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Mental health stigma of American college students: Business student perceptions

Dorothy A. Thompson^a, Heidi L. Dent^b, and Monica B. Fine^c

^aAccounting, Florida Southwestern State College, Ft. Myers, FL, USA; ^bMarketing, Western Carolina University, Cullowhee, SC, USA; ^cWall College of Business, Coastal Carolina University, Conway, SC, USA

ABSTRACT

College students' increased uncertainties about their post-college future have led to mounting mental health issues. Considering students' entry into a volatile business environment and the accompanying pressures to succeed, this study helps higher education institutions, particularly business programs, to understand the unique mental health challenges their students face. Surveying 698 US business students, we examine the relationship between the stigma associated with mental health and factors like student resilience, stressors, motivation, and feelings of anxiety, frustration, and loneliness as signals of mental health issues. A significant correlation is found between anxiety and mental health stigma, mental health issues, and feelings of frustration. Business students, as compared to non-business students, reported higher perceived loneliness and a lower level of mental health stigma. By acknowledging business students' high levels of resilience and loneliness, business schools can offer ways for students to mitigate their feelings of loneliness and improve their mental health. Evidence-based recommendations are included for developing tailored support mechanisms that enhance student well-being and academic performance.

KEYWORDS

Anxiety; business major; business student perceptions; loneliness; mental health; stress; resilience

Statement and justification of problem

College is a new, challenging, and stressful experience for many students. A Harvard Medical School study found that 1 in 5 students had thoughts of suicide, with racial, ethnic, sexual, or gender minorities found to be especially vulnerable (Younghans, 2018). Students with mental health issues often do not realize that they are not the only ones going through it (Baines, 2022).

The American College Health Association National College Health Assessment reported that among all undergraduate students surveyed, 64% reported experiencing moderate to high levels of distress due to relationships, over a third were diagnosed with anxiety, and 20% suffered from depression (ACHA, 2023). In addition, 53.3% of college students experienced loneliness (ACHA, 2023). The Association to Advance Collegiate Schools of Business (AACSB) research found that mental health dips are more prominent in graduate business students than in non-business graduate students. However, the study did not mention

the mental health status of undergraduate business students (Davidson, 2020).

College students often have commitments in addition to their coursework, including extracurricular activities, employment, and courses that require them to work in groups or teams as part of their education. Meanwhile, they experience pressures to succeed from family, school, and peers, including the expectation that they will find the perfect job before graduation. Given these and other factors, anxiety levels are likely to be high for all students. Yet, little is known about business students' mental health or their feelings toward those who have mental health issues. Kotera et al. (2019) found that business students from the United Kingdom (UK) hold negative attitudes toward mental illness, leading those with poor mental health to avoid seeking help. Despite pressures to excel at all levels of coursework, extracurricular activities, and finding the perfect job in a volatile business environment, a gap in research exists on the relationship between business students in the United States (US) and mental health stigma, their resiliency, motivation,

mental health issues caused from feelings of anxiety, loneliness, and frustration.

This research focuses on three areas to better understand the impacts associated with business students' mental health. For this study, mental health stigma is defined as a student's feelings toward those who have mental health issues. Additionally, mental health stressors encompass issues relative to academic performance, personal finances, socialization, time management, family issues, relationship problems, pandemic-related issues, and mental health issues like anxiety, depression, and substance abuse. We hope to gain insight into (1) business students' perceptions of mental health issues, specifically anxiety, frustration, and loneliness; (2) the stigma surrounding mental health issues; and (3) the influence of students' level of resiliency. This study aims to examine stressors' impact on college business students.

Literature review

According to the American Institute of Stress, 45% of college students experience higher than average stress levels than the general population (AIS, 2024). With overwhelming course loads, in addition to having a job, concerns about paying for college, and feelings of depression and anxiety, resilience is needed to promote their well-being and help them adapt to their new life at a university (Flannery, 2023; Rasheed et al., 2022). Stress, anxiety, and depression are risk factors associated with mental health (Mofatteh, 2021; Ramón-Arbués et al., 2020). Previous literature acknowledges the stress and anxiety associated with being a college student but lacks segmentation of the student population, discipline, and investigation into students' level of residence. This study attempts to examine the levels of stigma surrounding mental health in business students as compared to non-business students in the US. If more is known, more can be done to reduce student mental health problems with enhanced compassion (Jennings & Greenberg, 2009). In addition, identifying factors that could signal student mental health issues, such as anxiety, frustration, and loneliness, can help to understand business student struggles, raise awareness, and even proactively alleviate some of the pressures students face by providing resources and supporting them to succeed in the classroom and beyond (AIS, 2024).

