



# The Relation Among College Generation Status, STEM, and Adverse Health Conditions in a Sample of University Freshmen



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## Literature

- Previous studies have suggested a link between stress and adverse health conditions, such as hypertension, ulcers, asthma, and heart disease (Peltzer, et al., 2008)
- Research has found that first-generation college students experience higher rates of stress in comparison to continuing generation students (Stebleton et al., 2014)
- Studies also suggest that majoring in a STEM field might be more stressful due to several factors (e.g., workload, expectations, competitive nature; Rozek et al., 2019; Malcom, 2016)
- More research is needed to examine the role that college generation status and majoring in STEM might have on students' health

## Measures

- Data was collected during the Spring semester via an online pre-screening that was used for a study interested in health during the transition to college
- First-generation college students* were defined as having both parents with some college education or less (i.e., did not obtain any sort of degree)
- STEM majors* were defined as students who majored in the physical sciences, math or engineering
- Participants were asked 10 questions concerning their health (e.g., cardiovascular problems, allergies or breathing problems, high cholesterol; see attachment)
- Two health questions were excluded as they did not pertain to all participants

## Discussion

- Our hypotheses were not supported
- Contrary to our first hypothesis, our study found that continuing-generation college students had higher levels of adverse health conditions compared to first-generation college students
- One explanation for this is the possibility that having parents who went to college could give rise to higher expectations for the student, resulting in higher levels of stress and therefore higher levels of adverse health conditions
- Contrary to our other hypotheses, majoring in STEM had no effect on health and played no role in differences between first- and continuing-generation college students. It is possible that it was too early in our participants' academic careers to detect the impact that majoring in a STEM field could have on one's health

## Research Questions & Hypotheses

- Do first-generation college students experience higher rates of adverse health conditions compared to continuing generation college students?
- Do STEM majors experience higher rates of adverse health conditions compared to non-STEM majors?
- Does being a STEM major exacerbate the relation between college generation status and health conditions?

We predicted that first-generation college students and STEM majors would have significantly more adverse health conditions. Furthermore, we predicted a significant interaction whereby being a STEM major would exacerbate or intensify the difference between first- and continuing-generation college students.

## Participants

- 325 freshmen CSUN students (66.2% female)
- Latinx (61.2%), Asian (9.8%), Black or African American (7.4%), European American (8.6%), Persian or other Middle Eastern (2.8%), Mixed (9.8%)
- Age,  $M = 18.42$  years ( $SD = .54$ )
- First-gen ( $n = 221$ ) and continuing-gen ( $n = 101$ ) college students
- STEM ( $n = 65$ ) and non-STEM ( $n = 257$ ) majors

## Results

- A 2-way analysis of variance (ANOVA) was conducted
  - Independent variables:** college-generation status (first-generation, continuing-generation) and STEM major (STEM, non-STEM)
  - Dependent variable:** Adverse health conditions
- A significant main effect in the opposite direction was found for college generation status,  $F(1, 318) = 5.13, p = .024$  (See Table below)
- No significant main effect was found for STEM major ( $p > .05$ )
- No significant interaction was found ( $p > .05$ )

	STEM	Non-STEM	Main Effect
<b>First-gen</b>	$M = .27$ ( $SD = .50$ )	$M = .29$ ( $SD = .64$ )	<b>=.29</b>
<b>Continuing-gen</b>	$M = .43$ ( $SD = .60$ )	$M = .60$ ( $SD = .90$ )	<b>=.56</b>
<b>No Main Effect</b>	<b>= .32</b>	<b>= .39</b>	

## Implications

- Our findings illuminate that continuing-generation college freshmen exhibit more adverse health conditions than first-generation college freshmen
- This is important because not enough research has focused on continuing-generation college students and the types of experiences that may impact their health

## Limitations & Future Directions

- Although continuing-generation freshmen experienced more adverse health conditions than first-generation freshmen, we do not know when these conditions emerged, and if they are indeed related to their experiences in college
- Future research should conduct in-depth interviews with continuing-generation college students to understand their experiences
- An in-depth analysis between parental education levels and health among continuing-generation college students should also be conducted