ACEs, Perceived Academic Control, and GPA in College Students of Diverse Backgrounds

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Introduction

- Adverse Childhood Experiences (ACEs), which are traumatic events that occur before the age of 18, can have chronic, negative effects on one's physical and mental health, and as a result can limit one's educational opportunities (CDC, 2022).

- Perceived academic control, or the extent to which students perceive having influence over academic outcomes, can mitigate barriers to academic success, especially among students who have significant barriers (Hamm et al., 2016).
    - Academic challenges may be greater for students from racially marginalized backgrounds who may be the first in their family to attend college and are historically underrepresented in academia (Williams et al., 2020).
    - First-year college students face a number of challenges transitioning to college such as greater academic demands and stressors (Misra & Mckean, 2000).
    - Respondek et al. (2017) found that academic control positively predicted students' academic achievement, specifically in first-year college students.

The purpose of the study is to explore how ACEs relate to perceived academic control and GPA especially among first-year college students with racially marginalized identities.
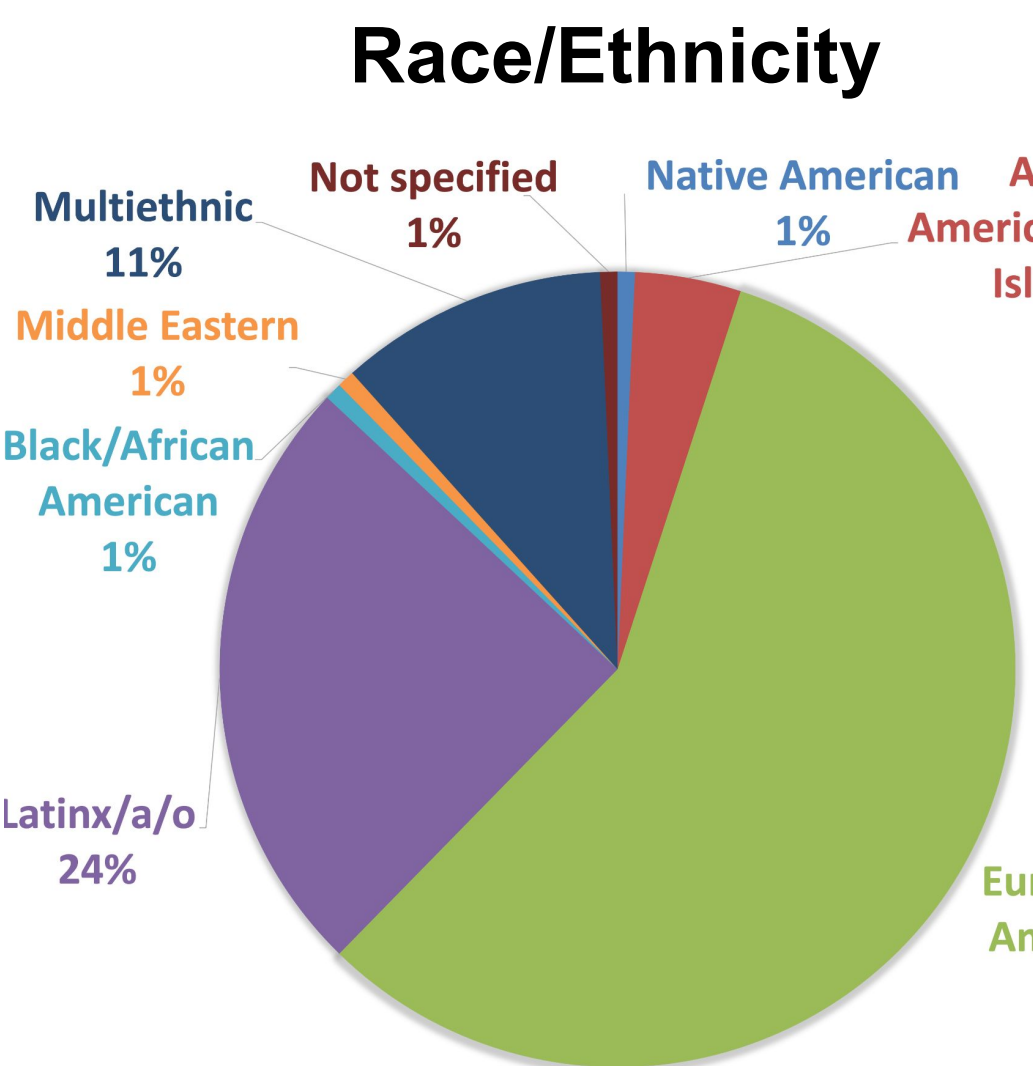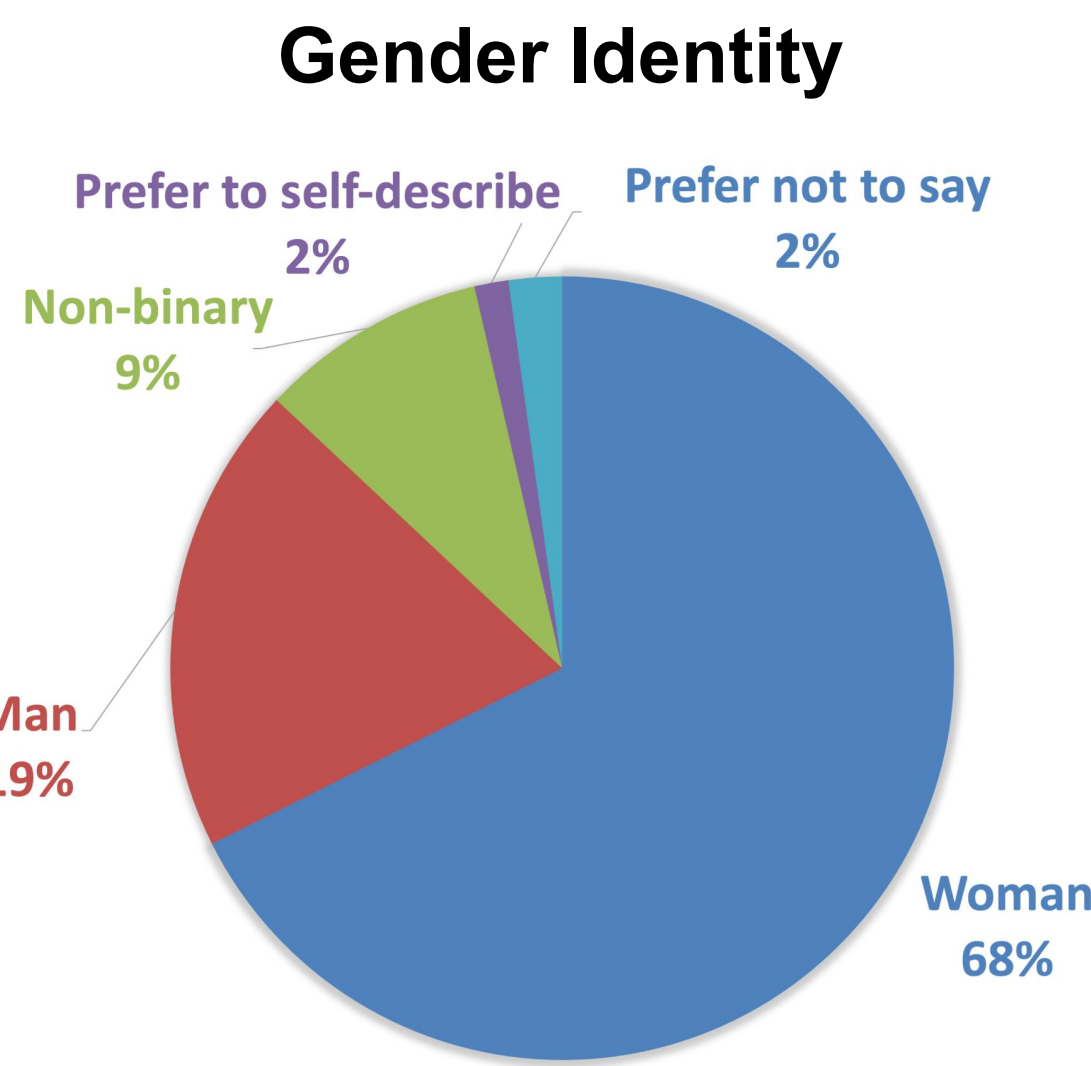
Hypotheses

- H1: Students with higher ACE scores will show lower levels of academic control than students with lower ACE scores.

- H2: Students with racially marginalized identities will report higher levels of ACEs, lower GPAs, and lower academic control than students not from racially marginalized identities.

