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Perceived stigma, mental health, and campus support among Latina/o and White college students

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ABSTRACT

Objective: College campuses can play a pivotal role in promoting mental health awareness and reducing stigma among college students. This study examines the effect of Latina/o and White students' mental health on their perceived self stigma and public stigma and the moderating role of college and university campuses' support toward perceived stigma. **Participants:** Survey responses of 51,821 Latina/o and White college students were examined. **Method:** Hierarchical regression analyses were conducted between anxiety/depressive symptoms, supportive campuses, and students' perceived self/public stigma. **Results:** Findings reveal that Latina/o students have statistically significantly lower perceived self/public stigma and higher anxiety/depressive symptoms than White students. Regression results show that campus support moderates the association between anxiety/depressive symptoms on perceived self stigma for White but not Latina/o students. **Conclusion:** Campuses need to identify ways to provide Latina/o students with more mental health awareness and support.

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Introduction

College students' mental health is a growing concern as a greater number of students meet the diagnostic criteria for a mental health disorder, with population-level trends in the United States showing that mental health diagnoses increased from 22% in 2007 to 36% in 2017.[1] Additionally, college mental health has further declined after the COVID-19 pandemic due to the growing stress, isolation, and unmet mental health needs students experienced.[2,3] Despite the prevalence of mental health disorders, stigmatizing attitudes toward mental illness are widespread in the United States.[4] While ample literature documents the relationship between mental health stigma and decreased help-seeking behaviors,[5–7] less work has examined the institutional and personal factors contributing to mental health stigma. College campuses can play a pivotal role in promoting mental health and reducing stigma toward receiving treatment among college-aged young adults, yet little research has examined whether college campus support affects mental health stigma. Thus, this study examines the effect of Latina/o and White students' anxiety/depressive symptoms on their perceived self/public stigma and the moderating role of college and university campuses' support toward perceived stigma.

Mental health among college students

Students' mental health is an important and growing concern on college and university campuses. Anxiety and depression are highly prevalent among college students,[8,9] and there is evidence that the transition to college can exacerbate the effects of anxiety and depression in college students.[10] Students face changing support systems, a new environment, people, and social norms. Consequently, college students may feel overwhelmed and struggle to acclimate,[11] making them more susceptible to developing anxiety and depression. The American College Health Association[12] reported that one-quarter of college students had been formally diagnosed with anxiety and 20% with major depressive disorder. Racial/ethnic minorities, such as Latina/os, appear to be a particularly at-risk group, and it is often that Hispanic/Latina/o students attend colleges where they are often marginalized.[11,13] Such higher education environments often differ from the predominantly Latina/o communities that these students come from[12], which may contribute to more stressful transitions to college and contribute to the social pressures and stress associated with being a minoritized college student on campus.[11,14] Latina/o students may encounter additional challenges, such as discrimination, social/political stress, lower expectations from teachers, racial violence, a sense of isolation due to not feeling welcome, cultural shock, and economic struggles. These additional challenges can vary in salience for the students given social and environmental contexts (e.g. DACA policies under attack), and COVID and other social contexts that can create unique challenges for Latina/o college students.[15–17]

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Gore and Aseltine[18] found that Latina/o young adults have a higher depressed mood compared to their Caucasian and Asian American counterparts. Similarly, Escovar and colleagues[19] found that Latina/o adults had, on average, a greater number of anxiety disorders compared to non-Latina/o White adults. Given that Latina/o students are typically marginalized in higher education spaces and are facing unique social stressors, this can be a potential reason that explains the increase in anxiety and depressive symptoms. Moreover, the heightened levels of anxiety and depression reported by Latina/o students suggest that colleges and universities may not be meeting the mental health needs of this population. Ultimately, we need data to help us better understand these relationships to inform specific interventions for Latina/o populations that are needed.

