The Impact of COVID on Academic Stress and Achievement Goal Orientations in College Students

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Introduction

- Students have reported increases in stress (Charles et al., 2021), burnout (Salmela-Aro et al., 2021), difficulty adjusting to online learning formats (Yip, 2020), and negative academic perceptions resulting from COVID, in turn affecting academic persistence (Clabaugh et al., 2021).
- Achievement goal theory outlines different goal orientations available to students in achievement settings (Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001; Pintrich, 2003).
  - *Mastery approach*: to learn and understand content
  - *Mastery avoidance*: to avoid misunderstandings and failing course material
  - *Performance approach*: to show competency and outperform others
  - *Performance avoidance*: to depict competence and avoid performing badly in front of others
- Goal orientations are related to stress perceptions and may be a cause of stress (Vandewalle et al., 2019).

Hypotheses

- We hypothesize that COVID stress would mediate the relationship between achievement goal orientations and perceived academic stress.

Method

Participants & Procedure

- Undergraduates completed a Qualtrics survey ($N = 285$; Mage = 22.94, $SD = 5.90$)
- 75% female; 9% male; 5% gender nonbinary/nonconforming.
- 51% White/European-American; 26% Hispanic/Latinx; 11% Multiracial/Multiethnic; 5% Black/African- American; 3% Asian/Asian-American; 2% Native American/Indigenous; 0.8% Native Hawaiian/Pacific Islander.

Measures

- **Perceived Academic Stress Scale** (Bedewy & Gabriel, 2015): 18 items assess students' perceived academic stress; rated 1 (*strongly disagree*) to 5 (*strongly agree*). ($\alpha = .64$)
- **COVID-Related Stress Scale** (Taylor et al., 2020): 12 items assess individuals' fears and anxieties related to the COVID pandemic; rated 0 (*not at all worried*) to 5 (*extremely worried*). ($\alpha = .95$)
- **Achievement Goal Questionnaire** (Elliot & McGregor, 2001): 15 items assess the four types of goal orientations; rated 1 (*strongly disagree*) to 5 (*strongly agree*), ($\alpha = .83$)

Results

Bivariate correlations

All study variables were positively correlated with each other with the exception of academic stress with mastery approach and academic stress with performance approach (*see Table 1*).

Table 1

Descriptive Statistics and Bivariate Correlations for Study Variables ($N = 283-285$).

| Variables	1	2	3	4	5	$M(SD)$
1. Academic Stress	--					3.20 (0.43)
2. COVID Stress	.29**	--				2.74 (0.96)
3. Mastery App	.02	.15*	--			5.35 (1.30)
4. Mastery Avoid	.34**	.28**	.18*	--		5.11 (1.54)
5. Performance App	.22**	.16**	.30**	.07	--	4.24 (1.79)
6. Performance Avoid	.36**	.13*	.25**	.22**	.67**	4.57 (1.53)

Note: *p < .05; **p < .001

Mediation analysis

- There was no direct effect between mastery approach and perceived academic stress; therefore, a mediation model was not tested.
- COVID stress fully mediated the relationship between mastery avoidance and perceived academic stress (*see Figure 1*).
- The relationship between performance avoidance and perceived academic stress was partially mediated by COVID stress (*see Figure 2*).
- The relationship between performance approach and perceived academic stress was partially mediated by COVID stress (*see Figure 3*).
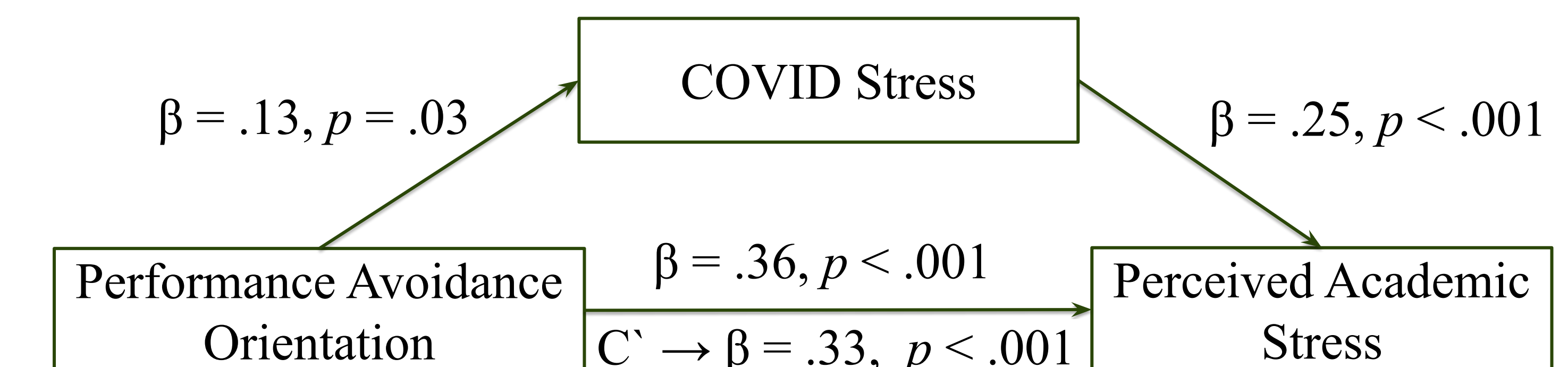
Figure 1

