Stress and Mental Health Among Racial Historically Marginalized and Advantaged Undergraduate Students

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ABSTRACT. Undergraduate students are a high-stress population with a high prevalence of psychopathology. Further, students from historically marginalized racial groups face additional stressors and challenges. The aim of this study was to investigate the impact of identifying with a historically marginalized racial group on the relationship between stress and mental health outcomes. We used archival data, in which 528 college students were originally recruited to complete surveys on college-related stress and symptoms of psychopathology. Analyses of variance were employed to study differences in rates between a historically marginalized racial group and a historically advantaged racial group. Regression analyses were employed to study the moderating effect of identity group on the relationship between stress and mental health outcomes. The historically marginalized racial group was more likely to report performance stress (p = .008) and the historically advantaged racial group was more likely to report internalized symptoms of psychopathology including anxiety (p = .007) and depression (p = .02). Furthermore, group marginalization moderated the relationship between total stress (p < .001), financial stress (p < .001), and performance stress (p < .001) with symptoms of internalized psychopathology. Our findings may be explained by a difference in resilience, interpretation of stress, or limitations to survey methods. Recommendations for researchers and clinicians are offered.

Keywords: minority stress, college students, marginalization

College students experience a high level of stress, which is related to negative health outcomes (Beiter et al., 2015; Hubbard et al., 2018). Prior to the COVID-19 pandemic, 48.6% of college students reported moderate stress, and 27.9% reported high levels of stress over the course of 12 months (American College Health Association, 2020). Stress is not a uniform experience; several domains have been studied among college students, some of which include financial stress (Britt et al., 2016; Jones et al., 2018; Robb, 2017), interpersonal stress (Jones et al., 2018; Pedersen, 2017), performance or academic stress (Beiter et al., 2015; Pedersen, 2017), intrapersonal stress (Hubbard et al., 2018), and aggregate general stress (Arbona et al., 2018).

The college student population is increasingly diverse in the United States; the number of historic racial minority students in higher education has increased in the last two decades (de Brey et al., 2019). In addition to being vulnerable to general college stress, racial minority college students are subject to what has been referred to as “ethnic minority stress,” a phenomenon separate from general stress (Wei et al., 2011), urging the examination of stress and mental health issues among various diverse groups. Ethnic minority stress describes unique challenges that are associated with being of ethnic or racial minority status, such as experiencing discrimination,
language barriers, stereotype confirmation concern, or acculturative stress (Arbona et al., 2018; French & Chavez, 2010; Wei et al., 2011). Among college students, experiences of ethnic minority stress are directly related to negative health outcomes (Anderson, 2013; Busse et al., 2017), negative psychological consequences, and worse subjective well-being (French & Chavez, 2010). Notably, ethnic minority stress appears to influence attitudes on college persistence (e.g., dropout rates), which highlights the importance of considering underlying minority status stress in the college mental health literature (Arbona et al., 2018; Wei et al., 2011).

**Mental Health Outcomes Among College Students**

In addition to stress, college students are vulnerable to symptoms of psychopathology. Over the last decade, rates of mental illness among college students have risen, including symptoms of depression and anxiety (Duffy et al., 2019). Broadly, 41.4% of college students report moderate to severe levels of general psychological distress (American College Health Association, 2020).

Among the general college student population, the relationship between reported stress and mental health outcomes is also well-known. In fact, certain domains of stress have been observed to predict specific mental health outcomes. For example, financial stress has been reported to be associated with poorer subjective well-being (Robb, 2017) and greater anxiety symptoms (Tran et al., 2018), whereas academic stress has been reported to be predictive of substance misuse (Metzger et al., 2017) and depressive symptoms (Acharya et al., 2018). Interpersonal stressors, such as hardships stemming from relationships or social conflict, are related to symptoms of depression and anxiety, in addition to being predictive of binge drinking or other substance use problems (Hubbard et al., 2018; Pedersen, 2017). Other intrapersonal stressors, such as low self-esteem and low confidence, have been shown to be related to symptoms of eating problems, anxiety, and depression (Hubbard et al., 2018).

These observed links between stressors and symptoms have been observed in a broad U.S. student population. Given the increasingly diversified student population and known impact of ethnic minority stress, the relationship between stress and mental health among students identifying with historically marginalized groups warrants investigation. The literature examining the relationship between stress and mental health outcomes specific to racial minorities in college is relatively scarce, although some research supports a link between minority stress and depression (Arbona et al., 2018) and psychological distress in general (French & Chavez, 2010).