Mental health stigma

Previous research has identified two types of stigma when it comes to seeking mental health services: perceived self stigma and perceived public stigma,[4] and not surprisingly, both affect whether an individual ultimately seeks help.[20] Perceived public stigma refers to negative attitudes and beliefs endorsed by the general population, which presume that an individual seeking mental health services is socially unacceptable.[21] For example, individuals who have sought mental health services are rated more negatively by others compared to those who have not sought services.[22–24] Similarly, individuals who sought treatment for mood disorders are rated as more emotionally unstable and less confident than individuals diagnosed with a physical disorder (e.g., back pain).[25] This public stigmatization is troublesome, as far-reaching negative perceptions about a group of individuals can contribute to negative stereotypes, prejudice, and discrimination.[26]

Perceived public stigma tends to be strongly associated with perceived self stigma[27,29]—the process by which negative public attitudes are internalized by individuals resulting in negative self perceptions.[28] Self stigma internalization processes (taking in harmful stereotypes and negative public attitudes about mental health)[27,29] are associated with an increased risk of depression, anxiety, and low self esteem, affecting treatment-seeking, with individuals showing low utilization rates of services and compliance.[30–32] Additionally, other findings suggest that perceived self stigma has a stronger relation to barriers to seeking mental health care when compared to public stigma.[33]

Perceived self stigma and public stigma have been identified as barriers to seeking mental health services among college students and across studies with other adult populations.[24,28] For example, Vogel and colleagues[28] found that, among a diverse sample of over 30,000 students, 21% indicated they had not received any mental health care in the previous year despite having at least one mental health problem. Students indicated they would be worried about what others would think if they utilized mental health services as their primary reason for not seeking treatment.[34] Similarly, another study by Vogel and colleagues[20] found that the relation between perceived public stigma and inclination to seek counseling was fully moderated by perceived self stigma and attitudes. This finding suggests that perceived self stigma and public stigma act as significant barriers for individuals most needing mental health treatment. With the growing number of mental illnesses and established relationship between perceived self stigma, public stigma, and help-seeking behaviors among college students, Eisenberg and colleagues[5] note that it is imperative that we find ways to reduce perceived self stigma and public stigma to increase support for students attending higher education institutions.

By implementing specific programming and messaging aimed at reducing the negative public stigma of mental health treatment, colleges and universities can begin to address public stigma. Corrigan and colleagues[35] revealed that colleges that provided education that challenged myths about mental illness and provided opportunities for others to meet people with a history of mental illness symptoms led to attitude changes in both perceived self stigma and public stigma toward mental health. To act as a positive model for other institutions, colleges and universities must employ programs that consider psychological and structural factors, as well as cultural awareness when messaging to reduce the public stigma toward help-seeking for mental health issues if they wish to support a diverse student population.[36] Programs aimed at reducing public stigma may be even more important for Latina/o college students, who frequently face the additional challenges associated with navigating campuses as a minoritized student population, which is associated with higher levels of stress and anxiety.[11] Previous research has shown that Latina/o students show higher rates of anxiety and depression.[11] Research further reveals that Latina/o college students report higher levels of perceived self stigma and perceived public stigma compared to White students.[37–39] With the growing number of Hispanic/Latina/o students enrolling in higher education,[40] it is crucial that schools take into consideration distinctive cultural values when attempting to reduce stigmatizing attitudes and increase help-seeking attitudes.

The Mental Illness Stigma Framework

The Mental Illness Stigma Framework (MISF)[41] can serve as a guide to support college students in their mental health challenges and help-seeking behaviors. The MISF posits that stereotypes, prejudice, and discrimination contribute to whether people endorse stigmatizing attitudes toward individuals with mental illnesses. Individuals who endorse stigmatizing attitudes are less likely to support policies that benefit individuals with mental illnesses, such as insurance parity or increased government funding of mental health resources.[41,42] Further, individuals with a history of mental illness are impacted by these mechanisms (e.g., stereotypes, prejudice, and discrimination) that promote self stigmatization and, as a result, are less likely to seek mental health support for fear of being labeled or being negatively stereotyped.[4,43,44] In this study, we used the MISF to guide us in understanding the different experiences that Latina/o and

White students have with mental health (depression and anxiety), perceived self stigma, perceived public stigma, and campus support.

