
Unsure	4	3
Other	1	1
Racial/Ethnic Group*		
White	64	53
Hispanic/Latinx	15	12
Black/African American	18	15
Asian	40	33
American Indian/Alaskan Native	3	3
Middle Eastern/North African	2	2
Native Hawaiian/Pacific Islander	-	-
Other	1	1
Multiracial	12	10

Sociodemographic Variable	Frequency	Percentage
Parental Education		
8 grade or lower	1	1
9-12 grade	1	1
High school	13	11
Some college	7	6
Associate's degree	2	2
Bachelor's degree	27	22
Master's degree	25	21
Graduate degree	44	36
Don't know	1	1
Socioeconomic Indicators		
Family receives public assistance	18	15
First-generation	23	19
Year in school		
1st year	17	14
2nd year	27	22
3rd year	33	27
4th year	41	34
5th year	3	3
Enrollment		
Part time	3	3
Full time	116	98
Greek Life Affiliation		
Yes	12	10
Living Situation		
On campus, Atlanta, residence hall	42	35
On campus, Atlanta, apartment	22	18
On campus, Oxford, residence	2	2
Fraternity/Sorority housing	3	3
On or off campus cooperative housing	1	1
Off campus, non-university housing	45	27
Off campus, with parents/guardians	5	4
Other	1	1

Sociodemographic Variable	Frequency	Percentage
Employment status		
Full-time, off campus	3	3
Part-time, off campus	22	18
Full-time, on campus	3	3
Part-time, on campus	40	33
Not employed	53	44
Disability		
Acquired brain injury	3	3
Anxiety disorder	53	44
Autism spectrum disorder	6	5
Attention-Deficit hyperactivity disorder	23	19
Bipolar disorder	1	1
Chronic pain	2	2
Depression	36	30
Diabetes	--	--
Dyslexia	3	3
Hearing impairment	2	2
Learning disability	4	3
Other mental health condition	29	24
Migraines	5	4
Visual impairment	2	2
PTSD	9	7
Chronic fatigue	3	3
Other	8	7

*Values do not sum to 100% because participants could identify multiple races/ethnicities

Table 2. Positive mental health facilitators in descending order of prevalence, Emory University Undergraduate Students (N=130), 2022

Item	Facilitation*	*Extent Rating [0, 10]***	
	n (%)	*M*	*SE*
Friendships/Social Life	91 (73)	7.6	0.39
Family Relationships	83 (68)	6.9	0.38
Exercise Habits	66 (58)	6.2	0.33
Romantic Relationships	47 (55)	6.6	0.44
Physical Health	47 (47)	6.4	0.30
Financial Status	40 (45)	6.8	0.37
Academic Performance	34 (30)	7.1	0.23
Eating Habits	31 (28)	6.6	0.30
Sleep Schedule	27 (23)	7.0	0.22

*Participants indicated whether each of these factors facilitated their mental health
**Extent rating refers to participants' rating of the extent to which each item facilitated their mental health (0= Extremely Small, 10= Extremely Large)

Table 3. Barriers to positive mental health in descending order of prevalence, Emory University Undergraduate Students (N=130), 2022

Item	Impairment*	*Extent Rating [0, 10]***	
	n (%)	*M*	*SE*
Sleep Schedule	91 (77)	6.0	0.49
Eating Habits	79 (72)	4.2	0.51
Academic Performance	79 (70)	6.5	0.36
Financial Status	49 (55)	5.6	0.52
Physical Health	53 (53)	6.0	0.37
Romantic Relationships	38 (45)	7.7	0.28
Exercise Habits	47 (42)	6.5	0.29
Family Relationships	39 (32)	7.7	0.26
Friendships/Social Life	33 (27)	7.4	0.22

*Participants indicated whether each of these factors impaired their mental health

**Extent rating refers to participants' rating of the extent to which each item impaired their mental health (0= Extremely Small, 10= Extremely Large)

Table 4. Sources of Stress, Emory University Undergraduate Students (n=123), 2022

Item*	Large Extent *n (%)*	Moderate Extent *n (%)*	Small Extent *n (%)*	No Extent *n (%)*	NA *n (%)*
Academic Workload	105 (85)	16 (13)	2 (2)	- -	- -
Mental Health	87 (70)	22 (18)	12 (10)	2 (2)	1 (0)
COVID-19	53 (43)	32 (26)	28 (23)	8 (7)	3 (2)
Gun Violence	45 (36)	35 (28)	31 (25)	9 (7)	4 (3)
U.S. Politics	42 (34)	42 (34)	25 (20)	10 (8)	5 (4)
Health of Loved Ones	39 (32)	38 (31)	27 (22)	8 (7)	12 (10)
Housing Instability	35 (28)	19 (15)	24 (19)	30 (24)	16 (13)
World Events	33 (27)	45 (36)	31 (25)	11 (9)	4 (3)
Food Instability	27 (22)	20 (16)	28 (23)	30 (24)	19 (15)
Climate Change	21 (17)	20 (16)	48 (39)	28 (23)	7 (6)
Bias in the News	17 (14)	33 (27)	44 (36)	17 (14)	12 (10)
Bias Experienced	5 (4.0)	20 (16)	31 (25)	37 (30)	31 (25)