Business vs. non-business

College students face countless challenges when transitioning from secondary school to independent young

adulthood in post-secondary school, and the accompanying high levels of stress can threaten well-being and academic attainment. Many students experience at least mild stress due to problems experienced by loved ones, their financial situation, love life, and health, and almost half experience mild stress about their relationships with family and people at school and work (Karyotaki et al., 2020). Studies suggest a connection between a student's selected major of study and the associated stress level (Flaherty, 2023). Students have many options when deciding on a major field of study during their academic career. They can cope with the stress of picking a major by limiting their selection criteria (Galotti, 1999). For this study, students are determined to be part of the College of Business if they select from ten majors (accounting, finance, economics, marketing, management, operations management, professional golf management, hospitality management, fashion business management, or general business). The ten majors provide a wide selection of student majors in business areas to evaluate mental health stigma and issues impacting mental health.

Frank et al. (1993) contend that business students put themselves first to maximize personal career gains. This self-centered mentality is distinct from the humanities' orientation toward helping others. Business students often hold high expectations for their future careers, experience information overload, multiple academic pressures, and set unrealistic ambitions in a highly competitive market with limited future opportunities. All of this leads to tension, fear, and anxiety (Sinha et al., 2001). Business students who suffer from mental health issues are more likely to be unprepared for additional stressors as they enter the workforce (Law, 2010). Additionally, perceived stress has a major impact on student mental health (Slimmen et al., 2022).

Understanding the mental health perception, level of mental health factors, and the likelihood of being prone to mental health issues among business students is of tremendous value for potential employers. A student's selected major appears to be a factor in the stress level the student experiences (Flaherty, 2023). In Norman and Ford's (2019) study, humanities and social science majors have perceived high academic stress, while there was no significant difference between the stress levels of science, technology, engineering, and math (STEM) versus non-STEM students (Chen et al., 2020). Students in the College of Arts and Humanities presented with major depression, followed by the College of Sciences and Health and Public Affairs (Ajinkya et al., 2016).

Mental health stigma

The American Psychological Association defines stigma as a “negative social attitude attached to a characteristic of an individual that may be regarded as a mental, physical, or social deficiency. A stigma implies social disapproval and can lead unfairly to discrimination against and exclusion of the individual” (APA, 2023). The negative stigma associated with mental health is one of the largest barriers to individuals seeking mental health services (Corrigan, 2004). Munir et al. (2022) found that college students who have experience with mental illness themselves or a family member maintain less distance and less stigmatized views toward mental illness. Undergraduate business students consider their academic workload a major challenge and a high contributor to their stress levels (Tang et al., 2021). Business students’ poor mental health was associated with mental health attitudes, external motivators, lack of motivation, perceived stress, and was adversely related to self-compassion (Kotera et al., 2019; Slimmen et al., 2022). This contributes to questions about a business student’s likelihood of having a stigma toward mental health. Smith and Cashwell (2010) utilized the Community Attitudes Toward the Mentally Ill (CAMI) instrument to assess a sample of participants’ attitudes toward mental illness. The CAMI has four subscales: Authoritarianism, Benevolence, Social Restrictiveness, and Community Mental Health Ideology (Taylor & Dear, 1981). Where Smith and Cashwell (2010) surveyed subgroups of students in non-mental health, mental health, mental health professional, and non-mental health professional, our subgroups consisted of business and non-business students. Utilizing one statement from Authoritarianism and Benevolence and four from social restrictiveness, we adapted six measures from Smith and Cashwell (2010) to evaluate mental health stigma presented in [Appendix A](#). Mental health stigma factors were measured through statements such as: “I think that most people hesitate to do homework or study with someone who has been treated for a mental illness,” and “I think that most people think badly of someone who has been treated for a mental illness.” Using Cronbach’s alpha, the preliminary tests produced a reliability coefficient of 0.877 for this measure, signifying a greater internal consistency and reliability.

Hypothesis 1: Business students will have a lower negative stigma toward mental health issues than non-business students.

Motivation

Motivation is connected to academic achievement and educational engagement. Students are motivated through intrinsic and extrinsic factors and can also suffer from a lack of motivation due to external factors like social media and fear of missing out (FOMO) (Alt, 2015).

When schools were forced to teach online at the beginning of the COVID-19 pandemic and continuing post-pandemic, students were left to adjust to this disruption from their normal routine on their own while decreasing their social interaction with peers and often abandoning their healthy habits (Gonzalez-Ramirez et al., 2021). Students in Generation Z (age 8–23) and millennials during the pandemic reported the highest stress levels, the lowest ability to manage stress, and difficulty making daily decisions and major decisions (Abrams, 2023). Monnig et al. (2023) found that COVID-19 related stressors like loneliness and barriers to environmental rewards are associated with mental illness. At the same time, Ciciurkaite et al. (2022) found that the most prevalent stressor associated with the pandemic is increased social isolation. Additionally, procrastination is more prevalent in people with poor mental health and has been associated with decreased academic performance. Both anxiety and depression can make students more vulnerable to repetitive negative thoughts (Freyhofer et al., 2021). These changes led to concerns about students’ ability to remain motivated and keep moving forward. Students motivated to achieve their educational and academic goals are more likely to have stronger academic performance and achieve educational success.

