

Examining Mental Health in Boston College Undergraduates

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Exploring the Mental Health & Well-being of US Undergraduates

College is a time of growth, discovery, and increased independence, but it can also be a source of significant stress for students due to the culture of hyper-achievement and the pressure to excel academically. The alarming rise in mental health concerns among college students has brought attention to the pressing issue of suicide. As a leading cause of mortality among young individuals aged 15-29 years globally, it poses a significant threat to the well-being and future of college students, who make up a considerable proportion of this age group (Wengjin et al., 2019). Various factors, such as academic pressures, social media influence, economic constraints, and family life stressors, have contributed to the mounting mental health concerns among college students (Schied et al., 2018). These issues can be overwhelming for students, and the effects of burnout can start long before young adults enter college, as adolescents may lack the necessary life skills to cope with increasing societal expectations of success. According to a study of college students by Lipson and colleagues, more than 60% of college students met the criteria for at least one mental health problem (Lipson et al 2022).

To ensure the success of the university, students, faculty, and staff need to identify and address mental health issues, given that the well-being of students is a crucial factor. Poor mental health can hinder student academic performance, potentially leading to lower GPAs and discontinuation of enrollment if mental health problems remain untreated. Mental health problems are significant predictors of academic dissatisfaction and dropout rates, whereas positive mental health is a predictor of satisfaction and persistence (Lipson 2017). Moreover, the social, academic, and financial well-being of students, their campuses, and larger society

depends on an institution's investment in student mental health. Higher-ed institutions can benefit both academically and financially by investing time and money in student mental health (Lipson 2019). One barrier to students' access to support for mental health issues while on college campuses is the stigma associated with mental health (Corrigan et al 2016).

Increased awareness and dialogue about mental health can help combat stigma and encourage students to seek the support they need (Davis, Wolfe, Heiman 2021:3). However, internalized stigma can prevent students from seeking help due to societal expectations that seeking help is a sign of weakness (Clement et al 2015). Other barriers to seeking care may include a lack of cultural competency at university counseling services, feeling overwhelmed by the process of seeking help, or believing that their issues do not warrant help (Bickham 2022). Further, institutional measures (e.g., racially- tense campus climate) and individual measures (e.g., coping mechanisms) are also contributors to psychological distress in students (Byrd and McKinney 2012).

Boston College is a 4-year private Jesuit university located in the northeastern United States. The median family income of a student at Boston College is \$194,100, and 70% of these students' families belong to the top 20% income bracket (Aisch et al 2018). With its Jesuit values, academic prestige, and predominantly white population, Boston College is an interesting case for studying undergraduate well-being. Mental illness-related stigma can perpetuate isolating behavior and poor engagement within the academic community, and the overall mental health of students plays a significant role in shaping campus culture. Is a "work hard, play hard" culture constructive if it negatively impacts mental health and academic performance? This study aims to examine the overall mental health of undergraduates at Boston College and assess how they engage with University Counseling Services (UCS). The purpose of the study is to use the

findings to identify areas of need (such as outreach to high-risk students), improve mental health resources, and create a supportive culture.

BACKGROUND

Most mental health disorders emerge by the age of 25 (Lipson et al. 2019), and traditional college years of life coincide with the age of onset of mental illness. Moreover, the prevalence of anxiety and depression among college students is reaching its highest levels (McAlpine 2021). In a nationally representative study of mental health among college students using data from a single university or multiple higher education institutions, Lipson et al (2019) find that a quarter of students with GPAs under 3.0 and who exhibited symptoms of mental health problems dropped out. Roughly one in three first-year college students have experienced mental health issues within the previous year, and both internalizing and externalizing issues have been linked to decreased GPA (Bruffaerts et al 2018). Additionally, there was evidence that mental health continues to be under-assessed by the college administration. College administrators often use low GPAs to predict whether a student will drop out. Low GPA alone only accounts for 11% of students who eventually drop out, while using both low GPA and mental health symptoms accounts for 30% of students who will drop out (Lipson et al. 2019). To make the most out of their education, students need to be as healthy as possible. Therefore, institutions can benefit from investing more in student mental health, which can help prevent student dropouts and even generate additional tuition revenue (Lipson et al. 2019). Kivlighan and colleagues conducted a study to examine the association between psychological distress and counseling. After counseling, the rate of increase in students' GPAs was higher compared to before counseling. Furthermore, students who were experiencing clinical distress at the beginning of counseling

showed a correlation between decreases in their psychological distress and improvements in their GPA as time passed (Kivlighan et al 2021).

Race/Ethnicity

Students of color experience greater levels of unmet mental health needs (Lipson et al. 2018). More than 60% of students of color screened for one or more mental health problems in 2020-2021, a 50% increase from 2013 (Lipson et al. 2022). According to Bravo et al. (2021), racial/ethnic minorities experience higher levels of discrimination-related stress compared to their white, non-Hispanic counterparts, which can lead to negative mental health outcomes. It's worth noting that the sample used in this study consisted primarily of individuals assigned as females at birth. To ensure greater diversity in the study population, future research should recruit participants of all genders.

Additionally, Goodwill and Zhou (2020) found that Asian international and Black college students have a higher risk of suicide attempts. Microaggressions could play a role in this, as they are significantly associated with anxiety and binge drinking in racial/ethnic minorities, according to Lovato et al. (2021). Therefore, addressing microaggressions could help mitigate mental health risks in this population.

Gender and Sexual Minorities

Discrimination also mediates depression and anxiety in sexual minority students (Woodford et al. 2013), who also tend to report higher rates of psychological distress (Dunbar 2017). Dunbar's (2017) study is exclusive to public universities and students did not provide information on their specific sexual orientation. Transgender students were also excluded.

Researchers have found that Compared to heterosexual students, LGBTQ+ college students experience higher levels of depression and lower levels of safety, happiness, and belongingness (Wilson and Liss 2022). Moreover, gender minority status is associated with having 4.3 higher odds of having one or more mental health problems (Lipson et al. 2019), and sexual minority status is directly associated with non-suicidal self-injury, which is directly associated with an increased risk of suicidal thoughts and behaviors (Muehlenkamp et al. 2015). In contrast, higher ratios of LGBTQ+ student organizations and non-discrimination policies inclusive of both sexual orientation and gender identity are associated with lower levels of discrimination and less distress (Woodford et al. 2018).

Low-income

Financial instability can have adverse effects on health and academic success. Low socioeconomic status is reported to have negative mental health effects on college students (Lee et al. 2017). Compared to non-low-income and non-first-generation students, low-income and first-generation students reported higher rates of anxiety and depression (Kreniske et al. 2022). According to both student interviews and literature, individuals from low socioeconomic backgrounds tend to suffer from poor mental health, often exhibiting symptoms of depression and anxiety. The emotional and mental challenges associated with paying tuition fees create additional hurdles for these students, who feel the need to justify attending college. Furthermore, the stress of their socioeconomic status discourages some students from engaging in stress-relieving activities such as socializing with friends or participating in extracurricular activities (Hyun 2018).