- H3: First-year students will report lower academic control and GPAs than students who are not first-year students.

Method

Participants & Procedure

- Participants consisted of 144 rural college students enrolled in either a public 4-year university or community college.
    - M_{age} = 24.7 years (SD = 7.83; range 18-59)

Gender Identity

- Prefer to self-describe 2%
- Prefer not to say 2%
- Non-binary 9%
- Man 19%
- Woman 68%

Race/Ethnicity

- Multiethnic 11%
- Not specified 1%
- Native American 1%
- Asian-American/Pacific Islander 4%
- Middle Eastern 1%
- Black/African American 1%
- Latinx/a/o 24%
- European-American 57%

- Class standing = 17.3% first-year, 11.5% sophomore, 18.7% junior, 44.6% senior, and 7.9% graduate student.

- Data were previously collected from a cross-sectional online survey via Qualtrics in which participants were compensated with extra credit in one of their courses.

Measures

- *Expanded ACEs Questionnaire*: 31 items measuring early experiences of victimization and helplessness (Karatekin & Hill, 2019; α = 0.83).

- *Perceived Academic Control Scale:* 8 Likert-scale items that assess causal attributions for academic performance (Perry et al., 2001; α = 0.83).

- *Grade Point Average (GPA)* was self-reported and measured on a 4.0 scale.

Results

- H1: We ran a correlational test that revealed no relationship between students' ACE scores and academic control (see Table 1).

- H2: We ran an independent sample *t*-test and found that racially marginalized and non-marginalized students had similar ACE scores, $t(135)$ = -0.80, p = 0.43. However, marginalized students had lower academic control scores, $t(135)$ = 2.16, p = 0.03 (see Figure 1), and lower GPAs, $t(130)$ = 2.23, p = 0.03, than non-marginalized students (see Figure 2).

- H3: We ran an independent sample *t*-test but no differences between first-year students and non-first year students in GPA were found $t(121)$ = 0.24, p = 0.81. First-year students had marginally lower levels of academic control than non-first year students, $t(126)$ = 1.77, p = 0.08.

Table 1

Descriptive Statistics and Bivariate Correlations for Study Variables (N = 144)

Variables	1	2	3	4	5	M(SD)
1. GPA	--					3.32 (0.52)
2. Academic Control	0.25 **	--				5.5 (0.96)
3. ACEs	0.17*	-0.06	--			11.13 (5.47)
4. First-year status	-0.02	-0.16	-0.05	--		--
5. Racially marginalized status	-0.19*	-0.18*	0.07	-0.07	--	--

Note: First-year status: 0 = not first-year, 1 = first-year. Racially marginalized status: 0 = not from a marginalized group, 1 = from a marginalized group. *p < .05; **p < .01; ***p < .001

Figure 1

Race/Ethnic Differences in Perceived Academic Control

- Racially Marginalized students: 5.35 (0.98)
- Non Racially-Marginalized students: 5.70 (0.93)

(y-axis: Perceived Academic Control; x-axis: Racially Marginalized status)

Figure 2

Race/Ethnic Differences in GPAs

- Racially Marginalized students: 3.19 (0.50)
- Non Racially-Marginalized students: 3.39 (0.52)