Students with a more favorable mental health status will also have increased motivation in their education and academic studies (Mahdavi et al., 2023). Students are motivated to participate in university classes when, first, they perceive themselves as autonomous; second, they can show and improve their skills; and third, they feel a sense of belonging in their classrooms and to their classwork (Levesque et al., 2004). Business majors showed stronger extrinsic motivation and a higher intrinsic desire for accomplishment (Scifres et al., 2021). Mahdavi et al. (2023) found that among university students, achievement motivation is significantly correlated with mental health. Utilizing the Depression, Anxiety, and Stress Scale (DASS-21), Kotera and Ting (2021) surveyed students from a Malaysian university regarding several topics, including motivation. The three types of motivation explored include: amotivation, extrinsic motivation, and

intrinsic motivation (Kotera & Ting, 2021). Kotera and Ting (2021) approached motivation with a negative tone when we asked students to rate questions like “I constantly try to improve my performance,” they asked students to rate their ability on how they “felt that I had nothing to look forward to.” Since motivation influences student mental health, we adapted eight measures for the motivation scale used by Kotera and Ting (2021) to measure US college student motivation. Students were asked to assess their level of trying to improve, setting challenging goals, working hard for a better future, being confident, and demonstrating determination. Sample statements include “I believe where there is a will, there is a way” and “Under pressure, I am confident I will find the way.” This variable of motivation resulted in the highest reliability coefficient using Cronbach’s alpha of 0.915.

Resiliency

Students are placed in new surroundings and situations when they attend an institute of higher education. The ability of students to adapt is relative to a characteristic of resilience. The American Psychological Association defines resilience as “the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands” (APA, 2022). Resilience allows students to effectively deal with, overcome, recover from, and learn from their experiences with academic challenges and failures. For business students, understanding the role of resilience can help improve academic performance and prepare students for the challenges of the business world. Substantial relationships have been found between academic resilience and motivation (Abdolrezapour et al., 2023). Lereya et al. (2016) utilize the student resilience survey (SRS) to understand the determinants and correlates of resilience. Lereya et al. (2016) indicated that the SRS has subscales that address family, school, community connections, home, school, community life participation, peer support, self-esteem, empathy, problem-solving, and goals and aspirations.

A student’s ability to bounce back is measured by questions adapted from the Student Resilience Survey (Lereya et al., 2016) and includes a student’s ability to cope, manage stress, cope with setbacks and failures, talk about stress, burnout, and a desire to seek help. Access to stress-coping training to develop resilience and talking to fellow students about stress is

correlated with higher student resilience (Houpy et al., 2017). To measure resiliency, students were asked to rate eleven statements, such as: “I feel completely burned out and often wonder if I can go on;” “I think resilience training and learning how to adapt well to challenges would be helpful;” “I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion;” and “I have no symptoms of burnout.” The resiliency variable was created by combining two of the survey questions. Utilizing Cronbach’s alpha to measure the reliability coefficient, this variable produced the lowest score of 0.694.

Hypothesis 2: Business students will have a higher level of resilience, including stress-related coping skills, than non-business students.

Mental health issues

Business students often perceive stress and mental health problems that can lead to feelings of shame associated with low self-worth and poor academic performance. Studies have shown that extrinsic motivation, driven by outside factors like money and recognition, is related to negative attitudes toward mental health problems (Kotera et al., 2018). Inferiority complexes can lead to depression and anxiety, which are intensified by the pressure felt during college due to increased comparison and competition among peers (Samuels, 2014). The stress and anxiety felt during college and the challenges students face after completing college are immense. Students are expected to excel in meeting the demands of professors and employers. The constant stress and anxiety further exacerbate feelings of depression and inferiority. This research, therefore, examines whether the higher level of stressors like anxiety, frustration, and loneliness a business student experiences leads to a higher likelihood of mental health issues as compared to non-business students.

Mental health stressors

The mental health of business students is a growing area of concern, with various stressors impacting their well-being, including academic stress, burnout, harmful alcohol abuse, and perceived stressors. Business students scored higher on several study stress factors and disengagement, depression, and harmful alcohol use than medical students (Dahlin et al., 2011). Lee et al. (2005) utilized 14 personal and 16 academic

stressors to explore the patterns of Korean college students. We utilized eight stressor items adapted from Lee et al. (2005) to measure patterns among US college students. A sample of stressors measured includes those related to academic performance, personal finances, family issues, and relationship issues. The Cronbach's alpha related to this measure is 0.796, indicating an acceptable level of scale reliability.