**Impact of Marginalization**

The college student population in the United States is becoming increasingly racially diverse, creating the need and opportunity to distinguish different critical stress and mental health issues among racial groups. Typically racial identity is operationalized as an individual’s self-identification of group membership (The California State University, 2020), versus ethnic identity, which refers to cultural and social identity (Kamenou, 2007). Aspinall (2002) posits that operationalized social categories, such as “racial minority” and “racial majority” or “non-White” and “White,” serve to group individuals by assumed shared experiences with oppression and power due to appearance or cultural identity, despite being distinct from a group’s own internal definition. As racial groups in the United States continue to diversify, the concept of “majority vs. minority” will lose relevance. Further, using the labels of “non-White vs. White” centers Whiteness as normative, which should be avoided (Aspinall, 2002). Many studies refer to “ethnic and racial minorities,” “students of color,” or utilize other terminology. To group students, we are utilizing “historically marginalized” to recognize both the impact of historical stress and the current growth in population.

**Marginalization and Stress**

Despite historically marginalized students being at a greater risk for negative outcomes associated with ethnic minority stress, little recent research has identified stress differences between historically marginalized and historically advantaged college students beyond their experiences with ethnic minority stress. Existing literature has shown that students of color have reported greater levels of family and financial stress and less perceived family support compared to their White counterparts (Cadaret & Bennett, 2019). Otherwise, there is a paucity of research examining potential differences in the manifestation of stress between historically marginalized and historically advantaged students.

**Present Study**

The field of mental health, which traditionally centers Whiteness, would benefit from a focus on the impacts of historic marginalization on emotional wellness. We sought to contribute toward a more nuanced understanding of ethnic minority stress and other experiences of historically marginalized communities.

The current study used archival data to investigate the impact of historic marginalization status on the relationship between stress types and mental health outcomes. Stress types were determined by Hubbard and colleagues (2018), using the same data, and included interpersonal, intrapersonal, financial, and performance...
stressors. Mental health outcomes assessed included symptoms of depression, anxiety, eating problems, and substance use. Although this study was largely exploratory, we hypothesized that historic marginalization status would moderate the relationship between stress and mental health.

Method

Participants

The current study reanalyzed data used in a previous study, which showed gender differences in the relationship between stress and mental health (Hubbard et al., 2018). The original dataset, collected in 2017, included 564 college students enrolled in undergraduate or graduate programs within the United States. IRB approval was granted from the University of Portland for the original study. Participants were recruited from the University of Portland, a private northwestern institution, targeting students in introductory psychology courses for which they received course credit, as well as nationally through Amazon Mechanical Turk, through which participants received a small financial incentive. In preparing the dataset for analysis, 36 participants were excluded for either not being an undergraduate student due to the small number, not reporting racial identity, or having omitted more than three responses from their survey.

Participants were grouped based on their alignment with either a historically advantaged racial culture (White) or historically marginalized racial identities (all other than White) to shed light on the impact of racial marginalization on stress and mental health processes. Thus, for the purpose of delineating experiences of identification with a racial group that has been historically marginalized, groups will cautiously be described as "historically marginalized" and "historically advantaged" in this article. The final sample for the current study contained 528 undergraduate students, 60.6% of whom identified as part of the historically advantaged group, and 39.4% identified as members of the historically marginalized group (17.6% Asian, 11.9% Hispanic or Latino, 5.9% Black, 3.8% Pacific Islander, and 0.2% Native American or Alaska Native). Most participants (n = 369; 69.9%) were women; nonbinary and genders other than women and men were not options in the original data collection, which is a limitation to this study. Participants were primarily 18 years old (33.7%), followed by 19 (21.4%), 21 (17.2%), 20 (14.0%), 22 (9.1%), 23 (3.2%), and 24 (1.1%).

Measures

Mental Health Outcomes

The Symptoms and Assets Screening Scale (SASS; Downs et al., 2013) is a self-report measure composed of 34 items assessing overall psychological distress, well-being, help-seeking behaviors, and symptoms of depression, anxiety, substance abuse, and disordered eating. The current study utilized participants’ scores (ranging from 0-15) on the individual mental health outcome items (e.g., “I feel hopeless”); higher scores indicated higher levels of psychopathology. The measure has shown good reliability and validity (Cronbach’s α for symptom subscales ranging from .73 to .81; Downs et al., 2013) in assessing constructs consistent with other college mental health literature. In the current study, the SASS demonstrated good internal consistency (Cronbach’s α = .82).

Stress Types

The Multidimensional Stress Scale (MSS; Hubbard et al., 2018) is a self-report measure created for the original study by Hubbard and colleagues (2018) that is composed of 32 items assessing life stressors experienced by college students. Participants were instructed to read each item and rate how much each of the described stressors (e.g., “Problems with roommates or housemates”) negatively affected their mental health in the past year on a four-point scale; higher scores indicated higher levels of stress. Using exploratory factor analyses with the same sample as the current study, Hubbard et al. (2018) discovered four latent variables and stress categories: interpersonal stress (items related to external social stressors), intrapersonal stress (items related to internal stressors and self-image), performance stress (items related to achievement and productivity), and financial stress (items related to financial wellness and work-related stress). Each of the four factors demonstrated very good internal consistency (Cronbach’s α ranging from .71 to .90) and the total stress variable (sum of all 32 items) demonstrated excellent internal consistency (Cronbach’s α = .92).