*Participants reported the extent to which each of these factors impacted their stress levels

Table 5. Food Insecurity, Emory University Undergraduate Students (n=128), 2022

Item	Often *n (%)*	Sometimes *n (%)*	Never *n (%)*
The food that I bought just didn't last, and I didn't have money to get more	6 (5)	23 (18)	99 (77)
I couldn't afford to eat balanced meals	9 (7)	29 (23)	90 (70)

Table 6. Negative Influences on Work Performance/Productivity, Emory University Undergraduate Students (n=157), 2022

Item	Experienced without Impairment *n (%)*	Experienced with Impairment *n (%)*	Total Experienced *n (%)*	% Impaired* *%*
Difficulty Concentrating	31 (20)	121 (77)	152 (97)	80
Stress	39 (25)	118 (75)	157 (100)	75
Lack of Motivation	33 (21)	117 (74)	150 (95)	78
Feeling too Tired	37 (23)	115 (73)	152 (96)	76
Lack of Quality Sleep	39 (25)	101 (64)	140 (89)	72
Anxiety Symptoms	50 (32)	99 (63)	149 (94)	66
Trauma/ Traumatic Emotions	37 (23)	48 (30)	85 (54)	57
Body Image Concerns	81 (51)	46 (29)	127 (80)	36
Physical Pain	39 (25)	37 (23)	76 (48)	49
Financial Concerns	55 (35)	30 (19)	85 (54)	35
Discrimination	41 (26)	12 (8)	53 (34)	23
Personal Drug/ Alcohol Use	33 (21)	8 (5)	41 (26)	20
Home Violence	3 (2)	3 (2)	6 (4)	50
Other's Drug/ Alcohol Use	31 (20)	2 (1)	33 (21)	6

* % impaired represents the percentage of people who reported impairment among those who experienced a given stressor

Table 7. Student Subjective Wellbeing Questionnaire, Emory University Undergraduate Students (n=150), 2022

Item	Almost Never *n (%)*	Sometimes *n (%)*	Often *n (%)*	Almost Always *n (%)*
I enjoy working on class projects and assignments	23 (15)	68 (45)	50 (33)	9 (6)
I feel like people at my school care about me	21 (14)	58 (38)	50 (33)	22 (15)
I feel like the things I do at school are important	20 (13)	60 (40)	55 (36)	16 (11)
I feel happy when I am working and learning at school	18 (12)	50 (33)	64 (42)	19 (13)
I can really be myself at my school	17 (11)	54 (36)	56 (37)	24 (16)
I feel like I belong at my school	14 (9)	63 (42)	49 (33)	25 (17)
I get excited about learning new things in class	8 (5)	46 (31)	68 (45)	28 (19)
I am a successful student	8 (5)	47 (31)	54 (36)	42 (28)
I believe the things I learn at school will help me in life	8 (5)	31 (21)	68 (45)	44 (29)
I am really interested in the things I am doing at school	5 (3)	46 (31)	72 (48)	28 (19)
I am treated with respect at my school	5 (3)	28 (19)	67 (44)	51 (34)
I get good grades in my classes	5 (3)	21 (14)	61 (40)	64 (42)
I feel it is important to do well in my classes	4 (3)	5 (3)	42 (28)	100 (66)
I do well on my class assignments	4 (3)	22 (15)	64 (42)	61 (40)
I think school matters and should be taken seriously	3 (2)	13 (9)	45 (30)	90 (60)
I do good work at school	2 (1)	27 (18)	67 (44)	55 (36)

Table 8. Academic-related Stress Summary Statistics, Emory University Undergraduate Students (n=130), 2022

Measure [min, max]	M	SE
SSWQ Sum [16, 64]*	46	0.69
Academic Efficacy [4, 16]	12	0.23
Joy of Learning [4, 16]	10	0.22
School Connectedness [4, 16]	11	0.22
Educational Purpose [4, 16]	13	0.19
Imposter Syndrome Sum [20, 100]	70.1	1.24
Yes (≥ 63)	101 (73%)	
No (< 63)	37 (27%)	
Burnout Sum [16, 64]	42	0.63
Disengaged [8, 32]	20	0.38
Exhausted [8, 32]	22	0.40
Yes (≥ 35)	111 (87%)	
No (< 35)	16 (13%)	