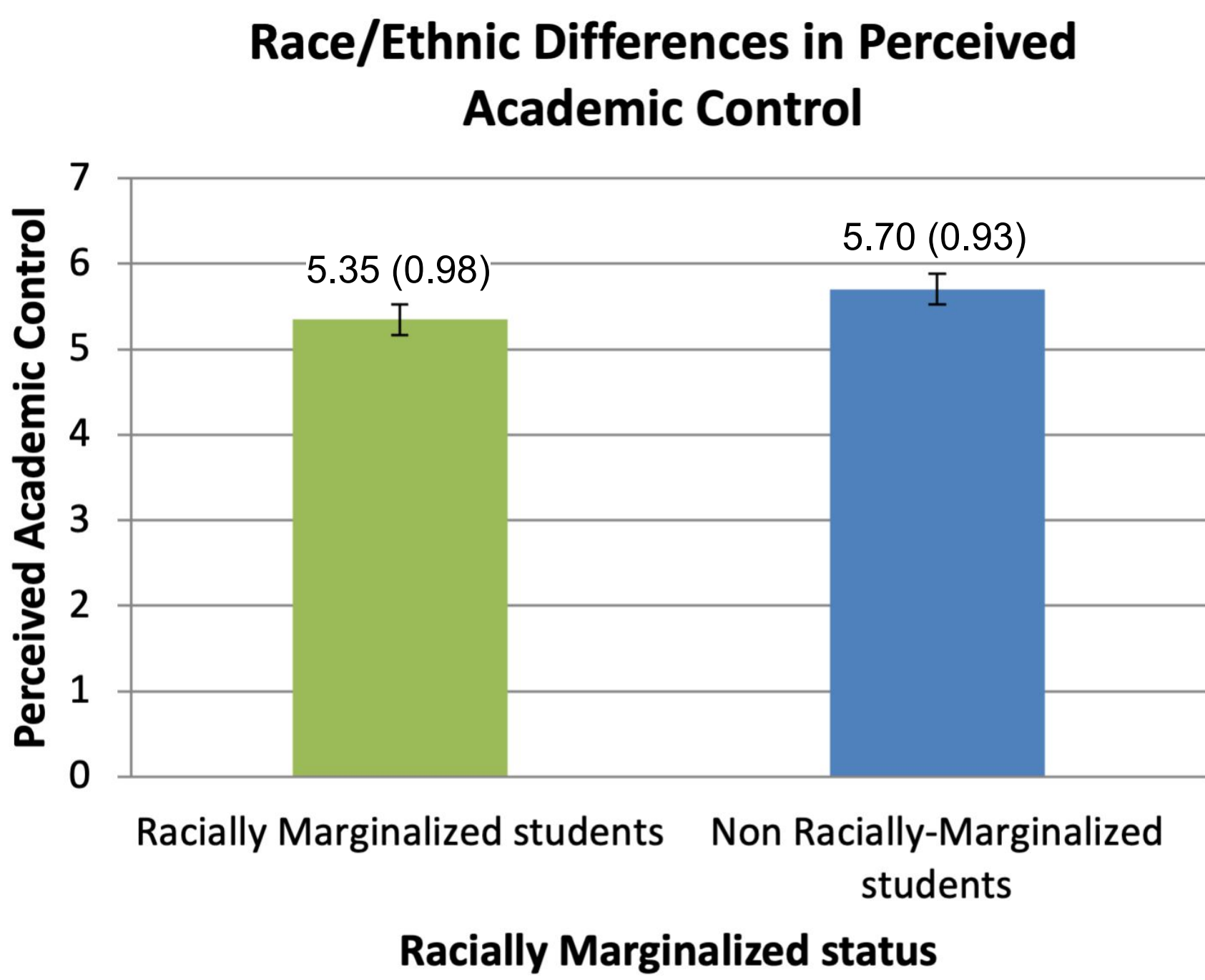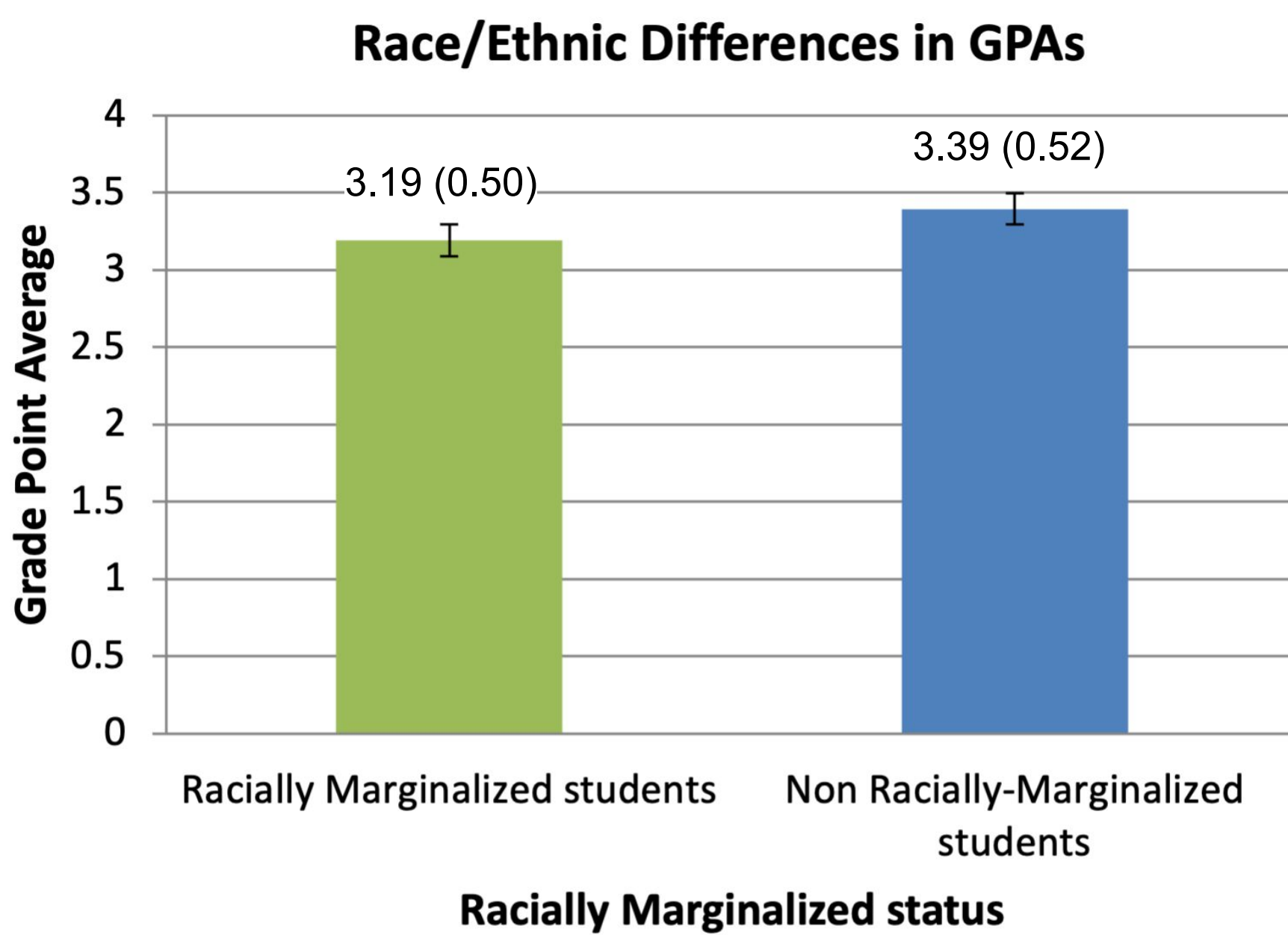(y-axis: Grade Point Average; x-axis: Racially Marginalized status)