Procedure and Design

Data were collected between February 2017 and January 2018 through an online, self-report survey. The sample was recruited nationally with Amazon Mechanical Turk (n = 216) and locally from a private university in the northwestern United States using Qualtrics (n = 348). At the time of data collection, the local undergraduate study body was primarily identified as White (57%; University of Portland, 2019). No significant differences between the national and local samples on the measures included in the current study were evident (Hubbard et al., 2018).

Several items on the MSS were endorsed by few students in the sample, suggesting that these items have limited relevance to this particular sample; these items included “problems with coworkers” (endorsed by 3.9%),
“excessive drinking or drug use” (4.4%), “death of a family member, partner, or friend” (11.4%), “issues with sexual or gender identity” (6.3%), “experiencing discrimination” (4.4%), and “feeling like you should be in college” (19.2%). For the current study, we employed a one-way analysis of variance (ANOVA), finding no significant mean differences between the historically marginalized and historically advantaged on these items with the exception of discrimination, \( F(1, 525) = 15.98, p < .001 \). As such, coworker problems, excessive drinking or drug use, death of a family member, partner, or friend, issues with sexual or gender identity, or feeling like you should be in college were excluded from factor analyses. Experiencing discrimination was retained.

**Results**

A one-way ANOVA showed a significant effect of group identity (i.e., historically marginalized vs. historically advantaged) on levels of anxiety, \( F(1, 526) = 7.29, p = .007, \eta^2_p = .01 \), and depression, \( F(1, 526) = 5.81, p = .016, \eta^2_p = .01 \), such that historically advantaged students were more likely to endorse these symptoms of psychopathology. There was also a significant effect of group identity on performance stress, such that the historically marginalized students were more likely to endorse performance stress, \( F(1, 526) = 7.12, p = .008, \eta^2_p = .01 \). No significant group differences were found among eating problems, \( F(1, 526) = 0.00, p = .99, \eta^2_p = .00 \), substance problems, \( F(1, 526) = 0.06, p = .81, \eta^2_p = .00 \), interpersonal stress, \( F(1, 526) = 0.04, p = .84, \eta^2_p = .00 \), and intrapersonal stress, \( F(1, 526) = 1.73, p = .19, \eta^2_p = .003 \), or financial stress, \( F(1, 526) = 3.15, p = .08, \eta^2_p = .01 \). See Table 1 for the means and standard deviations of the MSS variables across group identity.

To explore the impact of historic cultural marginalization on the association between stress and mental health outcomes, the mental health outcome was regressed on a model that included two covariates (age, gender) consistent with other college stress studies (Saleh et al., 2017), two main effect variables (stress, marginal cultural status), and the interaction between stress and marginal cultural status. Marginal status was coded –1 for historically marginalized cultural backgrounds and +1 for historically advantaged cultural backgrounds. Stress variables were mean-deviated to center the variable around zero (Vik, 2014). To reduce the risk of type I errors, symptoms of psychopathology, as measured by the SASS, were consolidated into two variables: “internalized symptoms” (totals scores from anxiety and depression subscales) and “behavioral excess” (totals scores from substance use and eating problem subscales). Hubbard et al. (2018) reported statistically significant correlations between all four of these subscales, and a higher correlation coefficient between depression and anxiety specifically.

**TABLE 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Historically Marginalized Group</th>
<th>Historically Advantaged Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5.05</td>
<td>3.60</td>
<td>6.01</td>
</tr>
<tr>
<td>Depression</td>
<td>3.89</td>
<td>3.39</td>
<td>4.69</td>
</tr>
<tr>
<td>Substance Problems</td>
<td>1.60</td>
<td>2.52</td>
<td>1.55</td>
</tr>
<tr>
<td>Eating Problems</td>
<td>5.02</td>
<td>3.11</td>
<td>5.03</td>
</tr>
<tr>
<td>Performance Stress</td>
<td>10.84</td>
<td>5.21</td>
<td>9.59</td>
</tr>
<tr>
<td>Financial Stress</td>
<td>2.41</td>
<td>2.19</td>
<td>2.08</td>
</tr>
<tr>
<td>Interpersonal Stress</td>
<td>5.03</td>
<td>3.34</td>
<td>5.10</td>
</tr>
<tr>
<td>Intrapersonal Stress</td>
<td>4.71</td>
<td>3.94</td>
<td>5.14</td>
</tr>
</tbody>
</table>

Note: Historically Marginalized Group \( (n = 208) \), Historically Advantaged Group \( (n = 320) \), Total \( (N = 528) \)