Anxiety is defined as “an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry” (Spielberger, 1972, p. 482). Vitasari et al. (2010) surveyed students from the University Malaysia Pahang to determine their levels of study anxiety. In surveying US college students, four measures were adapted from Vitasari et al. (2010) to measure their feelings associated with talking with people, speaking in front of an audience or to people in authority, and drinking or eating with others in public. Survey questions to measure anxiety included “Talking to people in authority gives me social anxiety” and “Drinking or eating with others in public places gives me social anxiety.” The anxiety composite measure was reliable, with a Cronbach's alpha estimate of 0.866.

Along with stressors and anxiety, students can experience feelings of loneliness. A student's perception of loneliness is subjective and defines the mental state of perceiving a deficit in relationships with others (McClelland et al., 2020). Loneliness has been predicted to lead to greater anxiety, stress, and depression, and over time, general mental health decline (Richardson et al., 2017). With the many new academic and social experiences associated with college life, students are at a higher risk of experiencing mental health issues of loneliness and depression (Qirtas et al., 2023). Using the UCLA Loneliness Scale and the Patient Health Questionnaire-9, Qirtas et al. (2023) measured loneliness and depression among students recruited from Dartmouth College using their cell phone behavior patterns. Focusing on the behavior patterns of maintaining a social life and its correlation with feeling lonely, we measured loneliness among US college students with a single-item measure that ranks students self-identifying their feelings of “Feeling lonely/Maintaining a social life.”

Bessière et al. (2006) define frustration as an “emotional or pre-emotional response to unexpected obstacles impeding goal achievement.” They explore how situational and dispositional factors are associated with levels of frustration. We use a single-item measure of students' ratings in response to this statement: “I feel frustration often.”

Hypothesis 3: Business students with lower-level feelings of anxiety, frustration, and loneliness will be less likely to have mental health issues than non-business students.

Methodology

Procedure

The University Institutional Review Board provided ethical approval for this survey research. A survey was developed and administered to business and non-business students in the United States using a 5-point Likert scale to measure mental health stigma, resiliency, motivation, and feelings of loneliness, anxiety, and frustration (Kotera & Ting, 2021; Lereya et al., 2016; Lee et al., 2005; Vitasari et al., 2010). The scale ranges from 1 (strongly disagree) to 5 (strongly agree). The Centers for Disease Control and Prevention identifies emotional and behavioral health problems attributed to student mental health in their National Health Interview Survey (Center for Disease Control and Prevention [CDC], 2022). This quantitative research uses a survey to address similar characteristics related to student mental health and the stigma surrounding mental health issues, and to explore whether business students are less likely to have mental health issues as compared to non-business students.

The survey data were analyzed using descriptive statistics, *t*-tests, Kurtosis, Skewness, and correlation tools to explore associations between business and non-business students' levels of mental health stigma, levels of resilience, stressors, and motivation. Next, we determined if there was a correlation between students' feelings of loneliness, anxiety, and frustration to the likelihood of being prone to mental health issues. The results support extant research suggesting student loneliness and mental state can lead to increased anxiety and impact student mental health (McClelland et al., 2020; Richardson et al., 2017). A multivariate regression model was used to explore the likelihood of mental health issues when students have feelings of loneliness, anxiety, and frustration. A multivariate regression model testing the explanatory variables was conducted in Stata/IC 16.1. Analysis was then performed to examine the impact of student mental health stigma and the relationship between mental health symptoms.

Participants

Participants were recruited from 159 universities in the United States. Of the respondents, 76 were from

private institutions, with 622 from public institutions. Students were classified into two categories, business and non-business, based on their respective majors. Students minoring in a business discipline or taking a business class as an elective were categorized under their respective non-business majors to explore the mindset of business majors compared to non-business majors. The students range from freshman class to graduate class level, majoring in business and other various disciplines, as can be seen in Figure 1.

With a sample size of 271 business participants and 427 non-business participants, Cohen's (1988) d was utilized to measure the difference in effect size between the two groups being analyzed. Smaller samples tend to have more variability in effect, while larger samples tend to be more precise. Cohen's d is presented for each of the dependent variables being tested in Table 1 and reflects a small effect or little to no effect between the comparable groups, based on the non-business participants outnumbering the business participants by 57%. This is an indicator that the difference in effects between the group means of the coefficients is noticeable but small to none.

The sample comprises 408 (58%) females and 290 (42%) males with an average age between 20 and 21 (55%). Most respondents are Caucasian (78.2%) and enrolled in public institutions (89.4%). Participants were recruited by senior-level marketing research

students who distributed the survey online. Students were not compensated or provided with incentives for completing the survey. Responses were related to demographic information and multiple areas associated with students' overall mental health, stigma of mental health, resiliency, anxiety, and motivation.

Data analysis

Descriptive statistics

Correlation analysis

Pearson's correlation function was used in Stata to measure the linear correlation between the data variables of mental health stigma, mental health issues, resiliency, motivation, feelings of anxiety, frustration, and loneliness. The correlations for the US business students are presented in Table 2.