Class Year

Mental health can deteriorate throughout students' college careers. For instance, first-year students exhibit low-risk behaviors, while upperclassmen report higher alcohol and drug use. As undergraduate students advance in their academic journey, they tend to develop maladaptive behaviors and encounter dissatisfaction with their lives (Jennings Mathis et al 2022). As they approach their senior year, students tend to report an increase in alcohol consumption and marijuana use and a decline in their level of life satisfaction (Mathis et al. 2022). The Lee and Mathis studies were conducted right after schools sent students home during covid (Lee et al. 2017) and before entering the school year (Mathis et al. 2022).

Accessing Services and the Impact on Student Mental Health

The utilization of college student services can be predicted by factors such as mental health literacy, social support, and accessibility, and university administration needs to consider these factors. Students with lower levels of social support and higher levels of mental health literacy are more likely to have received therapy. Individuals tend to discontinue services because of negative experiences, accessibility problems, negative attitudes toward services, or they felt better (Wenzler and Keeley 2022). Numerous studies have consistently shown that college students do not make full use of mental health services. This is not only due to a lack of information, financial resources, or available appointments but also because they perceive a lack of need or feel stigmatized about sharing their mental health problems with others (Lee et al. 2021). Since the pandemic, 91% of college students reported feelings of depression and anxiety (Horn 2020). Mental health literacy refers to the ability to distinguish a mental health condition from general stress, as well as to understand the attributions of mental disorders, risk factors, and available professional help, as defined by Jorm et al. in 1997. According to studies by Coles &

Coleman (2010) and Wright et al. (2007), people with higher levels of mental health literacy, such as those who can recognize symptoms and correctly attribute them to mental illness, are more likely to seek psychological help for themselves and recommend professional help for others.

Variance in help-seeking behavior

The utilization of mental health services was lowest among students of color. Even the highest annual rate of treatment received by Asian, Black, and Latinx students in the previous year was equivalent to or lower than the lowest rate among White students (Lipson et al. 2022). Seventy-eight percent of racial/ethnic minority student-athletes reported experiencing some form of mental health need. However, only 11% of these athletes in need reported having used mental health services in the past year (Ballesteros 2018). Asian-American students use counseling services the least (Cheng et al 2017, Lipson et al. 2018). Racial/ethnic differences in service utilization can be attributed to mistrust of non-Hispanic white counselors, perceived stigma, and lack of cultural competency (Cheng et al. 2017, Han and Pong 2015). Treatment for mental health problems was less likely to be received by men, while LGBTQ students were more likely to receive treatment (Seehuus 2019). Gender minority students have 4.3 higher odds of having one or more mental health problems compared to cis-gender students (Lipson 2019).

Factors that Shape Undergraduate Mental Health

Sleep. Lower quality of sleep was linked to an increase in total problems and was closely linked to clinically significant symptoms of psychological distress, such as heightened antisocial personality problems, anxiety problems, attention deficit/hyperactivity problems, depressive problems, and somatic complaints. Therefore, these findings suggest that poorer global sleep

quality is generally associated with diminished mental well-being in university students, including those who typically have healthy sleep habits (Milojevich and Lukowski 2016).

Stigma. Intervening with people from ethnic minority backgrounds is crucial for improving mental health outcomes, as they are often at a higher risk of not receiving sufficient mental health care due to their lower socioeconomic status and distrust of the mental health system (Gary 2005). For instance, African Americans and Latinos are less inclined to seek treatment, less likely to adhere to treatment once they initiate it, and more likely to postpone treatment until their symptoms become severe (Miranda et al 2015, DeFreitas et al 2018). Another study revealed that college students perceived stigma was significantly greater than personal stigma (Pompeo-Fargnoli 2020). Moreover, school-level stigma can lead students to underreport mental health problems (Gaddis et al 2018). Stigma impacts help-seeking behaviors in the overall student population but creates significant barriers to men, athletes, students of color, and LGBTQ in particular (Rafal et al 2018, Moreland et al 2018, Lipson et al 2018, Woodford et al 2018).

THEORY

Stress Theory

Severe life events and chronic strain predict the onset of mental illness. Severe life events are defined as negative events that are a long-term threat to personal well-being (i.e sudden loss of a loved one, hurricane, etc) (Brown and Harris 1978). Chronic strain is defined as “environmental demands which require repeated or daily readjustments in behavior over long

periods” (Thoits 2018). Stress theory is better suited for explaining group differences in psychological problems. An accumulation of social stressors perceived support resources, and coping mechanisms can impact the degree of psychological stress experienced. A stress-buffering effect occurs in individuals that are in better mental health and suffer less psychological stress because they perceive they have support when they encounter major life stressors (Turner & Turner 2013). Lower socioeconomic status is associated with higher levels of distress and disorder, but is more likely to be exposed to stressors and have fewer coping mechanisms (Aneshensel 2015). Stress theory may explain how people of lower status experience more stressors, but cannot explain why different groups are more prone to experience certain disorders like why men abuse drugs and alcohol more often and women become more depressed and anxious. Stress theory is most applicable to mood disorders (Thoits 2018). Eliminating or reducing stressors, teaching coping strategies to better manage stress, and increasing available social resources are treatment implications for treating or preventing mental illness (Caplan, Vinokur, and Price, 1997; Scott-Sheldon et al., 2008; van der Klink et al., 2001).

Labeling theory

Through labeling theory, researchers explore the tendency of individuals to place each other in groups and form social hierarchies. People in positions of power create and place labels on unacquainted persons in lower hierarchies; “Men and whites are more likely than women and blacks to attain positions of power and prestige – they talk more frequently, have their ideas more readily accepted by others, and are more likely to be voted group leader” (Mullen et al., 1989). Therefore, a person’s ability to achieve goals is dependent on their status, a loss of status results in a loss of power and influence. Labels, such as race and gender, carry stigmas that

create assumptions formed through preconceived notions. (Link and Phelan 2018). Treatment can help with symptoms but can also come with labeling and stigma. Those who experience mental health issues may respond to the stigma surrounding mental illness in one of three ways: avoid contact with other people, conceal information about his/her mental health issues, and attempt to educate others about mental illness to combat their stereotypes. Labeling and stigma can jeopardize job opportunities, social networks, and self-esteem. Labeling theory suggests confronting misconceptions about mental health by changing social norms of what is considered “normal” thoughts, feelings, and behaviors to reduce or prevent mental illness (Link and Phelan 2018).

Previous research has focused on student mental health in public universities but did not provide an option for students to identify their sexual orientation (Dunbar 2017). The current study takes place at a private university and allows students to provide their specific sexual orientation. The Lee and Mathis studies were conducted right after schools sent students home during covid (Lee et al. 2017) and before entering the school year (Mathis et al. 2022). The current study takes place during the school year. Stigma was not taken into account and the degree of mental health concerns experienced by participants was not collected in Wenzler and Keeley’s 2022 study. Stigma and the degree of mental health concerns are considered in the present study, as they are strong predictors of help-seeking.

As such, this study addresses the following research questions:

What is the mental health status of US college students?

How do the mental health and well-being of college students vary across social and institutional demographics?

What institutional or social factors shape variation in mental health status across students? The variation in mental health status across students is shaped by a combination of institutional and social factors, such as a supportive presence of counseling services on campus, the level of academic stress, social support networks, and stigma about mental health.