**TABLE 2**

<table>
<thead>
<tr>
<th>Covariates</th>
<th>( b )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.13</td>
</tr>
<tr>
<td>Age</td>
<td>0.34</td>
</tr>
<tr>
<td>Marginal Status</td>
<td>−2.03</td>
</tr>
<tr>
<td>Total Stress</td>
<td>0.44</td>
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<tr>
<td>Total Stress x Marginal Status</td>
<td>−0.06</td>
</tr>
</tbody>
</table>

**TABLE 2 (continued)**

<table>
<thead>
<tr>
<th>Covariates</th>
<th>( b )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.00</td>
</tr>
<tr>
<td>Age</td>
<td>0.07</td>
</tr>
<tr>
<td>Marginal Status</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Stress</td>
<td>0.57</td>
</tr>
<tr>
<td>Total Stress x Marginal Status</td>
<td>−0.02</td>
</tr>
</tbody>
</table>

Note: Fit for model predicting internalizing symptoms, \( R^2 = .56, F(5, 502) = 104.91, p < .001 \); Fit for model predicting behavioral excess, \( R^2 = .31, F(5, 502) = 44.38, p < .001 \).
Total Stress

Internalized Symptoms

When regressed on the covariates, the internalized score was positively associated with age, \( \beta = .07, F(5, 502) = 6.35, p = .01 \), but not gender, \( \beta = .01, F(5, 502) = 0.07, p = .79 \). A main effect was found for stress, \( \beta = .92, F(5, 502) = 4.88, p < .001 \), such that as stress increased, internalized symptoms increased. A main effect was also found for marginalization status, \( \beta = –.14, F(5, 502) = 22.56, p < .001 \), such that historically advantaged students reported higher internalizing symptoms than marginalized students reported. The interaction term was statistically significant, \( \beta = –.19, F(5, 502) = 112.36, p = .03 \). The positive interaction coefficient indicated that the association between stress and internalizing symptoms was slightly greater for students from historically advantaged cultural backgrounds than those from marginalized backgrounds. See Table 2.

Behavioral Excess

The behavioral excess score was not associated with age, \( b = .07, F(5, 502) = 3.28, p = .07 \), or gender, \( b = –.00, F(5, 502) = 0.00, p = .95 \). A main effect was found for stress, \( b = .57, F(5, 502) = 0.03, p < .001 \), such that as stress increased, students reported more behavioral excess. Neither the main effect for marginalization status, \( b = .00, F(5, 502) = 0.01, p = .94 \), or the interaction term, \( b = –.02, F(5, 502) = 25.40, p = .87 \), were statistically significant.

Interpersonal Stress

Internalized Symptoms

The internalized symptoms score was positively associated with age, \( \beta = .12, F(5, 521) = 12.96, p < .001 \), but not gender, \( \beta = .01, F(5, 521) = 0.04, p = .85 \). A main effect was found for stress, \( \beta = .66, F(5, 521) = 43.30, p < .001 \), such that as stress increased, internalized symptoms increased. A main effect was also found for marginalization status, \( \beta = –.10, F(5, 521) = 9.36, p = .002 \), such that historically advantaged students reported higher internalizing symptoms than marginalized students reported. The interaction term was not statistically significant, \( \beta = –.04, F(5, 521) = 0.12, p = .73 \). See Table 3.

Behavioral Excess

As age increased, behavioral excess scores increased, \( \beta = .10, F(5, 521) = 7.56, p = .006 \). Gender was not related to behavioral excess, \( \beta = –.40, F(5, 521) = 1.04, p = .37 \).

---

**TABLE 3**

<table>
<thead>
<tr>
<th>Covariates</th>
<th>( b ) Lower Upper</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( r^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal Status</td>
<td>–1.56 –2.48 –0.54 –10 –3.06 –10</td>
<td>.02</td>
<td>.17</td>
<td>.04</td>
<td>.02</td>
</tr>
<tr>
<td>Intrapersonal Stress</td>
<td>1.35 0.95 1.75 .66 6.58 .22</td>
<td>.02</td>
<td>.05</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>Intrapersonal Stress x Marginal Status</td>
<td>–0.05 –0.33 0.23 –.04 –0.35 –.01</td>
<td>.02</td>
<td>.04</td>
<td>.01</td>
<td>.72</td>
</tr>
</tbody>
</table>

**TABLE 4**

<table>
<thead>
<tr>
<th>Covariates</th>
<th>( b ) Lower Upper</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( r^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal Status</td>
<td>–1.21 –2.28 –0.14 –10 –.08 –.23</td>
<td>.03</td>
<td>.11</td>
<td>.03</td>
<td>.19</td>
</tr>
<tr>
<td>Intrapersonal Stress</td>
<td>1.27 0.84 1.70 .66 5.79 .21</td>
<td>.03</td>
<td>.07</td>
<td>.05</td>
<td>.19</td>
</tr>
<tr>
<td>Intrapersonal Stress x Marginal Status</td>
<td>–0.22 –0.51 0.06 –.18 –1.56 –.06</td>
<td>.03</td>
<td>.08</td>
<td>.05</td>
<td>.19</td>
</tr>
</tbody>
</table>