*SSWQ: Student Subjective Wellbeing Questionnaire

Table 9. Lifetime Diagnoses of Select Mental Health Conditions, Emory University Undergraduate Students (n=130), 2022

Psychiatric Disorder	Professional Diagnosis *n (%)*	Self-Diagnosis *n (%)*
Depression	44 (34)	58 (45)
Anxiety Disorder	51 (40)	76 (59)
Neurodevelopmental Disorder Or Intellectual Disability	15 (12)	31 (24)
Eating Disorder	13 (10)	24 (19)
Obsessive-Compulsive or Related Disorder	11 (9)	21 (16)
Trauma and Stressor-Related Disorder	7 (5)	17 (13)
Substance Use Disorder	3 (2)	8 (6)
Bipolar Disorder	2 (2)	2 (2)
Personality Disorder	1 (1)	5 (4)
Psychosis	---	1 (1)
At least one disorder	67 (52)	96 (74)
Two or more disorders	48 (37)	68 (52)

Table 10. Reported Satisfaction with Institutional Attributes, Emory University Undergraduate Students (n=128), 2022

Item	Dissatisfied *n (%)*	Neither satisfied nor dissatisfied *n (%)*	Satisfied *n (%)*	NA *n (%)*
Cost of attendance	109 (85)	6 (5)	5 (4)	8 (6)
Cost of food on campus	87 (67)	25 (19)	13 (10)	4 (3)
Cost of a parking pass	81 (63)	13 (10)	4 (3)	30 (23)
General mental health support	75 (58)	25 (19)	15 (12)	15 (12)
Diversity of food options	73 (57)	20 (16)	35 (27)	1 (1)
Number of free sessions at CAPS	69 (54)	26 (20)	13 (10)	21 (16)
Quality of mental health services	67 (52)	27 (21)	17 (13)	17 (13)
Cost of health insurance	51 (40)	19 (15)	8 (6)	49 (39)
Financial aid support	50 (39)	14 (11)	43 (33)	22 (17)
Accessibility of professors for support	46 (36)	34 (27)	37 (29)	10 (8)
Interfraternity council	29 (23)	40 (31)	17 (13)	42 (33)
Diversity of faculty	28 (22)	26 (21)	70 (55)	3 (2)
Accessibility and Disability services	25 (20)	28 (22)	19 (15)	54 (43)
Panhellenic council	20 (16)	44 (35)	18 (14)	45 (35)
National Pan-Hellenic council	14 (11)	45 (35)	22 (17)	46 (36)
Multicultural Greek council	11 (9)	47 (37)	17 (13)	52 (41)

Table 11. Mental Health Climate and Perceptions, Emory University Undergraduate Students (n=121), 2022

Item	Disagree *n (%)*	Agree *n (%)*
*Positive items**		
The administration is listening to the concerns of students when it comes to health and wellness	88 (73)	33 (27)
There is a good support system on campus for students going through difficult times	86 (72)	33 (28)
I feel that the campus climate encourages free and open discussion around mental and emotional health	59 (50)	60 (50)
I feel that students' mental and emotional wellbeing is a priority	56 (46)	65 (54)
I am able to perform up to my full potential	50 (42)	70 (58)
I have access to programs and resources that foster my success	35 (29)	85 (71)
Students are working to promote mental health on campus	26 (22)	95 (79)
Negative items		
When I feel depressed or sad, I tend to keep those feelings to myself	27 (22)	94 (78)
I feel that the campus environment has a negative impact on students' mental and emotional health	30 (25)	90 (75)
I feel that the campus environment has a negative impact on students' eating and body image	54 (45)	65 (55)

*Positive items in descending order of disagreement, negative items in descending order of agreement

Table 12. Perceived Campus Climate for Diverse Groups, Emory University Undergraduate Students (n=117), 2022

Item	Ratings of Emory's campus community for members of each group:			
	Hostile *n (%)*	Neutral *n (%)*	Welcoming *n (%)*	I Don't Know *n (%)*
Low SES students	38 (33)	17 (15)	41 (35)	21 (18)
Students with disabilities	25 (21)	11 (9)	39 (33)	42 (36)
Non-native English speakers	21 (18)	12 (10)	51 (44)	33 (28)
Racial/ethnic minority students	18 (15)	12 (10)	72 (62)	15 (13)
Transgender and genderqueer students	16 (14)	12 (10)	59 (50)	30 (26)
First-generation students	14 (12)	9 (8)	73 (62)	21 (18)
Not U.S. citizens	12 (10)	16 (14)	63 (54)	26 (22)
Women students	12 (10)	12 (10)	85 (73)	8 (7)
Immigrant students	10 (9)	13 (11)	66 (57)	27 (23)
Gay, lesbian, bisexual students	9 (8)	2 (2)	85 (77)	15 (14)
Non-Christian students	8 (7)	11 (9)	79 (68)	19 (16)
Christian students	6 (5)	10 (9)	80 (68)	21 (18)