To contribute to the knowledge of the mental health of college students and further unpack the role of institutional contexts and support for student mental health, this study focuses on the prevalence of depressive symptoms and support systems on campus. The current study's application of stress theory and labeling theory suggests the following:

H1: The prevalence of depressive symptoms will be higher among students in higher academic years (i.e., juniors and seniors) compared to students in lower academic years (i.e., freshmen and sophomores).

H2a: Racial and sexual minorities, including individuals who identify as people of color and LGBTQIA, will report experiencing depressive symptoms more frequently compared to non-minority groups. This could be due to various factors such as social stigma, discrimination, and systemic inequalities that impact access to mental health resources and support systems.

H2b: Black women will have the highest prevalence of depressive symptoms.

H2c: Queer men will demonstrate the most depressive symptoms compared to heterosexuals.

H3: There will be differences in the prevalence of mental health diagnoses among different demographic groups, with non-Hispanic white women potentially reporting higher rates of mental health diagnoses compared to other groups. The relationship between mental health diagnoses and race, and gender can vary depending on individual or social factors, such as socioeconomic status.

H4: Black queer and bisexual students will report the lowest self-rated mental health compared to non-Black queer and bisexual students and Black heterosexual students.

H5: Fewer black students, male students, and freshmen will attempt to access counseling services than non-black students, female students, and upperclassmen.

H6: More Black students will report mental health stigma on campus compared to non-Black students.

H7: Students who report mental health stigma on campus will attempt to access counseling services less than those who do not.

METHODS

Data and Sample

This is a cross-sectional survey study of currently enrolled undergraduate Boston College students using probability sampling. Boston College is a private Jesuit institution located in Chestnut Hill, Massachusetts. It has a total undergraduate enrollment of over 9,500 students (fall 2021) (U.S. News 2021). After data collection, the original sample was 1,240 students; and after conducting listwise deletion, the final sample included 919 students (n=919).

Recruitment strategy. For recruitment, flyers were distributed both electronically and physically around the Boston College campus including a QR code linking to the survey. The anonymous online survey was constructed in Qualtrics. Once I received approval from the Institutional Review Board (IRB) at Boston College, I shared the flyer with offices with listservs, including the sociology department, UGBC, and the nursing school to distribute the survey to the student body. To reach underrepresented students (i.e., racial/ethnic minorities, LGBTQIA, and lower socioeconomic backgrounds), I also reached out to offices like Monserrat and the Thea Bowman

AHANA and Intercultural Center (BAIC). To raise awareness of the survey, I held a 2-hour tabling event in the O'Neill Library lobby and offered miniature stuffed animals while supplies lasted, and my service animal, Mylo, worked as a therapy dog for the event. I handed out a flyer to students who approached the table for them to fill out the survey at their convenience. O'Neill was a prime location for convenience sampling because the lobby receives a lot of traffic amidst final preparations. Data were collected between November 2022 and December 2022. Emails and posters were distributed so that students were aware of the survey, but it was completely voluntary to participate. Participants were informed of the study and had to consent to continue.

Measures

Dependent Measures. Student mental health was the main outcome of the study, and it was assessed using several measures. The first mental health outcome measure assessed students' overall mental health rating while on campus. Respondents rated their overall mental well-being on campus using an ordinal measure on a scale of 1-10, with 1 being the worst and 10 being the best. To measure the prevalence of depressive symptoms, I asked participants to answer questions from the *Mental Health America* depression test ("Depression Test."). I developed a 10-question depression measure using the Mental Health America depression screening (Mental Health America 2022) to measure the frequency of several depressive symptoms. The ten questions for depression were little interest or pleasure in doing things; feeling down, depressed, or hopeless; Trouble falling or staying asleep, or sleeping too much; Feeling tired or having little energy; Poor appetite or overeating; Feeling bad about yourself - or that you are a failure or have let yourself or your family down; Trouble concentrating on things, such as reading an article or watching a movie; Moving or speaking so slowly that other people could have noticed; Being so fidgety or restless that you have been moving around a lot more than usual; Thoughts that you

would be better off dead, or of hurting yourself. The range is from 0-3 where 0 denotes not at all, 1 = several days, 2 = more than half the days, and 3 = nearly every day. A total depression measure was created from the ten depression questions.

Independent Measures. The main explanatory measures include various demographic information and identifying factors, including expected graduation year, school or college (within the larger college) gender identity, sexual orientation, race/ethnicity, international student status, transfer student status, enrollment in ROTC, first-generation college student status, whether the student is a varsity athlete, and whether the student was in Montserrat. Students were not asked to report their parent's income or occupational status. Montserrat is a department within the Division of Mission and Ministry that assists students who have the greatest financial need on campus, making Montserrat a good proxy for socioeconomic status. To measure mental health diagnosis and suspected undiagnosed illness, respondents were asked about their registration with campus disability services as having a documented and diagnosed disability as well as "any current mental disorders/illnesses diagnosis (e.g., obsessive-compulsive disorder, bipolar disorder, anxiety, depression). Students were also asked similar questions about cognitive or learning disabilities (e.g., Autism, Dyslexia, ADD/ADHD) and about any undiagnosed mental disorder/illnesses or cognitive/learning disabilities that they were not currently receiving support for.

Control Variables and Other Outcomes

Additionally, I include various control variables. A measure of religiosity was included because students may seek support through non-clinical or non-academic practices, so it is also crucial to account for students who are religious, spiritual, and/or regularly participate in faith-based practices in the survey. To evaluate primary contributors to stress on campus, which

may shape student mental health outcomes, respondents were asked to select one or more current stressors. This list of possible stressors included academics, social life, family, financial issues, food instability, athletics, discrimination/cultural incompetence, and sexual harassment. The potential root of these stressors was investigated by asking whether the stressors were caused or exacerbated by personal issues (e.g., a break-up) or administrative issues (e.g., lack of an LGBTQ+ resource center on campus), or some combination. Questions about safety on campus, pressures to stay stressed and busy, and mental health stigmatization, were included to measure the campus environment. Lack of support and understanding from professors, peers, advisors, and other on-campus support systems is also considered to assess the relationship between perceived support and mental health. Students that reported experiencing any of the 10 symptoms associated with depression rated the difficulty of these problems in class, at home, at work, or with other people. The range of difficulty is 0-3; 0 = not difficult at all; 1= somewhat difficult; 2= very difficult; 3; extremely difficult. Ranging from 1 to 5, students answered whether stressors were exacerbated by personal and/or administrative issues; 1= mostly personal, 2 = mostly administrative, 3= both personal and administrative, 4= neither, other, and 5 = not applicable. The accuracy of the statement that mental health is stigmatized on the campus of Boston College was rated using a scale that ranges from 1 (not accurate at all) to 5 (extremely accurate). The scale for feeling safe on campus is never, sometimes, about half the time, most of the time, and always (0-4). Professors' understanding of mental health issues was rated on a 1-10 scale, where 1 is not understanding at all and 10 is very understanding. The extent to which students think their professors and peers believe they are not working hard enough if they are not stressed was answered on a 1-5 scale; 1= very inaccurate, 2 = slightly inaccurate, 3= neither accurate nor inaccurate, 4 = slightly accurate, and 5 = very accurate. The following three

averages follow a 0-4 scale; never =0, sometimes =1, about half the time = 2, most of the time =3, and always = 4. Students answered whether they agreed that UCS has a supportive presence on campus on a 1-5 scale; 1= strongly disagree; 2= somewhat disagree; 3= neither disagree nor agree; somewhat agree=4; strongly agree =5.