The present study

Given the evidence that both perceived self stigma and perceived public stigma affect help-seeking behaviors[5] and college students are suffering from anxiety and depression in greater numbers,[9] it is worthwhile to consider campus support as a moderator of the relationships between perceived self/public stigma with anxiety/depression among college students. Further, given the continual challenges associated with frequently being minoritized on college campuses,[11] it is essential to study these relations in both non-marginalized groups (White) and groups that have been economically and socially marginalized (Latina/o) to see if any important differences can impact recommendations for campus support for students. Thus, we hypothesize that current campus supports might be geared to meet the needs of non-marginalized populations' beliefs around mental health. As such, campus support may have a more significant impact on White students. For this reason, we chose our sample to reflect Latina/o and White college student responses.

This study examined whether campus support contributes to mental health stigma using the 2017–2018 Healthy Minds dataset.[45] Specifically, we examined four research questions: (1) What are the levels of perceived self and public stigma among Latina/o and White college students? (2) Is anxiety/depressive symptoms associated with perceived self/public stigma? (3) Does campus support moderate the relationship between anxiety/depressive symptoms and perceived self/public stigma?, and (4) Are these relationships different for White and Latina/o students? This study serves as an important first step to explore whether college and university campuses that are supportive have an effect on perceived self and public stigma among college students and if such relationships are different based on students' marginalized status on campus.

Method

Sample

Participants included 51,821 Latina/o and White college students across the United States who participated in the 2017–2018 Healthy Minds Study.[45] As shown in Table 1, the majority of the Latina/o sample ($N = 8,130$) were female ($n = 5,618$; 69.1%) and, on average, 22.98 ($SD = 6.03$) years old, with eight percent ($n = 676$) who identified as international students. Among the White student sample ($N = 43,691$), the majority were also female ($n = 30,003$; 68.7%) and, on average, 22.67 ($SD = 6.13$) years old, with two percent ($n = 958$) who identified as international students.

Table 1. Student characteristics ($N = 51,821$).

	Latina/o students ($n = 8,130$)		White students ($n = 43,691$)	
	%	*N*	%	*N*
Sex				
Male	30.8	2,494	31.3	13,616
Female	69.1	5,618	68.7	30,003
Academic Level				
Undergraduate	75.1	5,913	76.1	32,155
Graduate	24.9	1,963	23.9	10,078
Nationality				
U.S. Resident/Citizen	91.7	7,441	97.8	42,701
International	8.3	676	2.2	958

Procedure

The Healthy Minds Network (HMS)[45] obtained the email addresses for a random representative sample of students from 60 college and university registrar databases in the U.S. Students took an online survey that examines mental health, service access and utilization, and mental health stigma among college students. There was an overall participation rate of 23%. Participants were enrolled in a drawing for one of ten $100 Amazon gift cards. Study recruitment, data collection, and ethical approval were granted by the University of Michigan's Institutional Review Board (HUM00100169) and at each participating school. Participants provided electronic consent before starting the survey and received a list of helpful mental health resources after survey completion.

Measures

Anxiety symptoms

The previously validated 7-item General Anxiety Disorder scale (GAD-7)[46] asked participants how often they have been bothered by different items over the past two weeks. Scores range from (0) not at all to (3) nearly every day. Sample items include "*Being so restless that it's hard to sit still*" and "*Feeling afraid as if something awful might happen*." Scores were summed and ranged from zero to 21, with higher scores indicating greater anxiety symptoms. The GAD-7 demonstrated high internal consistency among the Latina/o ($\alpha = .91$) and White ($\alpha = .91$) student samples in our study.