Note. Fit for model predicting internalizing symptoms, \( R^2 = .42, F(5, 521) = 75.54, p < .001 \); Fit for model predicting internalizing symptoms, \( R^2 = .32, F(5, 521) = 50.10, p < .001 \).
$p = .31$. A main effect was found for stress, $\beta = .55$, $F(5, 521) = 25.30, p < .001$, such that as interpersonal stress increased, students reported more behavioral excess. Neither the main effect for marginalization status, $\beta = .02, F(5, 502) = 0.31, p = .58$, or the interaction term, $\beta = .03, F(5, 502) = 0.09, p = .76$, were statistically significant. See Table 3.

**Intrapersonal Stress**

**Internalized Symptoms**
The internalized symptoms score was not related to age, $\beta = .07, F(5, 520) = 3.57, p = .06$. Internalized symptoms were related to gender, $\beta = .13, F(5, 520) = 11.09, p < .001$. Main effects were found for stress, $\beta = .66, F(5, 520) = 33.52, p < .001$, and for marginalization status, $\beta = -.08, F(5, 520) = 4.97, p = .03$. As stress increased, internalized symptoms increased, and historically advantaged students reported higher internalizing symptoms than marginalized students reported. The interaction term was not statistically significant, $\beta = -.18, F(5, 520) = 2.43, p = .12$. See Table 4.

**Behavioral Excess**
The behavioral excess score was not associated with age, $\beta = .05, F(5, 520) = 1.72, p = .19$, or gender, $\beta = .07, F(5, 520) = 2.82, p = .09$. A main effect was found for stress, $\beta = .48, F(5, 520) = 16.40, p < .001$, such that as intrapersonal stress increased, students reported more behavioral excess. Neither the main effect for marginalization status, $\beta = .04, F(5, 520) = 1.04, p = .31$, or the interaction term, $\beta = -.03, F(5, 520) = 0.06, p = .90$, were statistically significant. See Table 4.

**Performance Stress**

**Internalized Symptoms**
The internalized symptoms score was positively associated with age, $\beta = .12, F(5, 520) = 13.25, p < .001$. Internalized symptoms were related to gender, $\beta = .10, F(5, 520) = 8.24, p = .004$. Main effects were found for performance stress, $\beta = .80, F(5, 520) = 60.53, p < .001$, and for marginalization status, $\beta = -.17, F(5, 520) = 25.10, p < .001$. As performance stress increased, internalized symptoms increased, and historically advantaged students reported higher internalizing symptoms than marginalized students reported. The interaction term was statistically significant, $\beta = -.21, F(5, 520) = 4.24, p = .039$. The positive interaction coefficient suggests that the relationship between performance stress and

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**TABLE 5**

**Moderation Effect of Marginal Status on the Relationship Between Performance Stress and Mental Health Outcome**

<table>
<thead>
<tr>
<th></th>
<th>b</th>
<th>CI (95%)</th>
<th>$\beta$</th>
<th>t</th>
<th>r²</th>
<th>p</th>
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<td><strong>Internalized symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covariates</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.55</td>
<td>0.49 – 2.61</td>
<td>.10</td>
<td>2.87</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.57</td>
<td>0.26 – 0.88</td>
<td>.12</td>
<td>3.64</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
<td>−2.52</td>
<td>−3.51 – −1.53</td>
<td>−.17</td>
<td>−5.01</td>
<td>.001</td>
<td></td>
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<tr>
<td>Performance Stress</td>
<td>1.09</td>
<td>0.82 – 1.37</td>
<td>.80</td>
<td>7.78</td>
<td>.001</td>
<td></td>
</tr>
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<td>Performance Stress x</td>
<td>−0.20</td>
<td>−0.38 – −0.01</td>
<td>−.21</td>
<td>−2.06</td>
<td>.039</td>
<td></td>
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<tr>
<td>Marginal Status</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Behavioral excess</strong></td>
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<tr>
<td>Covariates</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.85</td>
<td>0.02 – 1.68</td>
<td>.08</td>
<td>2.00</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.29</td>
<td>0.05 – 0.53</td>
<td>.10</td>
<td>2.36</td>
<td>.019</td>
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</tr>
<tr>
<td>Marginal Status</td>
<td>−0.15</td>
<td>−0.92 – 0.62</td>
<td>−.02</td>
<td>−0.38</td>
<td>.072</td>
<td></td>
</tr>
<tr>
<td>Performance Stress</td>
<td>0.44</td>
<td>0.22 – 0.65</td>
<td>.49</td>
<td>3.96</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Performance Stress x</td>
<td>−0.10</td>
<td>−0.25 – 0.05</td>
<td>−.17</td>
<td>−1.34</td>
<td>.181</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Fit for model predicting internalizing symptoms, $R^2 = .41, F(5, 520) = 72.07, p < .001$; Fit for model predicting behavioral excess, $R^2 = .14, F(5, 520) = 16.27, p < .001$.*