The presence of UCS on campus is gauged by verifying whether students know the location of UCS, if UCS maintains a supportive presence on campus, and if they have ever attempted to access UCS resources. If respondents select “Yes,” the survey branches to a separate set of questions that measure UCS’ cultural competency, availability of resources, helpfulness, and frequency of use. Stigma, sense of need, costs, and the reputation of UCS are possible barriers to accessing resources for those who select “No.” The university does not charge students to use its counseling services, but those who select this option do not have enough information about accessing UCS resources.

Analytic Strategy

I used R/R Studio and Excel for data management and analysis. Analyses included descriptive statistics (e.g., mean, standard deviation, etc) and chi-squared tests of independence. Ordinal logistic regression is used to predict the relationship between an ordinal dependent variable and one or more independent variables.

RESULTS

Descriptive Statistics

Table 1 provides descriptive statistics for the explanatory variables. The sample is 919 undergraduate students (N=919). White students make up 59.41% of the sample population (N= 546), followed by 14.36% Asian (N= 132), 7.40% Latinx/Hispanic (N= 68), 7.07%

Biracial/Multiracial (N= 65), 5.98% Black/AA (N= 55), 4.03% White/Latinx (N= 37), 0.87% Black/Latinx (N= 8), 0.76% Other (N= 7), and 0.11% American Indian/Alaska Native (N= 1). Students reported their expected graduation year; 2022 (1%, N= 7), 2023 (26%, N= 241), 2024 (23%, N=209), 2025 (27%, N= 249), and 2026 (23%, N= 213). Students in the largest school, MCAS, account for 64% (N= 584) of the sample, followed by CSOM (16%, N= 145), LSOEHD (10%, N= 93), CSON (8%, N= 74), Double majors (2%, N= 18), WCAS (0.3%, N= 3), and those who reported no major (0.2%, N= 2). Most of the students in the sample identify as female (69%, N= 635). Male students make up 29% (N= 266). Students who identify as agender, gender fluid, non-binary, and gender nonconforming make up 1.2% (N= 11) of the sample, and students identifying as *other* make up 0.8% (N= 7). The percentage of heterosexual students is 77% (N= 709), while 13.4% are bisexual (N= 123), 3.5% have other or multiple identities (N= 32), 2.2% are queer (N= 20), 1.5% are gay (N= 14), and 0.8% identify as asexual (N= 7), bisexual (N= 7), or lesbian (N= 7). A small fraction of the sample is international, transfer, enrolled in ROTC, and/or varsity athletes: 4% (N= 34), 3% (N= 32), 0.3% (N= 3), and 4% (N= 35), respectively. A more significant portion is first-generation, Montserrat students, who identify as religious or spiritual: 19% (N= 177), 44% (N= 403), and 45% (N= 417) respectively.

Table 2 provides descriptive statistics for the outcome variables related to student mental health. Students rated their overall mental well-being on campus on a Likert scale of 1-10 (with 1 denoting poor mental health and 10 denoting excellent mental health) and the average score was 5.59 (SD=1.84). On average, students rated experiencing little interest or pleasure in doing things and feeling down, depressed, or hopeless similarly: 0.95 (SD= 0.81), 0.97 (SD=0.82), respectively. Feeling tired or having little energy received the highest mean of 1.62 (SD= 0.93). The mean for trouble falling or staying asleep, or sleeping too much is 1.27 (SD=1.03), while the

mean for poor appetite or overeating, feeling bad about oneself, and trouble concentrating is 1.13 (SD=1.02), 1.1 (SD=0.99), and 1.33 (SD=1.04) respectively. Moving or speaking so slowly that other people could have noticed has the lowest average rating of 0.18 (SD=0.80 the mean for unusual fidgeting or restlessness is 0.59 (SD=0.86). Lastly, the mean for feeling like you are better off dead or of self-harm is 0.25 (SD= 0.6). For students that checked off any of the 10 symptoms associated with depression, the average difficulty of these problems in class, at home, at work, or with other people is 1.14 (SD=0.78). For whether stressors were exacerbated by personal or administrative issues, students reported 1= 50% (n=919), 2 = 6.2% (n=919), 3= 29.2 (n=919), 4= 14.3% (n=919), and 5 = 0.3% (n=919). The average rate of how often students feel safe on campus is 3.21 (SD= 0.79). The mean for how understanding professors are of mental health issues is 5.81 (SD=2.05). The means for the extent to which students think their professors and peers believe they are not working hard enough if they are not stressed are 3.41 (SD=1.09) and 3.52 (SD=1.26), respectively. Seeking support from peers or friends for mental health difficulties has an average of 1.45 (SD=1.16). A mean of 0.84 (SD=0.97) is recorded for how often academic support is received from sources on campus. A mean of 0.47 (SD=0.88) is recorded for how often mental health support is received from on-campus resources. The percentage of students that know where UCS is located is 59 (n=919). In terms of the extent to which students agree with the following statement: *UCS has a supportive presence on campus*, the mean is 2.83 (SD=1.07). The percentage of students that have ever attempted to access UCS resources is 43 (n=919). In terms of the extent to which the following statement is an accurate characterization of Boston College: *Mental health is stigmatized on campus*, the mean is 2.64 (SD=1.00).

Table 1. Descriptive Sample Characteristics (N=919)			
Explanatory and Outcome Variables	M	SD	Range
<i>Expected Graduation Year</i>			
2026	0.23	---	---
2025	0.27	---	---
2024	0.23	---	---
2023	0.26	---	---
2022	0.01	---	---
<i>School</i>			
CSOM	0.16		
MCAS	0.64	---	---
LSOEHD	0.10	---	---
CSON	8.00 E -2		
WCAS	3.00 E -3	---	---
Double Major	0.02	---	---
No major	2.00 E -3	---	---
<i>Sex</i>			
Male	0.29	---	---
Female	0.69	---	---
Agender, gender fluid, non-binary, gender non-conforming	1.20 E -2	---	---
Other or multiple identities	8.00 E -3	---	---
<i>Sexual Orientation</i>			

Heterosexual	0.77	---	---
Asexual	8.00 E -3	---	---
Bisexual	0.13	---	---
Gay	0.02	---	---
Lesbian	8.00 E -3	---	---
Pansexual	8.00 E -3	---	---
Other or multiple identities	0.04	---	---
Queer	0.02	---	---
<i>Race/Ethnicity</i>			
Black/AA	5.98 E -2	---	---
AI/AN	1.10 E -3	---	---
Asian	0.14	---	---
Latinx/Hispanic	7.40 E -2	---	---
Black/Latinx	8.70 E -3	---	---
Biracial/Multiracial	7.10 E -2	---	---
White/Latinx	0.04	---	---
White	0.59	---	---
Other	0.00	---	---
<i>International Student</i>	0.04	---	---
<i>Transfer Student</i>	0.03	---	---
<i>ROTC</i>	0.00	---	---
<i>First-Generation Student</i>	0.19	---	---
<i>Varsity Athlete</i>	0.04	---	---
<i>Monseratt Student</i>	0.44	---	---