Depressive symptoms

Participants' depressive symptoms were measured with the widely used and reliable Patient Health Questionnaire (PHQ-9).[47] The PHQ-9 asked participants to report how often they have been bothered by nine items over the last two weeks on a scale ranging from (0) not at all to (3) nearly every day. Sample items include "*Feeling tired or having little energy*" and "*Feeling down, depressed, or hopeless*." Items were summed and ranged from zero to 27, such that higher scores indicated greater depressive symptoms. Cronbach's alpha among our Latina/o and White samples were .89 and .89 for this scale, respectively.

Perceived campus mental health support

Perceived campus mental health support was measured using four items that assessed how students perceived their campus to be supportive of mental health. Students were asked

to rate how strongly they agreed or disagreed with statements regarding their campus's mental health support on a scale from (1) strongly disagree to (6) strongly agree. A sample item includes, "*At my school, I feel that the campus climate encourages free and open discussion about mental and emotional health*." Items were mean scored, such that higher scores indicated a campus climate more supportive toward mental health and well-being. This measure demonstrated adequate reliability among our Latina/o and White sample, α = .75 and α = .77, respectively.

Perceived public stigma

Perceived public stigma was measured using three adapted items from the Perceived Devaluation-Discrimination Scale.[48] The items used in the HMS reflected stigma related specifically to how people would react to others receiving mental health treatment on a scale ranging from (1) strongly disagree to (6) strongly agree. A sample item includes "*Most people think less of a person who has received mental health treatment.*" Higher scores indicated greater perceived public stigma related to receiving mental health treatment. Cronbach's alpha for this scale for Latina/o and White students was .71 and .75, respectively.

Perceived self stigma

Perceived self stigma was assessed using three items that were asked to indicate on a scale from (1) strongly disagree to (6) strongly agree regarding their beliefs about how they feel toward seeking mental health treatment. Two items were adapted from the Personal Stigma Scale[5], demonstrating high internal reliability among diverse college students. A sample item includes, "*I feel that receiving mental health treatment is a sign of personal failure*." Items were mean scored with higher scores indicating greater perceived self stigma. Internal reliability of this scale was acceptable for Latina/o (α = .68) and White students (α = .72).

Covariates

Four demographic variables were entered into the analyses as covariates to control for factors that may influence the relation between college students' mental health and their perceived self stigma and public stigma.[49] The four characteristics that have been empirically linked to perceived stigma in previous studies and were included in the current study are: students' age, sex, academic level, and nationality status.[9,50,51]

Analytic plan

To examine students' levels of perceived self stigma and perceived public stigma, we conducted descriptive statistics and bivariate correlations between our main variables of interest. Next, we conducted hierarchical regressions to examine the relations between anxiety, depression, supportive campuses, and students' perceived self stigma and public stigma. In each regression model, we entered demographic covariates, including students' gender, age, nativity status, and degree status, in the first step of the regression. Next, we centered the main hypothesized predictor variables and entered them in the second step.[49] In the last step, we entered the interaction terms to examine the moderated effects of campus support with the independent variables in our study. All analyses were conducted using IBM's SPSS Statistics for Windows, Version 27.0.

Results

Independent sample *t*-tests revealed that the Latina/o students ($M = 7.16$, $SD = 5.58$) reported statistically significantly greater levels of anxiety symptoms compared to White students ($M = 7.02$, $SD = 5.54$), $t(38{,}644) = -1.94$, $d = -0.03$, $p < .05$. Latina/o students ($M = 8.50$, $SD = 6.16$) also reported statistically significantly greater levels of depressive symptoms compared to White students ($M = 7.96$, $SD = 6.02$), $t(9{,}047.58) = -6.55$, $d = -0.09$, $p < .001$. In addition, Latina/o students ($M = 5.40$, $SD = 0.86$) reported statistically significantly lower levels of perceived self stigma than White students ($M = 5.43$, $SD = 0.81$), $t(9{,}862.97) = 2.13$, $d = .03$, $p < .05$. Similarly, Latina/o students ($M = 3.67$, $SD = 1.26$) reported statistically significantly lower levels of perceived public stigma than White students ($M = 3.85$, $SD = 1.19$), $t(9{,}890.28) = 11.43$, $d = .15$, $p < .001$. Descriptive statistics and correlations between the main variables of interest were conducted separately for the Latina/o and White students (see Table 2). As expected, both Latina/o ($r(6{,}523) = .71$, $p < .001$) and White ($r(34{,}902) = .75$, $p < .001$) students reported significant correlations between anxiety and depressive symptoms.