---

**TABLE 6**

**Moderation Effect of Marginal Status on the Relationship Between Financial Stress and Mental Health Outcome**

<table>
<thead>
<tr>
<th></th>
<th>b</th>
<th>CI (95%)</th>
<th>$\beta$</th>
<th>t</th>
<th>r²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internalized symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>2.48</td>
<td>1.25 – 3.71</td>
<td>.16</td>
<td>3.96</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−0.10</td>
<td>−0.48 – 0.28</td>
<td>−.02</td>
<td>−0.51</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
<td>−2.10</td>
<td>−3.25 – −0.95</td>
<td>−.14</td>
<td>−3.57</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Financial Stress</td>
<td>1.99</td>
<td>1.19 – 2.79</td>
<td>.59</td>
<td>4.87</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Financial Stress x</td>
<td>−0.53</td>
<td>−1.06 – 0.00</td>
<td>−.23</td>
<td>−1.95</td>
<td>.052</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Behavioral excess</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.14</td>
<td>0.29 – 2.00</td>
<td>.11</td>
<td>2.64</td>
<td>.009</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>−0.26 – 0.27</td>
<td>.00</td>
<td>0.04</td>
<td>.970</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
<td>−0.07</td>
<td>−0.87 – 0.72</td>
<td>−.01</td>
<td>−0.18</td>
<td>.019</td>
<td></td>
</tr>
<tr>
<td>Financial Stress</td>
<td>0.59</td>
<td>0.04 – 1.14</td>
<td>.27</td>
<td>2.10</td>
<td>.036</td>
<td></td>
</tr>
<tr>
<td>Financial Stress x</td>
<td>−0.04</td>
<td>−0.40 – 0.33</td>
<td>−.03</td>
<td>−0.21</td>
<td>.836</td>
<td></td>
</tr>
<tr>
<td>Marginal Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Fit for model predicting internalizing symptoms, $R^2 = .08, F(5, 521) = 9.00, p < .001$; Fit for model predicting behavioral excess, $R^2 = .08, F(5, 521) = 18.46, p < .001$.*
internalizing symptoms was slightly greater for historically advantaged students than historically marginalized students. See Table 5.

**Behavioral Excess**
As age increased, behavioral excess scores increased, $\beta = .10, F(5, 520) = 5.57, p = .02$. Gender was also related to behavioral excess, $\beta = .08, F(5, 520) = 4.00, p = .35$. A main effect was found for stress, $\beta = .49, F(5, 520) = 15.68, p < .001$, such that as performance stress increased, students reported more behavioral excess. Neither the main effect for marginalization status, $\beta = -.02, F(5, 520) = 0.14, p = .70$, nor the interaction term, $\beta = -.17, F(5, 520) = 1.80, p = .18$, were statistically significant. See Table 5.

**Financial Stress**
**Internalized Symptoms**
The internalized symptoms score was not associated with age, $\beta = -.02, F(1, 521) = .26, p = .61, r^2 = -.02$; although it was related to gender, $\beta = .16, F(1, 521) = 15.68, p < .001, r^2 = .16$. Main effects were found for financial stress, $\beta = .59, F(1, 521) = 23.72, p < .001, r^2 = .19$, and for marginalization status, $\beta = -.14, F(1, 521) = 12.75, p < .001, r^2 = -.14$. As financial stress increased, internalized symptoms increased, and historically advantaged students reported higher internalizing symptoms than historically marginalized students reported. The interaction term trended toward statistically significance, $\beta = -.23, F(5, 521) = 3.80, p = .05, r^2 = -.08$, suggesting that the relationship between financial stress and internalizing symptoms may be slightly greater for historically advantaged students than historically marginalized students. See Table 6.

**Behavioral Excess**
The behavioral excess score was not associated with age, $\beta = .00, F(5, 521) = 0.00, p = .97$. Behavioral excess was related to gender, $\beta = .11, F(5, 521) = 6.97, p = .009$. Main effects were found for financial stress, $\beta = .27, F(5, 521) = 4.41, p = .04$. Neither the main effect for marginalization status, $\beta = -.01, F(5, 521) = 0.03, p = .86$, or the interaction term, $\beta = -.03, F(5, 521) = 0.04, p = .84$, were statistically significant. See Table 6.