<i>Registered with Disability Services</i>	0.11	---	---
<i>Diagnosed with Mental Disorder</i>	0.33	---	---
<i>Diagnosed with Cognitive/Learning Disability</i>	0.11	---	---
<i>Unsupported and Undiagnosed Mental Disorder</i>	0.59	---	---
<i>Unsupported and Undiagnosed Cognitive Disorder</i>	0.25	---	---
<i>Religious/Spiritual</i>	0.45	---	---

Table 2. Descriptive Sample Characteristics (N=919)			
Dependent and Independent Measures	M	SD	Range
<i>Self-Rated Mental Health</i>			
How would you rate your mental well-being on campus?	5.59	1.84	0-10
<i>Depression Symptoms</i>			
Little interest or pleasure in doing things	0.95	0.81	0-3
Feeling down, depressed, or hopeless	0.97	0.82	0-3
Trouble falling or staying asleep, or sleeping too much	1.27	1.03	0-3
Feeling tired or having little energy	1.62	0.93	0-3
Poor appetite or overeating	1.13	1.02	0-3
Feeling bad about yourself - or that you are a failure or have let yourself or your family down	1.10	0.99	0-3
Trouble concentrating on things, such as reading an article or watching a movie	1.33	1.04	0-3

Moving or speaking so slowly that other people could have noticed	0.18	0.05	0-3
Being so fidgety or restless that you have been moving around a lot more than usual	0.59	0.86	0-3
Thoughts that you would be better off dead, or hurting yourself	0.25	0.60	0-3
If you checked off any problems, how difficult have these problems made for you in class, at home, at work, or with other people?	1.14	0.78	0-3
Are these stressors caused or exacerbated by personal issues (e.g., a break-up) or administrative issues (e.g., lack of an LGBTQ+ resource center on campus)?	2.09	---	---
-mostly personal	0.50	---	---
-mostly administrative	6.20 E -2	---	---
-both personal and administrative	0.29	---	---
-neither, other	0.14	---	---
-not applicable	3.00 E -3	---	---
Total Depression Prevalence	9.38	5.86	0-30
<i>Campus Dynamics</i>			
To what extent is the following statement an accurate characterization of your college/university? <i>Mental health is stigmatized on campus.</i>	2.64	1.00	1-5
How often do you feel safe on campus?	3.21	0.79	0-4

How understanding are professors of mental health issues?	5.81	2.05	0-10
To what extent do you think your professors believe you are not working hard enough if you are not stressed?	3.41	1.09	1-5
To what extent do you think your peers believe you are not working hard enough if you are not stressed?	3.52	1.26	1-5
You seek support from peers or friends for mental health difficulties	1.45	1.16	0-4
How often do you receive academic support from sources on campus?	0.84	0.97	0-4
How often do you receive support for your mental health from on-campus sources?	0.47	0.88	0-4
Knowledge of UCS location	.59	—	—
To what extent do you agree with the following statement: UCS has a supportive presence on campus.	2.83	1.07	1-5
Have attempted to access UCS resources	0.43	---	---
AA= African-American; AI/AN= American Indian/Alaskan Native CSOM= Carroll School of Management; MCAS= Morrissey College of Arts and Sciences; LSOEHD= Lynch School of Education and Human Development; CSON= Connell School of Nursing; WCAS= Woods College of Advancing Studies ROTC= Reserve Officers' Training Corps			

Mental Health Outcomes

A Chi-square test of independence was performed to assess the relationship between graduation year and feeling tired or having little energy. The two variables had a significant relationship ($\chi^2=31.81$; $df=12$; $p<.01$). The results showed that believing that UCS has a supportive presence on campus ($\chi^2=32.94$; $df=16$; $p<0.01$), as well as attempting to access UCS resources ($\chi^2=27.96$; $df=4$; $p<.001$) differs significantly between graduation year. Knowing where UCS is located is dependent on graduation year ($\chi^2=35.01$; $df=4$; $p<.001$). Results showed that self-rated mental health varies significantly by school ($\chi^2=145.2$; $df=60$; $p<.001$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on school ($\chi^2=39.95$; $df=24$; $p<.05$). Believing that your peers perceive you as not putting in enough effort unless you experience stress and school is statistically significant ($\chi^2=42.51$; $df=24$; $p<.05$). Believing that your professors perceive you as not putting in enough effort unless you experience stress and school is statistically significant ($\chi^2=38.16$; $df=24$; $p<.05$). Knowing where UCS is located is dependent on school ($\chi^2=12.94$; $df=6$; $p<.05$). Poor appetite or overeating also varies significantly by school ($\chi^2=42.66$; $df=18$; $p<.001$). Feeling tired or having little energy also varies significantly by school ($\chi^2=29.27$; $df=18$; $p<.05$). Feeling bad about yourself - or that you are a failure or have let yourself or your family down also varies significantly by school ($\chi^2=30.23$; $df=18$; $p<.05$). The difficulty of depressive symptoms at work, at home, in class, or with others depends on school ($\chi^2=38.93$; $df=18$; $p<.01$). Seeking support from peers or friends for mental health difficulties is dependent on school ($\chi^2=40.91$; $df=24$; $p<.05$).

Sex and three of four diagnosis variables had statistically significant relationships (diagnosed mental disorder [$\chi^2=54.54$; $df=3$; $p<.001$], diagnosed cognitive disorder [$\chi^2=15.74$; $df=3$; $p<.05$], undiagnosed and untreated mental disorder [$\chi^2=39.63$; $df=3$; $p<.001$]).

Self-rated mental health is dependent on sex ($\chi^2= 101.3$; $df= 30$; $p< .001$). Poor appetite or overeating and sex have a significant relationship ($\chi^2= 32.27$; $df= 9$; $p< .001$). Feeling too tired or having little energy is dependent on sex ($\chi^2= 19.53$; $df= 9$; $p< .05$). Thoughts that you would be better off dead, or of hurting yourself ($\chi^2= 19.18$; $df= 9$; $p< .05$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on sex ($\chi^2= 45.13$; $df= 12$; $p< .001$). Feeling safe on campus and sex have a significant relationship ($\chi^2= 104.45$; $df=12$; $p< .001$). The difficulty of depressive symptoms at work, at home, in class, or with others depends on sex ($\chi^2= 17.75$; $df= 9$; $p< .05$). Believing that your peers perceive you as not putting in enough effort unless you experience stress and sex is statistically significant ($\chi^2= 37.96$; $df= 12$; $p< .001$). Believing that your professors perceive you as not putting in enough effort unless you experience stress is dependent on sex ($\chi^2= 24.02$; $df= 12$; $p< .05$). Seeking support from peers or friends for mental health difficulties is dependent on sex ($\chi^2= 70.17$; $df= 12$; $p< .001$). There is a statistically significant correlation between believing that UCS has a supportive presence on campus and attitudes towards sex ($\chi^2= 27.27$; $df= 12$; $p< .01$). Attempting to access UCS resources varies significantly by sex ($\chi^2= 33.81$; $df= 3$; $p< .001$).