Table 13. Factors Associated with Average Sleep Duration, Emory University Undergraduate Students (n=130), 2022

Measures [min, max]	< 7 hours M (SE)	≥ 7 hours M (SE)
Student Wellbeing [16, 64]	41.9 (1.18)	48.5 (0.90)
Joy of Learning [4, 16]	9.4 (0.30)	10.9 (0.32)
School Connectedness [4, 16]	9.9 (0.37)	11.3 (0.30)
Educational Purpose [4, 16]	11.4 (0.37)	13.0 (0.21)
Academic Efficacy [4, 16]	11.2 (0.29)	13.2 (0.29)
Burnout [16, 64]	43.6 (1.03)	41.2 (0.78)
Imposter Syndrome [20, 100]	71.0 (1.95)	70.8 (1.68)

Table 14. Factors Associated with Loneliness, Burnout, and Imposter Syndrome, Emory University Undergraduate Students (n=130), 2022

Measures [min, max]	Loneliness		Burnout		Imposter Syndrome	
	Yes *M (SE)*	No *M (SE)*	Yes *M (SE)*	No *M (SE)*	Yes M (SE)	No M (SE)
Hours of Sleep	6.7 (0.15)	6.5 (0.14)	6.5 (0.11)	7.4 (0.36)	6.6 (0.12)	6.7 (0.24)
Student Wellbeing [16, 64]	48.9 (1.11)	44.5 (0.92)	45.3 (0.80)	50.1 (2.42)	44.8 (0.82)	49.0 (1.40)
Academic Efficacy [4, 16]	12.7 (0.38)	12.3 (0.32)	12.4 (0.28)	12.4 (0.69)	12.2 (0.30)	13.2 (0.41)
Joy of Learning [4, 16]	11.2 (0.30)	10.0 (0.29)	10.2 (0.23)	11.5 (0.86)	10.0 (0.25)	11.4 (0.43)
School Connectedness [4, 16]	12.4 (0.31)	9.9 (0.28)	10.4 (0.25)	12.7 (0.69)	10.4 (0.26)	11.6 (0.45)
Educational Purpose [4, 16]	12.7 (0.33)	12.3 (0.25)	12.2 (0.22)	13.5 (0.54)	12.3 (0.23)	12.8 (0.39)
Loneliness [3, 9]	---	---	6.4 (0.19)	5.7 (0.45)	6.5 (0.19)	5.6 (0.33)
Burnout [16, 64]	43.3 (0.79)	40.1 (0.96)	---	---	43.2 (0.70)	39.5 (1.28)
Imposter Syndrome [20, 100]	64.5 (2.16)	72.8 (1.45)	71.9 (1.24)	62.3 (5.21)	---	---

Table 15. Mental Health Outcomes by First-Generation Status, Emory University Undergraduate Students (n=122), 2022

Item*	First-Generation (n=23) *n (%)*	Not First-Generation (n=99) *n (%)*
Depression		
Professional	8 (35)	36 (36)
Self	10 (44)	44 (44)
Anxiety		
Professional	8 (35)	43 (43)
Self	13 (57)	61 (62)
Any Diagnosis		
Professional	10 (45)	56 (57)
Self	16 (73)	74 (75)
Loneliness	20 (87)	64 (65)
Burnout	19 (83)	86 (87)
Imposter Syndrome	21 (91)	73 (74)

*Numbers may not sum to total due to missing values

Table 16. Mental Health Outcomes by Racial/Ethnic Identity, Emory University Undergraduate Students (n=120), 2022

Item*	White (n=49) *n (%)*	Black (n=12) *n (%)*	Asian (n=32) *n (%)*	Multiracial (n=12) *n (%)*	Latinx Ethnicity (n=15) *n (%)*
Depression					
Professional	20 (41)	3 (25)	8 (25)	6 (50)	6 (40)
Self	27 (55)	2 (17)	9 (28)	7 (58)	9 (60)
Anxiety					
Professional	27 (55)	4 (33)	6 (19)	6 (50)	7 (47)
Self	35 (71)	8 (67)	13 (41)	7 (58)	10 (67)
Any Diagnosis					
Professional	34 (69)	4 (33)	10 (33)	10 (83)	7 (47)
Self	44 (90)	9 (75)	15 (50)	8 (67)	13 (87)
Loneliness	37 (76)	6 (50)	20 (63)	9 (75)	12 (80)
Burnout	46 (98)	9 (75)	25 (83)	10 (91)	14 (93)
Imposter Syndrome	39 (80)	6 (50)	22 (69)	11 (92)	15 (100)