We examine the relationships between the variables and mental health issues, anxiety, and resiliency further. Pearson's correlation indicates a weak correlation with a -0.2 to 0.2 result, 0.3 – 0.49 and -0.4 to -0.49 for a medium correlation, and a perfect or strong correlation with a 1 or -1 result. Mental health issues were positive and statistically significant with a medium correlation to anxiety (0.343) and frustration (0.304), indicating that as anxiety and frustration increase, mental health issues increase.

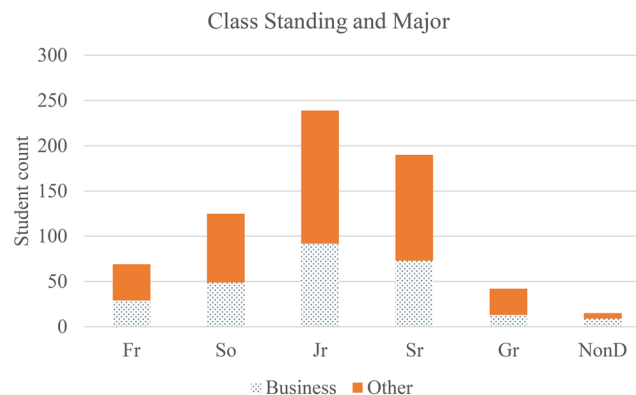


Figure 1. Representation of student class standing and major.

Table 1. Descriptive statistics of US business students, compared with non-business students.

	Business students					Non-business students				
	<i>n</i>	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	<i>d</i>	<i>p</i>	<i>n</i>	<i>M</i>	<i>SD</i>
1. MH stigma	271	2.902	0.966	0.425	0.092	0.145	.060	427	3.034	0.880
2. MH issues	271	2.765	1.398	0.111	0.000	0.316	.000	427	3.210	1.408
3. Resiliency	271	2.863	1.215	0.249	0.000	0.412	.000	427	2.366	1.205
4. Motivation	271	3.933	0.736	0.000	0.022	0.044	.565	427	3.901	0.717
5. Anxiety	271	2.814	1.091	0.073	0.001	0.241	.002	427	3.073	1.061
6. Frustration	271	3.419	1.176	0.001	0.018	0.196	.011	427	3.650	1.186
7. Loneliness	271	2.817	1.216	0.385	0.000	0.257	.001	427	3.136	1.258

Note: Italicized results indicate a significant difference between the two groups. $p < .025$.

The relationship between mental health issues and loneliness (0.554) had a higher than medium, statistically significant correlation, indicating a greater increase in mental health issues when there are high levels of loneliness. On the other hand, mental health issues were statistically significant with a negative relationship and a medium correlation to resiliency (−0.363) and a weak correlation to motivation (−0.144). This indicates that there is an inverse relationship between resiliency and motivation to mental health issues. As students have higher resilience and motivation, they will tend to have fewer mental health issues. Resiliency also had a significantly positive relationship and a weak correlation with motivation (0.234). This could be due to their similarities and counter-effect they have on mental health issues, but not on each other. Resiliency had a significantly negative, weak correlation with anxiety (−0.215), frustration (−0.137), and loneliness (−0.266) indicating an inverse relationship. As resiliency increases, anxiety, frustration and loneliness decrease. Anxiety has a positive, significant, weak correlation with mental health stigma (0.181) and frustration (0.226). Although a weak correlation, this is an indicator that feelings of anxiety stem from being frustrated and potentially having a stigma toward mental health. Anxiety has a negative, significant, weak correlation with motivation (−0.172). This can be interpreted as a student with higher motivation is less likely to have anxiety. Finally, frustration has a positive, significant, weak correlation with loneliness (0.168). Weak correlations provide for loose predictability, while a medium correlation provides for a moderate level of predictability in the relationship between the two variables being considered.

Tables 2 and 3 partially support hypothesis 2 that business students will have a higher level of resilience, including stress-related coping skills, than non-business students. Supporting research suggests that arts and humanities, as well as science, health, and public affairs majors, experience more depression (Ajinkya et al., 2016). In contrast, social science majors perceive higher academic stress (Norman & Ford, 2019).

Table 2. Correlations between mental health stigma, symptoms, and motivation in US business students ($n=271$).

	1	2	3	4	5	6	7
1. MH stigma	–						
2. MH issues	0.109	–					
3. Resiliency	0.018	(0.363)	–				
4. Motivation	(0.033)	(0.144)	0.234	–			
5. Anxiety	0.181	0.343	(0.215)	(0.172)	–		
6. Frustration	0.067	0.304	(0.137)	0.085	0.226	–	
7. Loneliness	0.137	0.554	(0.266)	(0.066)	0.340	0.168	–

Note: Italicized results indicate statistically significant results. r values in parentheses are negative correlations.

Further supporting hypothesis 2, in Table 3, the correlation of the US non-business students to mental health stigma is statistically significant with five of the variables. In contrast, there is a significant negative correlation between mental health issues and resiliency and motivation.