To evaluate the association between self-rated mental health and sexual orientation, a test of independence using Chi-square was conducted. The two variables had a significant relationship ($\chi^2= 139.31$; $df= 70$; $p< .001$). Statistical significance was found between sexual orientation and five of the depression test questions; feeling down depressed or hopeless ($\chi^2= 42.81$; $df= 21$; $p< .01$); feeling tired or having little energy ($\chi^2= 40.12$; $df= 21$; $p< .01$); trouble concentrating on things ($\chi^2= 59.24$; $df= 21$; $p< .001$); being so fidgety or restless that you have been moving around a lot more than usual ($\chi^2= 78.55$; $df= 21$; $p< .001$); thoughts that you would be better off dead, or of hurting yourself ($\chi^2= 90.2$; $df= 21$; $p< .001$). The depression variable and

sexual orientation have a significant relationship ($\chi^2= 287.77$; $df= 196$; $p< .001$). The difficulty of depressive symptoms at work, at home, in class, or with others depends on sexual orientation ($\chi^2= 48.77$; $df= 21$; $p< .001$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on sexual orientation ($\chi^2= 66.66$; $df= 28$; $p< .001$). Feeling safe on campus and sexual orientation have a significant relationship ($\chi^2= 49.24$; $df=28$; $p< .01$). Believing that your peers perceive you as not putting in enough effort unless you experience stress and sexual orientation is statistically significant ($\chi^2= 49.41$; $df= 28$; $p< .01$). How often mental health support is received from on-campus resources is dependent on sexual orientation ($\chi^2= 53.48$; $df= 28$; $p< .01$). There is a statistically significant correlation between believing that UCS has a supportive presence on campus and attitudes towards sexual orientation ($\chi^2= 62.48$; $df= 28$; $p< .001$). Attempting to access UCS resources varies significantly by sexual orientation ($\chi^2= 21.64$; $df= 3$; $p< .01$). How often academic support is received from on-campus resources is dependent on sexual orientation ($\chi^2= 44.02$; $df= 28$; $p< .05$). Seeking support from peers or friends for mental health difficulties is dependent on sexual orientation ($\chi^2= 47.46$; $df= 28$; $p< .01$).

Self-rated mental health varies significantly by race and ethnicity ($\chi^2= 131.68$; $df= 80$; $p< .001$). Little interest or pleasure in doing things, feeling down, depressed, or hopeless, and feeling tired or having little energy is dependent on race and ethnicity; ($\chi^2= 65.97$; $df= 24$; $p< .001$), ($\chi^2= 45.56$; $df= 24$; $p< .01$), ($\chi^2= 44.52$; $df= 24$; $p< .01$). Feeling bad about yourself - or that you are a failure or have let yourself or your family down, trouble concentrating on things, and moving or speaking so slowly that other people could have noticed is also dependent on race and ethnicity ($\chi^2= 47.26$; $df= 24$; $p< .01$), ($\chi^2= 43.58$; $df= 24$; $p< .01$), ($\chi^2= 78.89$; $df= 24$; $p< .001$). The difficulty of depressive symptoms at work, at home, in class, or with others depends

on race and ethnicity ($\chi^2= 55.19$; $df= 24$; $p< .001$). Having a mental illness diagnosis and race/ethnicity are statistically significant ($\chi^2= 24.77$; $df= 8$; $p< .01$). Race and ethnicity have a significant relationship with feeling like you have an undiagnosed mental illness you are not receiving support for and feeling like you have an undiagnosed cognitive disability you are not receiving support for ($\chi^2= 25.44$; $df= 8$; $p< .01$); ($\chi^2= 20.66$; $df= 8$; $p< .01$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on race and ethnicity ($\chi^2= 57.79$; $df= 32$; $p< .01$). How often mental health support is received from on-campus resources is dependent on race and ethnicity ($\chi^2= 46.43$; $df= 32$; $p< .05$). Believing that your professors perceive you as not putting in enough effort unless you experience stress and race/ethnicity is statistically significant ($\chi^2= 58.27$; $df= 32$; $p< .01$).

First-generation student status has a significant relationship with feeling like you have an undiagnosed mental illness you are not receiving support for and feeling like you have an undiagnosed cognitive disability you are not receiving support for ($\chi^2= 10.65$; $df= 1$; $p< .01$); ($\chi^2= 15.82$; $df= 1$; $p< .001$). Self-rated mental health is dependent on first-gen status ($\chi^2= 36.03$; $df= 10$; $p< .001$); Little interest or pleasure in doing things ($\chi^2= 28.57$; $df= 3$; $p< .001$), feeling down, depressed, or hopeless ($\chi^2= 19.74$; $df= 3$; $p< .001$), feeling tired or having little energy ($\chi^2= 8.88$; $df= 3$; $p< .05$), poor appetite or overeating ($\chi^2= 14.36$; $df= 3$; $p< .001$), moving or speaking so slowly that other people could have noticed ($\chi^2= 10.42$; $df= 3$; $p< .05$), and feeling bad about yourself - or that you are a failure or have let yourself or your family down ($\chi^2= 21.40$; $df= 3$; $p< .001$). The depression variable and first-gen status have a significant relationship ($\chi^2= 51.14$; $df= 28$; $p< .01$). The difficulty of depressive symptoms at work, at home, in class, or with others depends on first-gen status ($\chi^2= 18.18$; $df= 3$; $p< .001$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on first-gen status ($\chi^2= 22.99$; $df= 4$; $p<$

.001). How often academic support is received from on-campus resources is dependent on first-gen status ($\chi^2= 13.68$; $df= 4$; $p< .01$). How often mental health support is received from on-campus resources is dependent on first-gen status ($\chi^2= 11.17$; $df= 4$; $p< .05$).

Lastly, a Chi-square test of independence was performed with the Montserrat variable. Depression is dependent on being a Montserrat student ($\chi^2= 42.03$; $df= 28$; $p< .05$). There is a statistically significant relationship between Montserrat students and feeling like they have an undiagnosed mental illness are not receiving support for and feeling like they have an undiagnosed cognitive disability you are not receiving support for ($\chi^2= 8.42$; $df= 1$; $p< .01$); ($\chi^2= 15.98$; $df= 1$; $p< .001$). Self-rated mental health varies significantly by Montserrat status ($\chi^2= 36.88$; $df= 10$; $p< .001$). Little interest or pleasure in doing things ($\chi^2= 22.32$; $df= 3$; $p< .001$), feeling down, depressed, or hopeless ($\chi^2= 15.93$; $df= 3$; $p< .01$), feeling tired and having little energy ($\chi^2= 8.25$; $df= 3$; $p< .05$), poor appetite or overeating ($\chi^2= 9.12$; $df= 3$; $p< .05$), and feeling bad about yourself - or that you are a failure or have let yourself or your family down ($\chi^2= 16.00$; $df= 3$; $p< .01$) have a significant relationship with Montserrat status. The difficulty of depressive symptoms at work, at home, in class, or with others depends on Montserrat status ($\chi^2= 14.28$; $df= 3$; $p< .01$). Whether stressors are exacerbated by personal issues or administrative issues is dependent on Montserrat status ($\chi^2= 13.61$; $df= 4$; $p< .01$). Attempting to access UCS resources varies significantly by Montserrat status ($\chi^2= 15.30$; $df= 1$; $p< .001$).