*Numbers may not sum to total due to missing values

Table 17. Mental Health Outcomes by Sexual Orientation, Emory University Undergraduate Students (n=121), 2022

Item*	Heterosexual (n=71) *n (%)*	Bisexual (n=26) *n (%)*	Other Sexual Orientation** (n=24) *n (%)*
Depression			
Professional	22 (31)	14 (54)	8 (33)
Self	28 (39)	14 (54)	12 (50)
Anxiety			
Professional	24 (34)	15 (58)	12 (50)
Self	36 (51)	19 (73)	19 (79)
Any Diagnosis			
Professional	35 (51)	17 (65)	14 (58)
Self	45 (65)	24 (92)	21 (88)
Loneliness	45 (63)	22 (85)	17 (71)
Burnout	62 (90)	20 (83)	22 (96)
Imposter Syndrome	52 (73)	20 (77)	21 (88)

*Numbers may not sum to total due to missing values

**Other sexual orientation includes students who identify as lesbian, queer, asexual, and/or pansexual

Table 18. Mental Health Outcomes by Gender Identity, Emory University Undergraduate Students (n=121), 2022

Item*	Male (n=20) *n (%)*	Female (n=90) *n (%)*	Non-Binary & Genderqueer (n=10) *n (%)*	Transgender (n=4) *n (%)*
Depression				
Professional	6 (30)	34 (38)	4 (40)	1 (25)
Self	8 (40)	40 (46)	4 (40)	3 (75)
Anxiety				
Professional	2 (10)	41 (46)	8 (80)	2 (50)
Self	9 (45)	54 (60)	10 (100)	4 (100)
Any Diagnosis				
Professional	9 (45)	49 (56)	8 (80)	3 (75)
Self	12 (60)	66 (75)	10 (100)	4 (100)
Loneliness	16 (80)	59 (66)	9 (90)	4 (100)
Burnout	19 (100)	76 (88)	8 (80)	4 (100)
Imposter Syndrome	17 (85)	67 (74)	10 (100)	4 (100)

*Numbers may not sum to total due to missing values

Appendix B: Survey Instrument

Mental Health at Emory University

Please begin the survey below.

Thank you!

Within the last 12 months, have any of the following negatively impacted your work performance and/or productivity?	I did not experience this issue/not applicable.	I have experienced this issue, but my work performance/productivity has not been negatively affected.	I have experienced this issue, and it negatively impacted my work performance/productivity.
Symptoms of anxiety	◯	◯	◯
Having a lack of motivation	◯	◯	◯
Difficulty concentrating or staying focused	◯	◯	◯
Lack of quality sleep	◯	◯	◯
Feeling too tired	◯	◯	◯
Experiencing trauma/feeling traumatic emotions	◯	◯	◯
Stress	◯	◯	◯
Body image concerns	◯	◯	◯
Physical pain	◯	◯	◯
Financial concerns	◯	◯	◯
Experiencing discrimination (racism, sexism, antisemitism, homophobia, transphobia, biphobia, xenophobia, etc.)	◯	◯	◯
Violence in your home	◯	◯	◯
Personal use of alcohol or drugs	◯	◯	◯
A close friend or family member's use of alcohol or drugs	◯	◯	◯

Here are some questions about what you think, feel, and do at school. Read each sentence and choose the one best answer for how you felt in the past month.

	Almost Never	Sometimes	Often	Almost Always
I get excited about learning new things in class	○	○	○	○
I feel like I belong at my school	○	○	○	○
I feel like the things I do at school are important	○	○	○	○
I am a successful student	○	○	○	○
I am really interested in the things I am doing at school	○	○	○	○
I can really be myself at school	○	○	○	○
I think school matters and should be taken seriously	○	○	○	○
I do good work at school	○	○	○	○
I enjoy working on class projects and assignments	○	○	○	○
I feel like people at my school care about me	○	○	○	○
I feel it is important to do well in my classes	○	○	○	○
I do well on my class assignments	○	○	○	○
I feel happy when I am working and learning at school	○	○	○	○
I am treated with respect at my school	○	○	○	○
I believe the things I learn at school will help me in life	○	○	○	○
I get good grades in my classes	○	○	○	○

For each question, please indicate how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

	Not at all true	Rarely true	Sometimes true	Often true	Very true
I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task	○	○	○	○	○
I can give the impression that I'm more competent than I really am	○	○	○	○	○
I avoid evaluations if possible and have a dread of others evaluating me	○	○	○	○	○
When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future	○	○	○	○	○
I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people	○	○	○	○	○
I'm afraid people important to me may find out that I'm not as capable as they think I am	○	○	○	○	○
I tend to remember the incidents in which I have not done my best more than those times I have done my best	○	○	○	○	○
I rarely do a project or task as well as I'd like to do it	○	○	○	○	○
Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error	○	○	○	○	○
It's hard for me to accept compliments or praise about my intelligence or accomplishments	○	○	○	○	○
At times, I feel my success has been due to some kind of luck	○	○	○	○	○