Discussion

- The results indicate partial support for our hypotheses.
    - Racially marginalized students reported lower perceived academic control and lower grades than non-marginalized students.
    - First-year students had lower levels of academic control than non-first year students, although this finding did not reach statistical significance.
    - We did not receive support for our hypotheses about racial/ethnic differences in ACE scores or the relationship between ACE scores and academic control.
    - Furthermore, there were no significant differences in GPA based on students' class standing.

- Consistent with previous research, we found a significant positive correlation between students' academic control and their GPA.

- Contrary to previous research, we found a significant positive relationship between students' ACE scores and their GPA.

Limitations

- Small and non-representative sample collected through an online survey.
    - The majority of our sample were upperclassman who had more time to develop a sense of perceived academic control.

- Data were collected during the COVID-19 pandemic and findings may not generalize in times of less stress and uncertainty.
    - The pandemic may have influenced the number and severity of academic and other challenges for students, potentially influencing their academic control and/or academic performance.
    - Unfortunately, we did not measure students' anxiety, depression, perceived stress, or substance use which may have influenced their academic control and/or academic performance.

- Participants reported a mixture of teaching modalities (18.0% fully online, 8.6% fully in-person, and 73.4% online and in-person) which may have impacted perceived academic control.

Future Directions

- Replication of this study with larger, more representative and racially diverse samples at different types of colleges.

- Future research can explore if relationships are different for individuals who identify with marginalized identities in classes where they are more represented.

- Future studies can make a greater effort to focus on freshpersons and transfer students with disabilities as transitions may be especially challenging for these students.

Implications

- There are effective interventions that increase college students' academic control [e.g., Attributional Retraining (AR); Perry et al., 2001].
    - The results of the current study suggest targeting college interventions toward populations that may have lower levels of perceived academic control, including racially marginalized students and possibly first-year students.

- Additional research is needed to determine how ACEs relate to college students' perceived academic control.