Mediation Effect of COVID Stress on Mastery Avoidance and Perceived Academic Stress ($N = 281$).
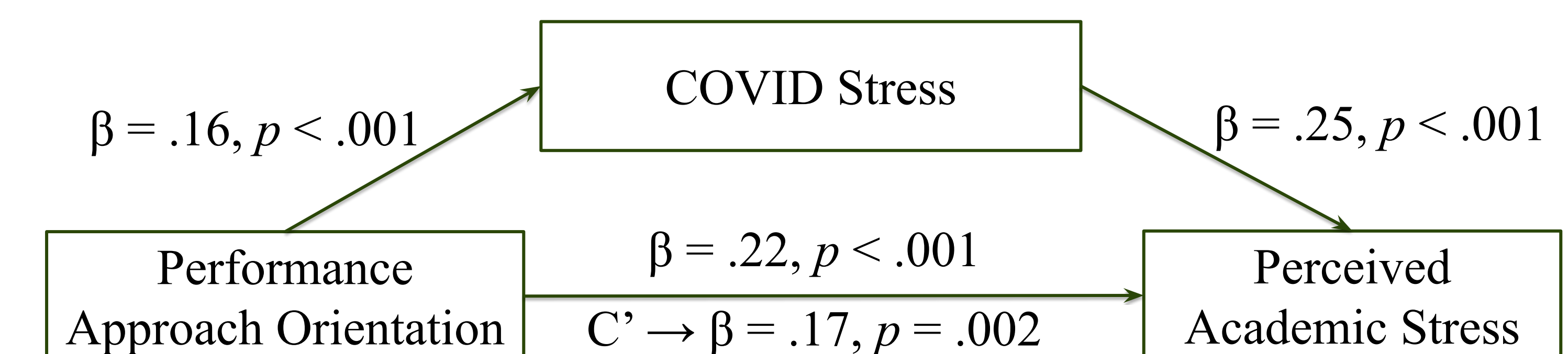

β = .27 p < .001; β = .22, p < .001; β = .34, p < .001; C' → β = .28, p = .71
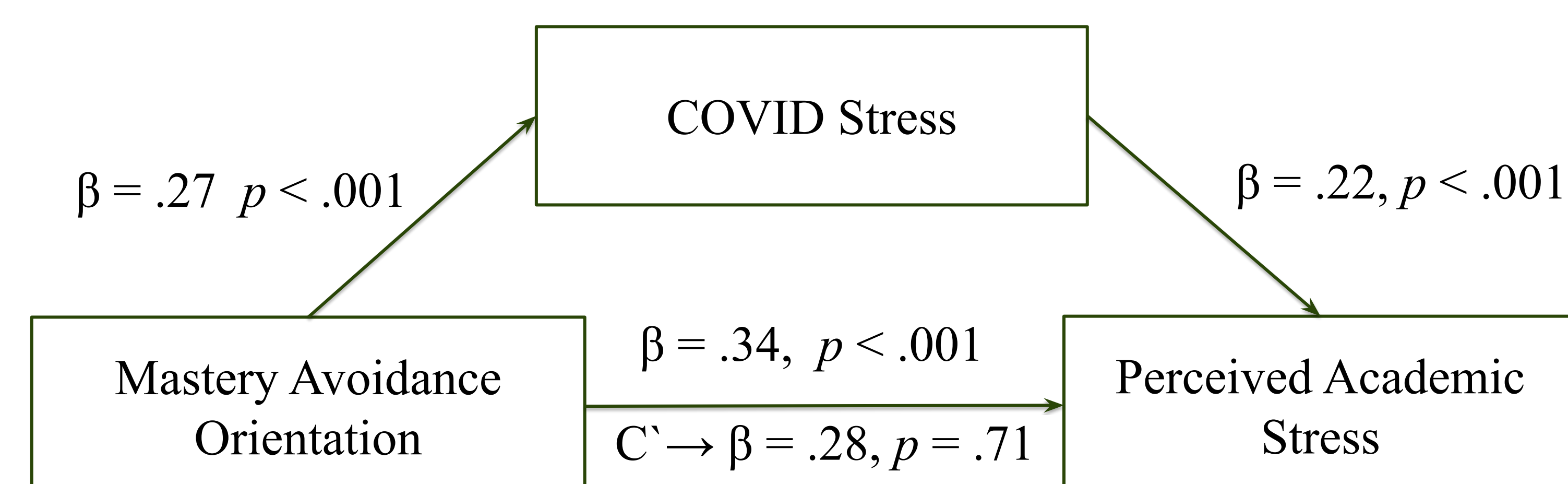
Figure 2

Mediation Effect of COVID Stress on Performance Avoidance and Perceived Academic Stress ($N = 282$).

β = .13, p = .03; β = .25, p < .001; β = .36, p < .001; C' → β = .33, p < .001

Figure 3

Mediation Effect of COVID Stress on Performance Approach and Perceived Academic Stress ($N = 282$).

β = .16, p < .001; β = .25, p < .001; β = .22, p < .001; C' → β = .17, p = .002

Discussion

- The hypotheses were generally supported.
  - Students who used a mastery avoidance approach tended to have increased academic stress as a result of COVID stress.
  - Students who used a performance avoidance or performance approach tended to show an increase in academic stress, which can partially be explained by COVID stress.
- The pandemic created a lot of uncertainty and stress in many aspects of students' lives, which may have exacerbated existing stressors.
  - Uncertainty may influence goal orientations.
  - Students may be less able to focus on mastery of course content due to adjusting to new online learning environments.
- As a result of the switch to online education, students' interactions and perceptions of peers may have changed, affecting their performance approach and avoidance goals.
  - Feeling more distanced, students may have had decreased opportunities to make peer comparisons.

Limitations & Future directions

- The sample was non-representative, limiting generalizability.
- Future studies should use longitudinal designs to investigate bidirectional effects of COVID stress and student engagement.
- Future studies can investigate relationships as COVID mandates are eased and students return to face-to-face learning.