I'm disappointed at times in my present accomplishments and think I should have accomplished much more	○	○	○	○	○
Sometimes I'm afraid others will discover how much knowledge or ability I really lack	○	○	○	○	○
I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt	○	○	○	○	○
When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success	○	○	○	○	○
If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done	○	○	○	○	○
I often compare my ability to those around me and think they may be more intelligent than I am	○	○	○	○	○
I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well	○	○	○	○	○
If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact	○	○	○	○	○
I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement	○	○	○	○	○

The following questions are about how you feel about different aspects of your life:

	Hardly Ever	Some of the time	Often
How often do you feel that you lack companionship?	◯	◯	◯
How often do you feel left out?	◯	◯	◯
How often do you feel isolated from others?	◯	◯	◯

Please check the box to indicate whether you have ever used the following and, if so, whether you have used it since entering Emory and in the last 30 days:

	Have you ever used?	Since entering Emory?	In the last 30 days?
Marijuana/Cannabis (e.g., smoked, edible, vaped THC, hash, synthetic marijuana)	☐	☐	☐
Depressants, Sedatives, and Sleeping pills prescribed to you (Xanax, Valium, GHB, Rohypnol)	☐	☐	☐
Depressants, Sedatives, and Sleeping pills not prescribed to you (Xanax, Valium, GHB, Rohypnol)	☐	☐	☐
Prescription stimulants not prescribed to you (e.g., amphetamines, Ritalin, Concerta, Dexedrine, Adderall, diet pills)	☐	☐	☐
Non-prescription stimulants: cocaine (e.g., blow, snow), methamphetamine (e.g., T, meth, crystal, crank)	☐	☐	☐
Prescription opioids not prescribed to you (e.g., Vicodin, OxyContin, Percocet)	☐	☐	☐
Non-prescription opioids: heroin (e.g., smack, dope), fentanyl	☐	☐	☐
Hallucinogens (e.g., mushrooms, LSD, PCP)	☐	☐	☐
Other Drugs	☐	☐	☐

Trigger Warning: Some of the questions below contain references to sexual assault, self-harm, and suicide; these questions are very personal and you may skip any question you do not feel comfortable answering.

Below you will find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement with each statement. Please refer to your experiences as a student.

	Strongly disagree	Disagree	Agree	Strongly agree
I always find new and interesting aspects in my work	○	○	○	○
There are days when I feel tired before I arrive at work	○	○	○	○
It happens more and more often that I talk about my work in a negative way	○	○	○	○
After work, I tend to need more time than in the past in order to relax and feel better	○	○	○	○
I can tolerate the pressure of my work very well	○	○	○	○
Lately, I tend to think less at work and do my job almost mechanically	○	○	○	○
I find my work to be a positive challenge	○	○	○	○
During my work, I feel emotionally drained	○	○	○	○
Over time, one can become disconnected from this type of work	○	○	○	○
After working, I have enough energy for my leisure activities	○	○	○	○
Sometimes I feel sickened by my work tasks	○	○	○	○
After my work, I usually feel worn out and weary	○	○	○	○
This is the only type of work that I can imagine myself doing	○	○	○	○
Usually, I can manage the amount of my work well	○	○	○	○
I feel more and more engaged in my work	○	○	○	○
When I work, I usually feel energized	○	○	○	○

How would you describe your financial situation right now?

◯ Always stressful
◯ Often stressful
◯ Sometimes stressful
◯ Rarely stressful
◯ Never stressful

What is the average number of hours you work per week during the school year? (Paid employment)

_____

What is the average number of hours that you engage in unpaid work per week during the school year? (Volunteering)

_____

On average, how many hours of sleep do you get per weekday night during the school year?

_____

Since you have been at Emory, how often have you had problems paying for basic necessities like food, clothing, housing/rent, or transportation?

◯ Never or rarely
◯ Sometimes
◯ Often or all the time

Please say whether the statement was often true, sometimes true, or never true for you in the last 30 days:

	Often true	Sometimes true	Never true
The food that I bought just didn't last, and I didn't have money to get more	◯	◯	◯
I couldn't afford to eat balanced meals	◯	◯	◯

Since you began as a student at your school, have you experienced sexual assault?

◯ Yes
◯ No
◯ I don't know
◯ Prefer not to say

Since beginning at your school, has someone had sexual contact with you when you were unable to provide consent or stop what was happening because you were passed out, drugged, drunk, incapacitated, or asleep?