Table 3 provides results of the ordinary least squares regression for self-rated mental health (SRMH) and depression in association with race/ethnicity, sexual orientation, graduation year, school, mental/cognitive disorder diagnosis status, religiosity, and attempting to access UCS. With regards to self-rated mental health while on campus, results indicate that Asian ($b= .569$, $p< .05$), Latinx/Hispanic ($b= .711$, $p< .05$), biracial/multiracial ($b= .707$, $p< .05$), and White

($b = .999$, $p < .001$) students report higher self-rated mental health (SRMH) compared to Black students. Students graduating in 2024 have worse self-rated mental health ($b = -.603$, $p < .001$) compared to the Class of 2026. Being queer is associated with lower self-rated mental health ($b = -1.064$, $p < .01$) compared to heterosexual students, but the results are skewed by the very small population queer students. Conversely, CSON ($b = .560$, $p < .05$) and WCAS ($b = 1.968$, $p < .05$) students have higher self-rated mental health than CSOM students, though results are skewed by the small population of CSON and WCAS students. Moreover, being a Montserrat student ($b = -.288$, $p < .05$) is associated with lower SRMH. Having a diagnosed mental disorder ($b = -.663$, $p < .001$), feeling that you may have an undiagnosed mental disorder ($b = -.945$, $p < .001$) or an undiagnosed cognitive disorder ($b = -.388$, $p < .01$) you are not receiving support for, and attempting to access UCS resource ($b = -.396$, $p < .01$) are also associated with lower SRMH. Conversely, being religious/spiritual is associated with a higher SRMH.

Depressive Symptoms

Latinx/Hispanic ($b = -2.260$, $p < .05$), biracial/multiracial ($b = -2.461$, $p < .05$), White/Latinx ($b = -2.391$, $p < .05$), and White ($b = -2.886$, $p < .001$) students have less prevalence of depression compared to Black students. Students identifying as bisexual ($b = 2.342$, $p < .001$) have a higher prevalence of depression than heterosexual students. MCAS students ($b = 1.183$, $p < .05$) have a greater prevalence of depressive symptoms compared to CSOM students. Students graduating in 2024 have a higher prevalence of depression ($b = 1.183$, $p < .001$) compared to the Class of 2026. Students with other or multiple identities have a higher prevalence of depression ($b = 2.779$, $p < .01$) compared to the heterosexual students, but make up a very small percentage of the sample which skews the results. Having a diagnosed mental disorder ($b = 2.480$, $p < .001$), having a diagnosed cognitive disorder ($b = 1.462$, $p < .05$) feeling that you may have an

undiagnosed mental disorder ($b= 2.369, p< .001$), or an undiagnosed cognitive disorder ($b= 3.309, p< .001$) you are not receiving support for, and attempting to access UCS resources ($b= -.957, p< .05$) is associated with higher prevalence of depression. However, being religious/spiritual ($b= .953, p< .001$) is associated with a lower prevalence of depressive symptoms.

Table 3 also shows the interaction effects of attempting to access UCS and the graduation year on depression, as well as graduation year and sex. The statistical interaction between the Class of 2024 and attempting to access UCS resources is significant for depression. Class of 2024 that attempt to access UCS resources have a lower prevalence of depressive symptoms than 2024 students who do not. The statistical interaction between the Class of 2023 and identifying as female is significant for depression. Female students in the class of 2023 have a lower prevalence of depressive symptoms.

Table 3. Multilevel OLS Regression of Multiple Mental Health Outcomes (N=919)

<i>Covariates and controls</i>	SRMH	Depression
<i>Race/Ethnicity</i>		
AI/AN	.152	-5.585
Asian	.569*	-1.329
Latinx/Hispanic	.711*	-2.260*
Black/Latinx	-.343	1.801
Biracial/Multiracial	.707*	-2.461*
White/Latinx	.469	-2.391*
White	.999***	-2.886***
Other	-.193	-1.393

Sex

Female	.062	-.309
Gender Fluid	-.035	-3.041
Other or multiple identities	.410	-2.377

Sexual Orientation

Asexual	.697	-.356
Bisexual	-.291	2.343***
Gay	.723	-1.275
Lesbian	1.44	.190
Pansexual	-.003	.686
Other or multiple identities	-.556	2.779**
Queer	-1.064**	.870

First-Generation

.711

Graduation Year

2025	-.140	.606
2024	-.603***	1.183*
2023	-.231	.183
2022	-.183	-3.180

School

MCAS	-.016	1.346**
LSOEHD	.370	-.406
CSON	.560*	.172
WCAS	1.968*	1.976
Double Major	-.058	1.344
No Major	1.873	-3.439

Montseratt	-.288*	-.016
Registered with DSO*	-.226	-.724
Diagnosed Mental Disorder	-.663***	2.480***
Diagnosed Cognitive Disorder	-.363	1.462*
Undiagnosed Mental Disorder	-.945***	2.369***
Undiagnosed Cognitive Disorder	-.388**	3.309***
Religious	.451***	-.953**
Mental Health Support*	.017	-.240
Attempted to access UCS	-.396**	.957*
Mental Health Stigma*	-.023	-.177
Attempted to access UCS x 2024	---	-3.020**
Female x 2023	---	-2.79**
Intercept	5.870	8.080
	(0.334)	(1.047)
Adjusted R ²	0.263	0.289

DSO= Disability Services Office

Mental Health Support= How often do you receive support for your mental health from on-campus sources?

Mental Health Stigma= "To what extent is the following statement an accurate characterization of your college/university?"

Mental health is stigmatized on campus."

Beta coefficients

The comparison groups are Black/AA (0), Heterosexual, 2026, and CSOM.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

I find support for H2a, H3, and H5. Results show that racial and sexual minorities reported the highest rate of depression (H2a). There are statistically significant relationships between the prevalence of mental health diagnoses and school, race/ethnicity, and sex (H3). Moreover, findings indicate that freshmen, male students, and black students attempted to access UCS resources less than upperclassmen, non-male students, and non-black students (H5). There is partial support for H1; Students graduating in 2024 have a higher prevalence of depression than students in the Class of 2026, however, this was not found for other upper-class years (H1). I did not find support for H2b, H2c, H4, and H6. There is no significance between the depression and the statistical interaction of race and sex (H2b), sexual orientation and sex H2c, and race and sexual orientation (H4). Lastly, students who reported that mental health is not stigmatized on campus are attempting to access UCS resources the least, whereas students who feel that mental health stigma on campus is an extremely accurate assessment are attempting to access UCS resources the most (H6).