Regression analysis

Multiple regression analyses were conducted to examine the best explanatory variables of mental health symptoms and to explore the likelihood of business students being prone to mental health issues when they have feelings of anxiety, frustration, and loneliness as compared to non-business students. Table 4 reflects a significant finding for the three variables. Anxiety, Frustration, and Loneliness all reflect statistically significant results with a t value greater than 2 for both groups and a p value less than .025 for both business and non-business students. The results indicate that both business and non-business students have a likelihood of mental health issues when having feelings of anxiety, frustration, and loneliness. Anxiety and frustration reflect a higher level of likelihood with non-business students, while loneliness is higher amongst business students. Business students, because of their high expectations for their futures and the competitive nature of the industry, may create additional tension, fear, and anxiety for themselves (Sinha et al., 2001). However, since business students have exposure and expectations for competitive environments, non-business students may perceive themselves to have greater academic anxiety (Norman & Ford, 2019). Focusing on their major, having long study hours, prioritizing career goals over social activities, along with a perception that they are more focused on networking than making friends, it is no surprise that business students seem to experience a greater sense of loneliness than their non-business counterparts. This result partially supports hypothesis 3 that business students with lower-level feelings of anxiety, frustration, and loneliness will be less likely to have

Table 3. Correlations between mental health stigma, symptoms, and motivation in US non-business students ($n=427$).

	1	2	3	4	5	6	7
1. MH stigma	–						
2. MH issues	0.188	–					
3. Resiliency	0.083	(0.389)	–				
4. Motivation	0.109	(0.156)	0.180	–			
5. Anxiety	0.211	0.449	(0.177)	(0.163)	–		
6. Frustration	0.148	0.390	(0.380)	0.042	0.239	–	
7. Loneliness	0.176	0.507	(0.256)	(0.094)	0.349	0.310	–

Note: Italicized results indicate a significant difference between the two groups. $p < .025$.

Table 4. Multiple regression: likelihood of business students being prone to mental health issues when having feelings of anxiety, frustration, and loneliness.

MH issues	Business students (<i>n</i> = 271)				Non-business students (<i>n</i> = 427)			
	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>
Anxiety	0.181	0.067	2.71	.007	0.374	0.054	6.87	.000
Frustration	0.234	0.060	3.93	.000	0.258	0.048	5.37	.000
Loneliness	0.546	0.059	9.23	.000	0.383	0.047	8.17	.000
<i>R</i> ²	0.368				0.386			

perceived mental health issues than non-business students.

Discussion

After performing a *t*-test, descriptive statistics, and generating the skewness values of the eight measurable variables by business and non-business students, the consistencies are observed in Table 1. Skewness values ranged from 0.000 to 0.425, and Kurtosis values ranged from 0.000 to 0.265. Performing a *t*-test between the business and non-business students for each variable produced *p*-values between .000 and .565, demonstrating significant results between the groups of students for five of the eight variables. Non-business students have a higher mental health stigma and report higher mental health issues as compared to business students. This confirms extant research on non-business majors experiencing higher perceived anxiety (Norman & Ford, 2019). These results support and fail to reject hypothesis 1 that business students will have a lower negative stigma toward mental health issues than non-business students. Business students had higher scores in resiliency and motivation, but only resiliency produced significant results. These results partially support hypothesis 2 that business students will have a higher level of resilience, including stress-related coping skills, than non-business students. When reviewing score results for feelings of anxiety, frustration, and loneliness, non-business students present significantly higher results as compared to their business counterparts. Understanding these factors can help institutions continue to analyze and provide resources and support student success in the classroom and beyond.

Conclusion

This research builds upon extant findings on college students' mental health stigma, resilience, motivation, and student feelings of anxiety, frustration, and loneliness. We explored whether business students in the United States will have a lower negative stigma toward mental health issues than non-business students and discovered that non-business students have a higher

stigma surrounding mental health issues (Hypothesis 1 supported). This result correlates with a business student's self-centered mentality (Law, 2010). Having a lower negative stigma toward mental health issues indicates that business students are not focused on the issues of others but on themselves. This could also suggest that business students are focused more on extrinsic factors (Kotera et al., 2018).

We then evaluated the relationship between business students and their level of resilience, including stress-related coping skills and motivation, to determine if they would be higher than non-business students. When comparing the means of the two groups, the results showed that business students had higher scores in resiliency and motivation. Only the resiliency variable produced significant results (Hypothesis 2 partially supported), suggesting that business students are resilient and able to adjust to maximize personal career gains. The relationship between resilience and academic motivation (Abdolrezaipoor et al., 2023), combined with business pedagogy, including experiential learning, may support a stronger sense of belonging in class (Levesque et al., 2004). The results could be due to higher perceived stress by non-business students (Norman & Ford, 2019), that non-business students are more focused on family and friends in school (Karyotaki et al., 2020), or that business students focus on maximizing gains (Frank et al., 1993).