◯ Yes, I am certain this has happened
◯ I suspect this has happened but am not certain
◯ No, this has not happened

In the past four years, have you ever done any of the following intentionally?
(Select all that apply)

☐ Cut myself
☐ Burned myself
☐ Punched or banged myself
☐ Scratched myself
☐ Pulled my hair
☐ Bit myself
☐ Interfered with wound healing
☐ Carved words or symbols into skin
☐ Rubbed sharp objects into skin
☐ Punched or banged an object to hurt myself
☐ Other _____
☐ No, none of these

In the past four years, did you ever seriously consider attempting suicide?

◯ Yes
◯ No

In the past four years, have you attempted suicide?

◯ Yes
◯ No

Have you ever attended an appointment at Emory CAPS?

◯ Yes
◯ No

Rate your experience on a scale of 1-10

The Worst Not Bad Extremely Good

(Place a mark on the scale above)

Please explain the reason for your rating:

_____

Why not?

◯ Didn't need it
◯ Heard mostly negative things
◯ Was on the waitlist
◯ Received therapy elsewhere
◯ Other _____

What have you heard from other students about the quality of mental health and psychological counseling services from your school?

◯ I have mostly heard negative opinions
◯ I have heard an even mix of negative and positive opinions
◯ I have mostly heard positive opinions
◯ I haven't heard anything

Have you ever been diagnosed with any of the following conditions by a health professional (e.g., primary care doctor, psychiatrist, psychologist, etc.)?
(Select all that apply)

- ☐ Depression (e.g., major depressive disorder, persistent depressive disorder)
- ☐ Bipolar (e.g., bipolar I or II, cyclothymia)
- ☐ Anxiety (e.g., generalized anxiety disorder, phobias)
- ☐ Obsessive-compulsive or related disorders (e.g., obsessive-compulsive disorder, body dysmorphia)
- ☐ Trauma and Stressor Related Disorders (e.g, post-traumatic stress disorder)
- ☐ Neurodevelopmental disorder or intellectual disability (e.g., attention deficit disorder, attention deficit hyperactivity disorder, intellectual disability, autism spectrum disorder)
- ☐ Eating disorder (e.g., anorexia nervosa, bulimia nervosa)
- ☐ Psychosis (e.g., schizophrenia, schizo-affective disorder)
- ☐ Personality disorder (e.g., antisocial personality disorder, paranoid personality disorder, schizoid personality disorder)
- ☐ Substance use disorder (e.g., alcohol abuse, abuse of other drugs)

Do you self-identify with any of the following diagnoses? (Regardless of whether you have received a diagnosis from a healthcare professional)
(Select all that apply)

- ☐ Depression (e.g., major depressive disorder, persistent depressive disorder)
- ☐ Bipolar (e.g., bipolar I or II, cyclothymia)
- ☐ Anxiety (e.g., generalized anxiety disorder, phobias)
- ☐ Obsessive-compulsive or related disorders (e.g., obsessive-compulsive disorder, body dysmorphia)
- ☐ Trauma and Stressor Related Disorders (e.g, post-traumatic stress disorder)
- ☐ Neurodevelopmental disorder or intellectual disability (e.g., attention deficit disorder, attention deficit hyperactivity disorder, intellectual disability, autism spectrum disorder)
- ☐ Eating disorder (e.g., anorexia nervosa, bulimia nervosa)
- ☐ Psychosis (e.g., schizophrenia, schizo-affective disorder)
- ☐ Personality disorder (e.g., antisocial personality disorder, paranoid personality disorder, schizoid personality disorder)
- ☐ Substance use disorder (e.g., alcohol abuse, abuse of other drugs)

On the scale below, please rate how satisfied/dissatisfied you are with the following:

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	Not applicable
Total estimated cost of attendance at Emory (2022-2023= $74,964 per year)	○	○	○	○	○	○
Financial aid support from Emory	○	○	○	○	○	○
Cost of health insurance at Emory ($2,185 per school year)	○	○	○	○	○	○
Cost of a parking pass at Emory ($650 per school year)	○	○	○	○	○	○
Cost of food on campus	○	○	○	○	○	○
Diversity of food options on campus	○	○	○	○	○	○
Number of free sessions at Emory CAPS (8)	○	○	○	○	○	○
Accessibility and Disability services at Emory	○	○	○	○	○	○
General mental health support at Emory	○	○	○	○	○	○
The quality of mental health services on campus	○	○	○	○	○	○
Accessibility of professors for emotional/mental support	○	○	○	○	○	○
Diversity of faculty	○	○	○	○	○	○
Greek Life's presence on campus (Interfraternity Council: Alpha Tau Omega/ATO, Kappa Alpha/KA, Sigma Alpha Epsilon/SAE, Delta Tau Delta/DTD, etc.)	○	○	○	○	○	○
Greek Life's presence on campus (Panhellenic Council: Kappa Alpha Theta, Gamma Phi Beta, Delta Phi Epsilon, etc.)	○	○	○	○	○	○
Greek Life's presence on campus (Multicultural Greek Council: Sigma Beta Rho, Xi Kappa, Delta Phi Lambda, etc.)	○	○	○	○	○	○
Greek Life's presence on campus (National Pan-Hellenic Council: Alpha Phi Alpha, Alpha Kappa Alpha, Delta Sigma Theta, etc.)	○	○	○	○	○	○