DISCUSSION

The present study examined the mental health status of Boston College undergraduates and how different institutional and social factors shape variance in mental health. The relationship between several variables related to mental health, such as school, graduation year, sexual orientation, and sex is evaluated. The findings showed significant relationships between mental health outcomes and self-rated mental health, feeling tired or having little energy, poor appetite or overeating, thoughts of self-harm, and seeking support for mental health difficulties. Various depressive symptoms and sexual orientation were significantly associated. Seeking support from peers and seeking support from UCS varied significantly by graduation year and

sex. Additionally, attitudes toward UCS' presence on campus varied significantly by graduation year and sex.

The study found that a significant proportion of college students have mental health problems. However, black students have the highest rate of undiagnosed mental health disorders that they are not receiving support for. A higher percentage of female, gender-fluid, and other/multiple identity students reported having a mental health disorder diagnosis. This finding is in line with previous research that found that gender minority status is associated with higher odds of having one or more mental health problems (Lipson et al. 2019). The majority of students who felt they had an undiagnosed mental or cognitive disorder attempted to access UCS resources. Moreover, gender-fluid students and students with other or multiple gender identities reported have the highest rates of undiagnosed and unsupported mental health disorders. Though fewer students reported cognitive diagnoses, there was a consistent percentage of students reporting mental health diagnoses across graduation years. Having a diagnosed or undiagnosed mental/cognitive disorder and attempting to access UCS resources are associated with lower self-rated mental health and a higher prevalence of depression. The results indicate that graduating in 2024 is associated with worse self-rated mental health and a higher prevalence of depression compared to the Class of 2026. Black students have a higher prevalence of depression and lower self-rated mental health compared to Asian, Latinx/Hispanic, biracial/multiracial, and White students. Being religious/spiritual is associated with higher self-rated mental health. Being a Montserrat student is associated with higher self-rated mental health; As previous studies have found, lower socioeconomic status is associated with higher levels of stress, which impacts overall mental health (Aneshensel 2015).

Limitations

The current study is not without limitations. First, the survey was conducted before winter break when professors assign exams and papers. Midterms can cause more stress for students, which may have impacted their self-rated mental health and the prevalence of depressive symptoms. Second, this is a cross-sectional study, so responses were recorded at one point in time. Third, the sample was primarily white, which limits the generalizability. Lastly, the substantial sample size is an empirical contribution to mental health research at Boston College. However, imperfections in the survey design resulted in missing data, so hundreds of respondents were excluded.

FUTURE DIRECTION AND IMPLICATIONS

Mental Health Services Offered by US Higher Education Institutions

The increase in mental health problems for undergraduates has increased the demand for university counseling services and other on-campus resources (Abrams 2022). Many universities use the International Association of Counseling Services (IACS) as a framework for their mental health resources (Journal of College Student Psychotherapy 2011). To effectively serve the university and college community, the counseling service must fulfill four crucial roles. Firstly, it should offer professional counseling to students who require assistance with personal adjustment, vocational, developmental, and/or psychological issues. Secondly, it should act as a preventative measure, helping students to identify and acquire the necessary skills to effectively achieve their educational and life objectives. Thirdly, it should support and facilitate the healthy growth and development of students through outreach and consultation with the campus community. Finally, the counseling service should also contribute to campus safety (IACS 2018). Both individual and

group counseling and psychological testing should be offered. For counseling staff to effectively cater to the varied needs of students, they must possess the relevant background and training, which includes proficiency in multicultural competence. Moreover, “regular evaluation of the effectiveness of the services must be conducted “(ICAS 2018). Findings suggest that many students feel they have an undiagnosed mental health issue they are not receiving support for despite attempting to access UCS resources. Regular evaluation of student mental health and mental health services can help improve overall campus prosperity and well-being.

Future Direction

In addition to quantitative surveys, future research should conduct qualitative interviews with professors, administrators, UCS staff, and students to gain valuable insight into mental health on campus from different perspectives. Moreover, future research efforts should use quota sampling for survey recruitment. Quota sampling is a non-probability sampling method that selects a specific sample size by subpopulations; Individuals are chosen based on their characteristics. This method enables researchers to investigate specific characteristics by subgroup in greater detail by ensuring that enough participants from each section are included in the study. Considering students exhibiting mental health problems account for about a third of drop-outs (Lipson et al. 2019), administrators, the Office of Health Promotion, University Counseling Services, and University Health Services, should collectively evaluate mental health investments on campus. The Healthy Minds Network has a helpful Return on Investment calculator (R.O.I.) for college mental health services and programs; This tool calculates economic returns of services or programs that improve mental health in the student population based on a college’s enrollment size, approximate institutional drop-out rate, and approximate per student tuition rate (*Healthy Minds Network* 2019). Moreover, Mathis and colleagues found

that undergraduates develop more maladaptive behaviors and encounter dissatisfaction with their lives as they progress through their academic careers. However, the pandemic could have had a significant impact on the class of 2024's mental health, given that they made their college debut in the Fall of 2020 when Boston College's covid protocols were in full effect. Future research should take into account the impact of the COVID-19 pandemic on student mental health. Stress theory is appropriate for understanding worse self-rated mental health and the higher prevalence of depression in 2024 graduates compared to the Class of 2026. Establishing the transition from high school to college during a global pandemic as a chronic strain underlines a new way to measure mental health differences between the class of 2024 and other undergraduate classes (Thoits 2018).

Implications

Given the increasing demand for mental health resources and the limited resources available, it is crucial for counseling centers to adapt their practices and for universities to foster a supportive culture that addresses factors that contribute to mental health problems (Abrams 2022). One way to do this is by recognizing mental health as a community issue that affects all members of the university and educating others on how to identify signs of student distress. It is also important to prioritize advocacy and outreach efforts to provide better support to those who need it. The implications of this study are significant, as it suggests that the university can improve mental health care by identifying gaps in its services and targeting the most vulnerable populations. By doing so, the university can address the needs of these populations and potentially reduce the prevalence of mental health issues on campus. However, effective outreach methods are major components of the success of services. Findings suggest that school and graduation years have a statistically significant relationship with knowing the location of UCS.

Therefore, administrative efforts should incorporate critical initiatives, such as being visible as possible and adapting services to students' needs to increase student engagement with mental health resources and practices (Davis et al. 2021). Students receive dozens of emails a day from different clubs, organizations, and offices so increasing in-person efforts to promote mental health services may be an effective way to reach students. Representatives from the Office of Health Promotion have attended Women's Center meetings in the past to distribute information about resources and answer questions. Extending these efforts to other clubs and student organizations can be helpful.

The study's findings can also provide valuable insights into the effectiveness of current mental health interventions and suggest new approaches that may be more effective in meeting the needs of students. Additionally, the study's results can inform the development of policies and programs aimed at improving mental health care on campus. Moreover, this study highlights the importance of mental health care in universities and the need for continuous research to improve the well-being of students. By prioritizing mental health care, universities can create a supportive and healthy environment for their students, which can lead to better academic and personal outcomes.

Contributions

Professor Moorman provided multiple rounds of feedback on the research question, introduction, literature review, survey structure, recruitment plan, and research design. Professor Satcher led the statistical analyses and provided significant feedback and edits to the literature review, methods, results, and discussion.

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