Finally, we looked at the possibility of business students having lower feelings of anxiety, frustration, and loneliness, thereby being less likely to have mental health issues than non-business students. On average, non-business majors reported higher significant levels of anxiety, frustration, and loneliness. When multiple regression was completed, we found that business students with feelings of loneliness are more prone to mental health issues as compared to non-business majors (Hypothesis 3 partially supported). Business students with mental health issues are more likely to be unprepared for additional stressors as they enter the workforce. The competitive nature of business students with their peers and accompanying inferiority complexes can lead to increased anxiety (Samuels, 2014), which can snowball into mental health issues and additional stressors as they prepare for

post-graduation. This increased feeling of loneliness underscores research that suggests students with mental health issues suffer more significant stressors as they enter the workforce (Law, 2010).

Business students typically have personality characteristics, including low openness and agreeableness and high levels of extraversion (Lounsbury et al., 2009). Students engage with their academics when they feel a sense of belonging and are optimistic about skill development (Levesque et al., 2004). By acknowledging business students' high levels of resilience and feelings of loneliness, universities can offer ways for business students to mitigate their feelings of loneliness and improve their mental health, in turn being more prepared for workplace stressors post-graduation. By training students to adapt to challenges and stressors throughout their tenure and educating students about mental health issues, universities can decrease the mental health stigma among non-business majors. Fostering open, collaborative environments where students can openly discuss stressor factors with their peers increases student resilience (Houpy et al., 2017). Cross-department peer-collaborative programs can improve student well-being, decrease mental health-related stressors, and increase students' willingness to seek help.

Implications

This study's findings have several important implications for colleges of business within higher education, mental health professionals, and researchers regarding student well-being. There has been a significant increase in awareness of student mental health, yet with students' feelings of isolation and loneliness increasing, students feel that their campuses are failing to work cohesively and improve their mental health (Flannery, 2023). Offering optional basic training or changes to the curriculum with add-on training modules, business faculty can help guide business students with mental health stressors or those who ask for help. Additionally, providing business students with collaborative environments or training on communicating in a face-to-face environment will counter their immersion in digital environments and provide social settings. Outside the classroom, college activities can provide business student research groups with the means to brainstorm and collaborate to develop more innovative options to improve mental health stressors on campus (Mowreader, 2024). Acknowledging business students' high levels of resilience and feelings of loneliness, departments can offer additional ways for students to mitigate their feelings of loneliness and improve the mental health of business students.

Our study results suggest that, given their differences in resiliency, stressors, and stigma levels, business students may benefit from differing approaches to mental health support and targeted mental health interventions. Providing interventions (direct or indirect, such as peer-groups or integrated informational quizzes) to combat loneliness and foster social connections may be particularly beneficial. Business students characteristically have higher resilience, including stress-coping skills; therefore, some elements of the business curriculum contribute to these positive outcomes. However, since findings also suggest loneliness in business students is a critical early predictor of mental health issues, institutions should offer timely identification and prevention strategies with appropriate screening tools and outreach programs. Career services can offer workshops or develop optional integrated curriculum support on maintaining work-life balance and managing stress for business students through an optional add-on module.

Business students who aspire to be entrepreneurs will encounter loneliness as they grow their businesses and make decisions that no one else can help them make (Isokauppila, 2021). Business students who learn how to cope with loneliness, potentially through creating social connections, will become better leaders and employees, produce higher-quality work, be more positive, and have enhanced self-esteem and self-efficacy (Murthy, 2017).

Although business students often demonstrate higher levels of resilience, they also report increased experiences of loneliness. Communication campaigns focused on building stronger awareness around mental health stigma should be a part of business education initiatives. Universities can implement complimentary programs that reduce mental health stigma and integrate mental health education into existing resource frameworks, like those included in required course syllabi. These resources can assist faculty without requiring them to develop content beyond their areas of expertise. In addition to campus-wide campaigns, institutions may also integrate optional mental health training modules into Learning Management Systems (e.g., Canvas or Blackboard), enabling faculty and staff across business disciplines to address mental health challenges and the needs of student populations, with targeted training based on tendencies within majors. Additionally, university administrators should consider these findings when allocating resources and developing mental health policies. As student graduate and move into leadership positions, having a basis of mental health awareness can assist them personally and professionally.

Recommendations for additional research

Future research opportunities should explore interdisciplinary differences to inform mental health strategies in higher education. COVID-19 created an anomaly in higher education and prompted many adjustments to pedagogy and student perceptions. Longitudinal research can evaluate how the mental health profiles of business and non-business students evolve. Offering insights over a longer period beyond the pandemic can provide valuable insights for practitioners and administrations to better understand and plan for the long-term impact of mental health issues within the academic disciplines. Investigating business students' perceptions of mental health across undergraduate levels can inform pedagogical strategies and the development of targeted support programs.