**Discussion**
The aim of this study was to examine the effects of racial marginalization on the relationship between stress and mental health outcomes. A one-way ANOVA revealed greater instances of performance stress among historically marginalized students. Symptoms of psychopathology also differed between the groups, such that historically advantaged students reported greater levels of internalized symptoms compared to historically marginalized students. Further, linear regression analyses found a moderating effect of historic marginalization status on the relationship between total stress, performance stress, and financial stress with internalized symptoms of psychopathology. In sum, historically marginalized students report the same level of stress, and more in some cases, compared to historically advantaged students. Stress appears to have less of an impact on internalized mental distress (anxiety and depression) for historically marginalized students than for historically advantaged students.

**Differences in Stress**
We observed that historically marginalized students reported more performance stress, which includes not having enough time to get everything done, worrying about the future, feeling pressure to succeed, issues with time management, balancing school, work, and life, academic problems, test anxiety, and feeling pressure to be in college (Hubbard et al., 2018), than historically advantaged students. This observation has not been thoroughly addressed in the existing literature. In a study with African American students at several predominantly White universities, researchers found racial discrimination to be associated with several negative outcomes, including performance anxiety and perfectionism, both of which are related to performance stress (Chao et al., 2012). Poor cultural representation in student bodies may leave students from historically marginalized racial groups feeling more stressed to academically perform and presents the opportunity for stereotype threat; expecting negative judgment by majority groups regarding the inferiority of being a minority increases performance stressors by those minority individuals (Owens & Massey, 2011). Further, test anxiety, one of the performance stress factor items, has been shown to generally be higher among Black students compared to White students in various age groups (von der Embse et al., 2018). In general, however, this is an area that research has not not thoroughly covered.

**Differences in Internalized Mental Distress**
The finding that historically advantaged students reported more symptoms of internalized mental distress, which included anxiety and depression, compared to the historically marginalized students is consistent with findings from the National College Health Assessment which revealed that ethnic minority students tended to report fewer symptoms of psychopathology and fewer diagnoses of mental health concerns on a national level (Chen et al., 2019). Notable, however, it is unknown...
if psychopathology is truly lower among minority students or if these students are underdiagnosed. Despite the lower rates of diagnoses, students who identified as multiracial and Asian/Pacific Islander were more likely to experience functionally impairing hopelessness and depression, anger, and suicidality. Additionally, suicide attempts were similarly reported between White, Black, and Hispanic students, despite Black and Hispanic students reporting fewer psychiatric symptoms (Chen et al., 2019). The differences observed in the current study may represent actual differences in psychopathology between historically marginalized and historically advantaged students. However, given the greater rates of suicidal behaviors (ideation and attempts) and functionally impairing depression despite fewer instances of mental health diagnoses, these findings may point to barriers for mental health care or cultural variants in how distress is presented and interpreted. Cross-culturally, depression has been documented to vary in its presentation in regard to somatization, expressions of positive affect, relationship with suicidality, and feelings of guilt (Juhasz et al., 2012). Anxiety disorders have also been shown to vary in presentation across diverse cultures (Marques et al., 2011). It is probable that some measures of depression and anxiety are not sensitive to cultural nuances, despite their use in research and clinical contexts.

Differences in affective disorders between Western and Eastern cultures show similar inconsistencies. Studies utilizing inventories of affective symptoms tend to observe higher rates of negative affect among East Asian and Asian American groups compared to European American groups, but structured diagnostic interviews report higher rates of affective disorders in the United States compared to Asian nations (De Vaus et al., 2018). Rather than an issue of measurement, De Vaus and colleagues (2018) suggest a difference in experiences with emotions, such as variability in ways of thinking and responding to emotions and thoughts. Certain patterns of thinking are more associated with Eastern cultures than Western (e.g., emotions co-occur, emotions change, emotions exist in context) and ways of responding to or coping with thoughts and emotions may protect against affective disorder (De Vaus et al., 2018). In sum, observations of differences in psychopathology across cultural groups may be explained by differences in cultural experiences and interpretations of negative affect.

**Moderating Effects of Identity**

Despite historically marginalized students reporting stressors at the same rate as historically advantaged students, and at a greater rate in the case of performance stress, stress does not appear to lead to negative affect at the same rate for the two groups. We observed a moderating effect of marginal status on the relationship between certain stressors (total stress, performance stress, and financial stress) and internalized symptoms (symptoms of anxiety and depression) such that historically advantaged students who endorsed these stressors were more likely to experience internalized symptoms of psychopathology. Various theories may explain these observed findings; we explore outcomes as explained by locus of control and resilience.