Additionally, there was a statistically significant correlation between anxiety and perceived public stigma between Latina/o ($r(6{,}208) = -0.13$, $p < .01$) and White ($r(33{,}406) = -0.02$, $p < .001$) students. However, given the large sample size when examining the *r* values, we see that the Latina/o correlation is one that we deem relevant whereas the correlation for White students, although significant, is essentially zero. A follow-up z-test[50] revealed that the correlations between these two variables were statistically significant between the Latina/o and White students, $z = -8.01$, $p < .001$. To avoid multicollinearity, anxiety and depressive symptoms were subsequently entered into separate regression analyses.

Eight hierarchical regressions for each unique combination of predictors (anxiety/depressive symptoms) and dependent variables (perceived self stigma/public stigma) were conducted to examine our hypothesis for Latina/o and White students separately. As shown in Tables 3–4, campus support was statistically significantly and positively associated with perceived self stigma and public stigma among Latina/o and White students. A statistically significant association between anxiety and perceived public stigma among Latina/o and White students also appeared, albeit it was most likely significant given the large sample size and was so small in magnitude as to be not informative. Campus support did not moderate the relationship between anxiety/depressive symptoms and perceived public stigma for Latina/o students or White students. However, campus support did moderate the relationship between anxiety/depressive symptoms and perceived/self stigma among White students but not Latina/o students.

Table 2. Pearson's correlations, means, and standard deviations among study variables.

Latina/o sample	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.	8.
1. Age	22.98	6.03								
2. Sex	–	–	−0.05**							
3. Academic Level	–	–	.54***	−0.04***						
4. Nationality	–	–	.12***	−0.08***	.18***					
5. Anxiety	7.16	5.58	−0.10**	.13**	−0.07**	−0.05**				
6. Depression	8.50	6.16	−0.12***	.10***	−0.11***	−0.04**	.71***			
7. Campus Mental Health Support	3.98	0.97	−0.001	.002	.005	−0.04*	−0.24***	−0.25***		
8. Self Stigma	5.40	0.86	−0.01	.16**	.01	−0.06**	.02	−0.006	.07***	
9. Public Stigma	3.67	1.26	−0.04**	.01	−0.05**	−0.03*	−0.13**	−0.15***	.17***	.27***
White Sample										
1. Age	22.67	6.13								
2. Sex			−0.04***							
3. Academic Level			.50***	−0.03***						
4. Nationality			.06***	−0.03***	.09***					
5. Anxiety	7.02	5.54	−0.11***	.17***	−0.11***	−0.03***				
6. Depression	7.96	6.02	−0.13***	.11***	−0.15**	−0.02***	.75***			
7. Campus Mental Health Support	3.97	0.97	.02*	−0.02*	.01	−0.01*	−0.28***	−0.30***		
8. Self Stigma	5.43	0.81	−0.001	.16***	.02***	−0.04***	.04***	.02**	.08***	
9. Public Stigma	3.85	1.19	−0.04***	.03***	−0.03***	−0.02***	−0.02***	−0.18***	.18***	.31***

Note. *N*s range from 3,282 to 8,130 for the Latina/o sample and from 20,685 to 46,285 for the White sample.
*$p < .05$; **$p < .01$; ***$p < .001$.

Table 3. Hierarchical regression analyses with anxiety symptoms Predicting stigma.