Considering these implications, this study helps higher education institutions, particularly colleges of business, seeking to better understand and address the mental health challenges of their students, including loneliness, stress, and stigma. To develop effective support systems, institutions should consider implementing routine assessments of student well-being, with a specific focus on measuring perceived loneliness among business students. Surveys could be conducted at regular intervals throughout the academic year (e.g., at the beginning, midpoint, and end of each semester) to track trends over time and proactively respond to developing issues. Universities can enhance student well-being, reduce stigma, and ultimately support stronger academic performance and retention within business disciplines by leveraging data to drive targeted interventions.

Limitations

A limitation associated with the sample of convenience hinders the ability to generalize the findings. In addition, not all scales contained the same number of measures. Some, like loneliness and frustration, only contained one, while others, like motivation, stressors, and resiliency, had eight or more. While this research included 698 students from 159 public and private institutions, further research may utilize a larger data set representing public and private institutions and representative class sizes, genders, races, financial stability, and backgrounds to capitalize on greater generalizability. Additionally, with the increase in distance education and remote and hybrid educational offerings, modality could be explored as an influential factor in mental health and associated stigma. Lastly, future research to understand the change in student mental health over time can assist with future program and communication offerings.

Disclosure statement

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Notes on contributors

Dr. Dorothy A. Thompson is Professor of Accounting at Florida Southwestern State College. Her research appears in *Accounting & Taxation*, *Higher Education Quarterly*, *The Accounting Educators Journal*, and others. With a base of 10 years of corporate accounting experience before going into academia, she has a broad research focus.

Dr. Heidi Dent is an Adjunct Marketing Professor at Western Carolina University and a Guest Lecturer at Hochschule München University of Applied Sciences. With 25+ years in B2B marketing and digital innovation, she consults on marketing and website strategy. She holds a DBA, MBA, and MS in Digital Marketing.

Dr. Monica B. Fine is Professor of Marketing and Associate Dean of Student Success at Coastal Carolina University. She advances student success through experiential learning, mentoring, and career readiness.

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Appendix 1

Survey items related to each numbered variable are italicized

1. **MH Stigma**, adapted from Smith and Cashwell (2010) ($\alpha = 0.877$)
 - I think most people take the opinion of someone who has been treated for a mental illness less seriously.
 - I think that most people hesitate to do homework or study with someone who has been treated for a mental illness.
 - I think that most people think badly of someone who has been treated for a mental illness.
 - I think that most people consider mental illness to be a sign of personal weakness.
 - I think most people do not enter into a relationship with someone who has been treated for a mental illness.
 - I think most people feel uneasy when someone who has been treated for a mental illness moves into their dorm or is their roommate.
2. **Stressors**, adapted from Lee et al. (2005) ($\alpha = 0.796$), **MH Issues** – Single-item measure
 - Academic Performance
 - Personal Finances (Paying my bills)
 - Time Management
 - Family Issues
 - Relationship Problems
 - *Mental Health Issues (Anxiety, Depression, Substance Abuse, etc.)*
 - Pandemic-Related Issues
3. **Resiliency**, adapted from Lereya et al (2016) ($\alpha = 0.694$)
 - I have the skills necessary to personally cope with difficult events (i.e., unexpected deaths, difficult patients, medical errors).
 - I have the skills necessary to manage stress and prevent burnout.
 - I have the skills necessary to cope with setbacks and failures.
 - I feel comfortable talking about stress and burnout with my peers.
- I think resilience training (learning how to adapt well to challenges) would be helpful.
- I have had sufficient resilience training (learning how to adapt well to challenges).
- *I have no symptoms of burnout.*
- I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.
- *I feel completely burned out and often wonder if I can go on.*
- *I am at the point where I may need some changes or may need to seek some sort of help.*
4. **Motivation**, adapted from Kotera & Ting (2021) ($\alpha = 0.915$)
 - I constantly try to improve my performance.
 - I set challenging goals for myself and strive to achieve them.
 - I work hard for a “better” future reward rather than accept a lesser reward now.
 - I prefer to be proactive in my daily life.
 - I believe in performance rather than just following the rules.
 - I believe where there is a will, there is a way.
 - I start an activity with the firm determination to complete it.
 - Under pressure, I am confident I will find the way.
5. **Anxiety**, adapted from Vitasari et al. (2010) ($\alpha = 0.866$)
 - *Talking with people I don't know very well gives me social anxiety.*
 - Acting, performing, or speaking in front of an audience gives me social anxiety.
 - Talking to people in authority gives me social anxiety.
 - *Drinking or eating with others in public places gives me social anxiety.*
6. **Frustration**, adapted from Bessière et al. (2006) – Single-item measure
 - I feel frustration often.
7. **Loneliness**, adapted from Qirtas et al. (2023) – Single-item measure
 - Feeling lonely/Maintaining a social life