**Locus of Control**

In addition to possible drivers from cultural variants in experiences with negative affect, there may be cultural differences in the prevalence of and experiences with certain risk factors for performance stress. Although we did not study locus of control in this study, previous researchers have observed relevant patterns related to this. One study with college students found that a high external locus of control, defined by believing that one’s successes or failures are determined by powerful others or chance, has been shown to predict greater academic stress among college students (Karaman et al., 2019). Its inverse, internal locus of control, is positively related to socioeconomic status, academic performance, and feeling safe at school, which may reduce academic or performance stress (Shifrer, 2018). Llamas et al. (2018) observed that an internal locus of control protected Latino/a college students experiencing interpersonal stress (e.g., intragroup marginalization) from psychological distress. Previous findings have suggested that the way stressors are interpreted by an individual may contribute to mental health outcomes, which may explain the protective factor against psychopathology for historically marginalized students and facilitative factor for historically advantaged students reporting performance stress.

Historic marginal status was also found to moderate the relationship between financial stress and internalized symptoms. Frankham et al. (2020) studied economic locus of control, the degree of control over financial aspects of life, and found that it did not uniquely predict mental health outcomes; however, hope mediated the relationship between subjective financial hardship and depression, and shame mediated the relationship between subjective financial hardship and anxiety. Given these findings, it is plausible that experiences with financial stress (e.g., feeling hopeful, feeling ashamed) protect against or facilitate psychopathology.

**Resilience**

Another possible explanation for the difference in the impact of stress by historic marginalization status may be resilience. Findings from Hu et al. (2015) suggested
that greater levels of resilience are related to better mental health outcomes. This relationship was shown to be stronger for those who had experienced adversity, suggesting that those who had exposure to adversity had opportunities to build resilience. The chronic stress of marginalization may present opportunities to strengthen resilience, weakening the relationship between stress and psychopathology. However, the extent to which racial stress affects mental health has been shown to differ by racial identity and the level to which one identifies with that given racial group (Woo et al., 2019), and is therefore not generalizable to broad historic marginalization.

Resilience, a buffer against the effects of stress on mental health, is central to minority stress research (Marks et al., 2020; Meyer, 2015). A review of research with Black and African American populations propose a “cultural resilience life stress paradigm” which posits that cultural identity plays a role in resilience against mental distress (Archibald, 2018). Further, another study found that strong cultural identification and expression of cultural heritage enhanced resilience among African American and Latinx adolescents (Wilcox et al., 2021). Shih and colleagues (2019) additionally proposed that identifying with two or more racial groups fosters psychological resilience, supporting the notion that racial identity impacts resilience against mental distress. However, additional research parsing out the impact of resilience in mental health outcomes in college student populations specifically is needed.

Concluding Remarks
Implications of these findings are relevant for researchers and college mental health professionals. Findings from the current study highlight some of the implications historic marginalization may have on college students’ experience with certain stressors and mental health outcomes.

Limitations and Recommendations for Future Research
As the primary aim of this paper was to investigate outcomes predicted by experiences with historic marginalization, it is critical to consider the limitations of this study in regard to identity. One limitation to this study was the aggregation of historically marginalized individuals into one category. Research has shown differences in reported psychopathic symptoms between racial groups (Chen et al., 2019); however, sample sizes from the current study were not large enough for independent group analysis. Further, this study required respondents to select only one racial identity, which limited valuable information regarding the nuances of multiracial identities. Holding a biracial identity has been shown to have important implications for stress that future research should consider (Albuja et al., 2019).

Based on our findings, we provide the following recommendations for researchers and college mental health providers. Specific findings highlighting the relationship between stress, mental health outcomes, and marginalized identities can inform prevention programming and mental health screening to increase awareness of these patterns among students and providers.

Recommendations for Researchers
1. Utilize culturally responsive research methodologies. Tailor recruitment strategies to target low response groups to avoid limitations of aggregating responses. If looking at identity markers, consider expanding racial groups and allowing for multiracial selection.
2. To further examine cultural factors related to stress and mental health, consider including a measure of group affiliation or acculturation for each racial identity endorsed. Forcing participants to choose one racial identity without accounting for variations in levels of cultural affiliation overlooks important factors related to culture’s impact on outcome processes.
3. Carefully select measures of holistic mental distress if assessing psychopathology. Consider cultural variants of distress that may not be accounted for in diagnostic criteria but may indicate psychopathology nonetheless.

Recommendations for College Counseling Centers
1. Be mindful of the differences in stress and psychopathology presentations in historically advantaged and marginalized students. Be intentional in measures used to assess global campus wellness, utilizing instruments that demonstrate cultural sensitivity toward the groups who are asked to respond.
2. Be aware of the pressures related to academic performance and achievement that may increase stress among historically marginalized students. Consider surveying students at different times of the year to assess for periods of time when extra support may be appropriate.
3. Prevention programming may consider focusing on the relationship between stress and mental health outcomes while teaching resilience and stress-reduction strategies for all students.

References
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