	Self stigma			Public stigma		
Latina/o sample	B	SE	β	B	SE	β
Step 1						
(Constant)	5.36***	.07		3.96***	.10	
Age	−0.01*	.003	−0.04	−0.01	.004	−.03
Sex	0.25***	.03	0.15	−0.01	.05	−.002
Academic level	0.10*	.04	0.05	0.004	.06	.002
Nationality status	−0.06	.05	−0.02	−0.03	.07	−.01
		R^2 = .02***			R^2 = .001	
Step 2						
Anxiety symptoms	−0.002	.003	−0.02	−0.03***	.004	−.14
Campus support	0.05**	.02	0.06	0.13***	.02	.11
		ΔR^2 = .004***			ΔR^2 = .04***	
Step 3						
Anxiety symptoms X Campus support	−0.003	.003	−0.02	0.003	.003	.02
		ΔR^2 = .001			ΔR^2 = .001	
White Sample						
Step 1						
(Constant)	5.27***	.02		4.08	.04	
Age	0.001	.001	.003	−0.01***	.002	−0.04
Sex	0.26***	.01	.15	0.03	.02	.01
Academic level	0.03***	.01	.01	0.07**	.02	.03
Nationality status	−0.16***	.03	−0.03	−0.17**	.05	−0.02
		R^2 = .02***			R^2 = .005***	
Step 2						
Anxiety symptoms	0.01***	.001	.04	−0.03***	.001	−0.14
Campus support	0.08***	.01	.10	0.15***	.01	.13
		ΔR^2 = .01***			ΔR^2 = .05***	
Step 3						
Anxiety symptoms X Campus support	−0.003**	.001	−0.02	0.001	.001	.006
		ΔR^2 = .001***			ΔR^2 = .001	

Note. For Latina/o sample: Personal stigma (*N* = 3,120); Public stigma (*N* = 3,119). For the White sample: Personal stigma (*N* = 19,800); Public stigma (*N* = 19,791).
*$p > .05$; **$p > .01$; **$p > .001$.

Discussion

In line with Hunt and Eisenberg's study[13], preliminary findings revealed that Latina/o students in our sample reported greater anxiety and depressive symptoms than White students. While the reported scores for both Latina/o and White students' depressive and anxiety symptoms were small, it is important to note that the difference in the reported scores for Latina/o and White students' depressive symptoms was most likely a real difference, whereas the difference in anxiety symptoms was very small and given the large sample size, may be significant, but may not reflect a real difference (e.g. overpowered). Nonetheless, despite the difference being small, it may be important to make a distinction between students from economically/socially marginalized backgrounds and those from non-marginalized backgrounds who are experiencing symptoms of anxiety/depression which speaks to potential differences in need for support. We feel

Table 4. Hierarchical regression analyses with depressive symptoms Predicting stigma.

	Self stigma			Public stigma		
Latina/o sample	B	SE	β	B	SE	β
Step 1						
(Constant)	5.34	.07		3.95***	.10	
Age	−0.01	.003	−0.04	−0.005	.004	−0.03
Sex	0.27	.03	.15	−0.001	.05	−0.002
Academic level	0.10	.04	.05	0.004	.06	.002
Nationality status	−0.07	.05	−0.02	−0.03	.07	−0.01
		R^2 = .03***			R^2 = .001	
Step 2						
Depressive symptoms	−0.003	.002	−0.03	−0.03***	.01	−0.17
Campus support	0.05***	.02	.06	0.12***	.02	.11
		ΔR^2 = .005***		ΔR^2 = .05***		
Step 3						
Depressive symptoms X Campus support	−0.003	.002	−0.02	0.003	.003	.02
		ΔR^2 = .001			ΔR^2 = .001	
White Sample						
Step 1						
(Constant)	5.27***	.02		4.08***	.04	
Age	0.001	.001	.003	−0.01***	.002	−0.04
Sex	0.26***	.01	.15	0.03	.02	.01
Academic level	0.02**	.01	.01	0.07**	.02	.03
Nationality status	−0.16***	.03	−0.03	−0.17***	.05	−0.02
		R^2 = .02***			R^2 = .002***	
Step 2						
Depressive symptoms	0.004***	.001	.04	−0.03***	.001	−0.17
Campus support	0.08***	.01	.10	0.14***	.01	.12
		ΔR^2 = .01***			ΔR^2 = .06***	
Step 3						
Depressive symptoms X Campus support	−0.002*	.001	−0.02	0.002	.001	.01
		ΔR^2 = .001*			ΔR^2 = .001	