Feel free to explain/clarify the reason(s) for any of your ratings above:

In general, during your time as an Emory student, did each of the following facilitate(help) or impair(harm) your mental health?

	Facilitate (Help)	Impair (Harm)	Does not apply
Your Academic Performance	○	○	○
Your Friendships/Social Life	○	○	○
Your Family Relationships	○	○	○
Your Romantic/Intimate Relationships	○	○	○
Your Physical Health Status	○	○	○
Your Financial Status	○	○	○
Your Sleep Schedule	○	○	○
Your Eating Habits	○	○	○
Your Exercise Habits	○	○	○

To what extent has your academic performance impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your academic performance facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your friendships/social life impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your friendships/social life facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your family relationships impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your family relationships facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your romantic/intimate relationships impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your romantic/intimate relationships facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your physical health status impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your physical health status facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your financial status impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your financial status facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your sleep schedule impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent has your sleep schedule facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your eating habits impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your eating habits facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your exercise habits impaired your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

To what extent have your exercise habits facilitated your mental health?

To an extremely small extent | To a moderate extent | To an extremely large extent

(Place a mark on the scale above)

In the last year, to what extent have each of the following impacted your stress levels?

	To no extent	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent	Not Applicable
Your mental health	○	○	○	○	○	○	○
Your academic load/academic work expectations	○	○	○	○	○	○	○
The health of your loved ones or other problems experienced by your loved ones	○	○	○	○	○	○	○
Bias or discrimination incidents that you have read or heard about in the news or experienced outside of Emory	○	○	○	○	○	○	○
Bias or discrimination incidents that you have experienced at Emory	○	○	○	○	○	○	○
Climate change	○	○	○	○	○	○	○
The COVID-19 pandemic	○	○	○	○	○	○	○
National/world events	○	○	○	○	○	○	○
U.S. government and politics	○	○	○	○	○	○	○
Gun violence	○	○	○	○	○	○	○
Housing instability/Cost of housing	○	○	○	○	○	○	○
Food instability/ Cost of food	○	○	○	○	○	○	○

How much do you agree with the following statements in regards to Emory's campus?

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
There is a good support system on campus for students going through difficult times	○	○	○	○	○	○
When I feel depressed or sad, I tend to keep those feelings to myself	○	○	○	○	○	○
I feel that students' mental and emotional wellbeing is a priority	○	○	○	○	○	○
I feel that the campus climate encourages free and open discussion around mental and emotional health	○	○	○	○	○	○
Students are working to promote mental health on campus	○	○	○	○	○	○
The administration is listening to the concerns of students when it comes to health and wellness	○	○	○	○	○	○
I feel that the campus environment has a negative impact on students' mental and emotional health	○	○	○	○	○	○
I feel that the campus environment has a negative impact on students' eating and body image	○	○	○	○	○	○
I have access to programs and resources that foster my success	○	○	○	○	○	○
I am able to perform up to my full potential	○	○	○	○	○	○

Using the scale below, please rate the overall climate at Emory in general for persons from the following backgrounds:

	Hostile	Somewhat hostile	Neutral	Somewhat welcoming	Welcoming	I don't know
Students with disabilities	○	○	○	○	○	○
Women students	○	○	○	○	○	○
Racial/ethnic minority students	○	○	○	○	○	○
Gay, lesbian, and bisexual students	○	○	○	○	○	○
Transgender and genderqueer students	○	○	○	○	○	○
Students from religious beliefs and backgrounds other than Christian	○	○	○	○	○	○
Students with Christian religious beliefs and backgrounds	○	○	○	○	○	○
Students who are immigrants	○	○	○	○	○	○
Students who are first-generation (first in their family to attend college)	○	○	○	○	○	○
Students who are not US citizens	○	○	○	○	○	○
Students who are non-native English speakers	○	○	○	○	○	○
Students of low socioeconomic status	○	○	○	○	○	○

Please feel free to use the space below to elaborate on any of your responses throughout the survey or provide additional information about your mental health or attitudes/perspectives regarding your experience as an Emory student!