Note. For the Latina/o sample: Personal stigma (N = 3,116): Public stigma (N = 3,119): For the White sample: Personal stigma (N = 19,791): Public stigma (N = 19,781).
*p > .05; **p > .01; **p > .001.

the important take home point is that it is imperative that college campuses target these disparities and implement interventions that increase the overall wellbeing of students in culturally sensitive ways. Moreover, while college students, in general, are at higher risk for mental health disorders, it is important to note that Latina/o students are more likely to encounter systemic barriers, such as discrimination, racial stress, low income, and lack of health insurance, that often make them less likely to seek mental health treatment.[52] There remain unique systemic stressors that Latina/o college students are more likely to face, which can place them at greater risk of psychological distress.[53]

Interestingly, findings further demonstrated that students' anxiety symptoms were negatively linked with perceived public stigma for both student populations. Notably, the association was significantly stronger for Latina/o than White students, such that greater anxiety symptoms were linked to reduced public stigma. This is a surprising finding that might be due to the racial socialization that students undergo that may normalize mental health and decrease mental health stigma. Various studies highlight the impact of parental ethnic-racial socialization and how this may help prepare children to develop skills to protect themselves from the harmful effects of discriminatory and stigmatizing experiences that Latinos are more likely to face [54]. Nonetheless, these findings highlight the importance of college and university campuses addressing students' mental health, with a particular focus on economically and socially marginalized students. In line with the Mental Illness Stigma Framework, it seems that Latina/os' mental health influences their attitudes toward stigma, suggesting that college campuses need to pay particular attention not only to their unique cultural background but to their mental health needs as well.

Findings further revealed that campus support was positively associated with perceived self stigma and public stigma for Latina/o and White students. This finding was surprising because past research suggests that campus support is associated with decreased perceived self and public stigma.[35] In the present sample, it appears that as campus support increased, students had a higher awareness of mental health stigma, however, given the way the data was collected, we were not able to link this to campus support. Smith and Applegate[55] note that campuses can make a greater impact on students' perceived self/public stigma by engaging in active and meaningful education on mental health stigma. Lastly, this study found that campus support moderated the relation between anxiety/depressive symptoms and perceived self stigma for White students but not Latina/o students, albeit with minimal effects. Additionally, campus support did not have a statistically significant moderating effect on the relation between anxiety/depressive symptoms and perceived public stigma for Latina/o students or White students. The result that campus support decreased perceived self stigma for White students but not Latina/o students suggests that current campus supports may be more geared toward White students' beliefs about mental health and that such campus support would have a greater impact on those students.

As previously mentioned, our findings suggest that college and university campuses that are supportive of mental health may be addressing White college students' perceptions of self stigma. One possible reason for this finding among White but not Latina/o students in the current study is that Latina/o students experience stigma differently from their White counterparts. Indeed, Mendoza and colleagues [39] found that Latina/o students experience stigma differently. Latina/os' mental health stigma can be partly understood through cultural practices and values, such as *familismo*, which places a strong emphasis on family loyalty and unity.[56] Prior work indicates that Latina/os often feel that seeking treatment for their mental health problems can bring *vergüenza*, or shame, to their family, thus contributing to their perceived stigma.[39,57] Moreover, Latina/o college students are more likely to face additional stressors due to being an economically and socially marginalized group, which can include: discrimination, lower expectations from teachers, racial violence, cultural shock, and economic struggles. Zamarripa[17] notes that all of these additional challenges impact students' mental health as well as their perceptions of campus college support.

White college students are more likely to embody Western values and worldviews about mental health and the college environment, making them feel more secure in their new environment. According to Baker and Robnet[58], this may result in White students being more responsive or aligned with the college support being provided. Mental health providers in higher education institutions should be aware of the unique experiences of Latina/o students and address their needs in a culturally appropriate way. For example, colleges can address Latina/o's perceived stigmas by challenging culturally relevant mental health stigmas. Shahwan et al[59] note that campus mental health support can be beneficial to decrease perceived self stigma amongst Latino students if they target mental health stigma in culturally appropriate ways. Moreover, mental health resources, such as psychotherapy, can potentially have a positive impact on minoritized students' mental health if done in a culturally appropriate manner that embraces the unique circumstances they face. In contrast, campus support did not moderate the relationship between anxiety/depressive symptoms and perceived public stigma for White or Latina/o students in our study. This suggests that it is more challenging to address public stigma compared to self stigma[60] and highlights college and university campuses' need to amplify current efforts to combat public stigma.

Limitations

The current study has several strengths, including its large sample drawn from multiple campuses across the U.S. However, it is not without limitations. First, the reliability coefficient for perceived self stigma among the Latina/o sample was slightly below the acceptable value ($\alpha = .68$), suggesting an imprecision in measurement that may have accounted for some of the findings in the final models. Louden and colleagues[61] found that multiple facets of the Latina/o culture—such as collectivism, power distance, and long-term orientation—are significant predictors of variance in self stigma measures. Future research should explore how to incorporate and consider facets of culture in measures of perceived self stigma. Additionally, we were unable to examine how students' mental health, perceived stigmas, and campus support work together to impact help-seeking behaviors. To further test the Mental Illness Stigma Framework, research that examines whether campuses are making an impact on students' mental health treatment-seeking *behaviors via* their perceived stigmas is needed.

This study's findings resulted from a cross-sectional study, and thus, we could not determine the causality of relationships between variables. Similarly, it may be that the unexpected insignificant findings are a result of conducting hierarchical regression analyses, as well as significant findings that are not relevant given the large sample size. There might be a feedback loop between stigma and mental health that can be further explored with analyses that capture these complex interactions over time. Future studies should consider examining these dynamic links. We also could not identify specific types of support that benefit college students or the ones that impact their perceived self and public stigma. Future studies should examine the different types of services provided to higher education students and the effectiveness of the services available. Researchers could also consider examining the effectiveness of mental health services by cultural group. It is important to consider the context that marginalized students are facing, when considering which support services will promote health.

Lastly, the demographic categories used in this survey were limited, so we could not examine ethnic differences among our Latina/o sample. Given the heterogeneity in cultural traditions, accents, vocabulary, and *refranes*, or sayings, among Latina/o ethnic groups,[62] it may be that Latina/o ethnic groups will respond differently to mental health stigmatization reduction efforts. Future research should explore differences in perceived stigma among marginalized groups and whether mental health stigma reduction programs are meeting the needs of students of color.[63–69]

Conclusion

This study examined the levels of perceived self stigma and public stigma, the association between perceived self/public stigma and anxiety/depression, and explored the moderating effect of college campuses' level of mental health support on the relationship between anxiety/depressive symptoms and perceived self stigma/public stigma among Latina/o and White college students. We found a difference in rates of anxiety and depressive symptoms among Latina/o college students compared to their White counterparts. While this difference is statistically small, it reflects a difference in the number of students experiencing depressive and anxiety symptoms. Findings further revealed that students' mental health is linked to their perceptions of mental health stigma. College and university campuses are well situated to educate students about mental health and provide targeted efforts at reducing stigma. However, findings from our study suggest that college campuses are not meeting the needs of Latina/o

students. Future studies should investigate the types of college campus supports that are most beneficial for Latina/o students and the best way to provide essential services. Researchers could also examine these processes among different racial/ethnic subgroups. Culturally tailored campus support and programming aimed at reducing mental health stigma can ultimately aid in the reduction of racial/ethnic disparities in mental health stigma and treatment.

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Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the U.S. and received approval from the University of Michigan's Institutional Review Board (HUM00100169).

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