Patterns and Outcomes of Electronic Mentoring Among Engineering Graduate Students During the COVID-19 Pandemic

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WHERE DISCOVERIES BEGIN

Acknowledgment -
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A National Survey of Engineering Graduate Students (*n*=566) during the COVID-19 Pandemic

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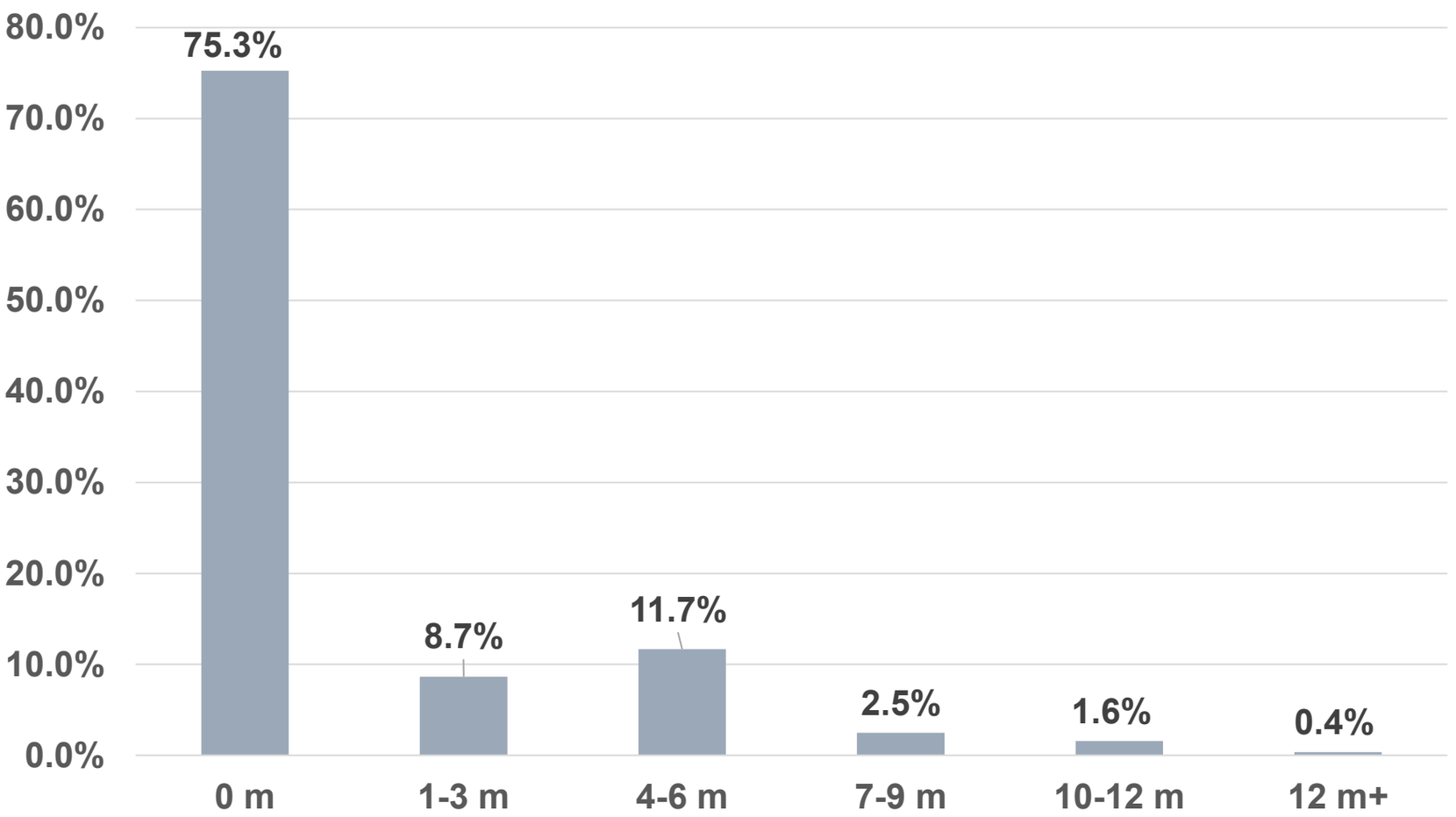
- Part of **National Study of STEM Faculty and Students during the COVID-19 Pandemic** (3,269 students; 1,052 faculty)
- 12-15 min online surveys (Qualtrics)
- Survey invitations sent to deans/associate deans in 214 engineering colleges
- June 3-22, 2020 (retrospect of experience in Spring 2020)

Background Characteristics of Survey Sample

- 566 engineering grad students (44 institutions in 16 states)
  - Female (40.3 %)
  - Black/Hispanic/Native American (13.8%)
  - Household experienced a loss of income (33.2%)
  - Disability (6 types; 12.0%)
  - International (36.4%)
  - PhD (38.7%)

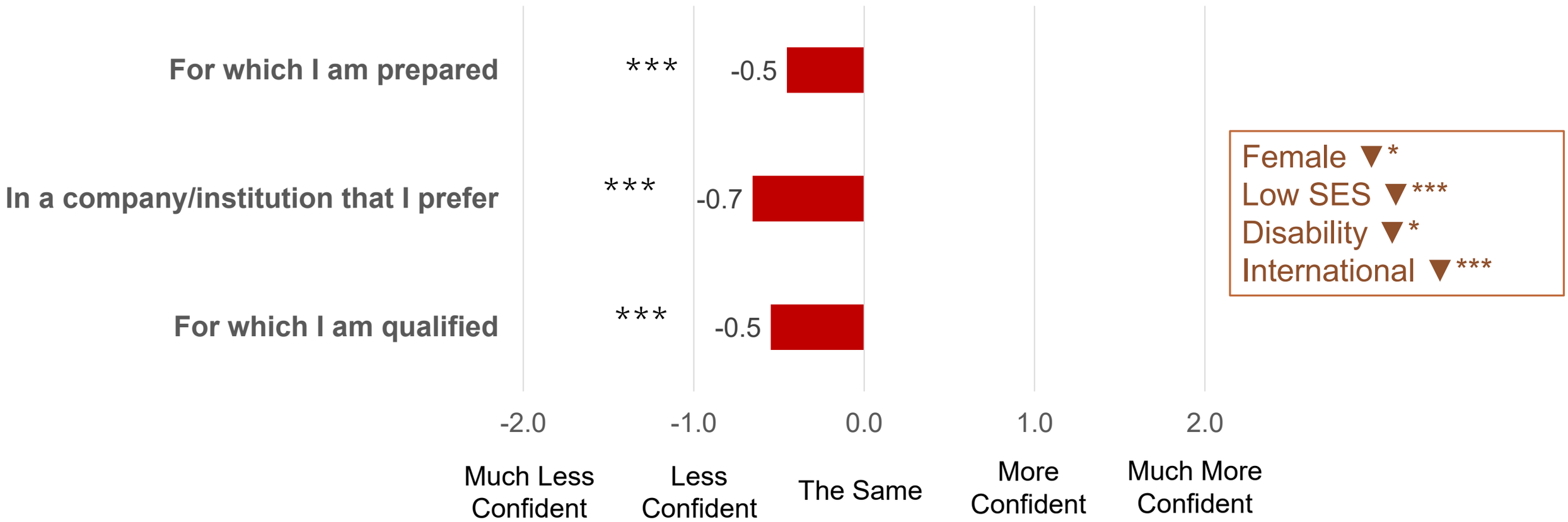
Delayed Graduation due to the COVID-19 Pandemic



Low SES ▲**
PhD ▲***

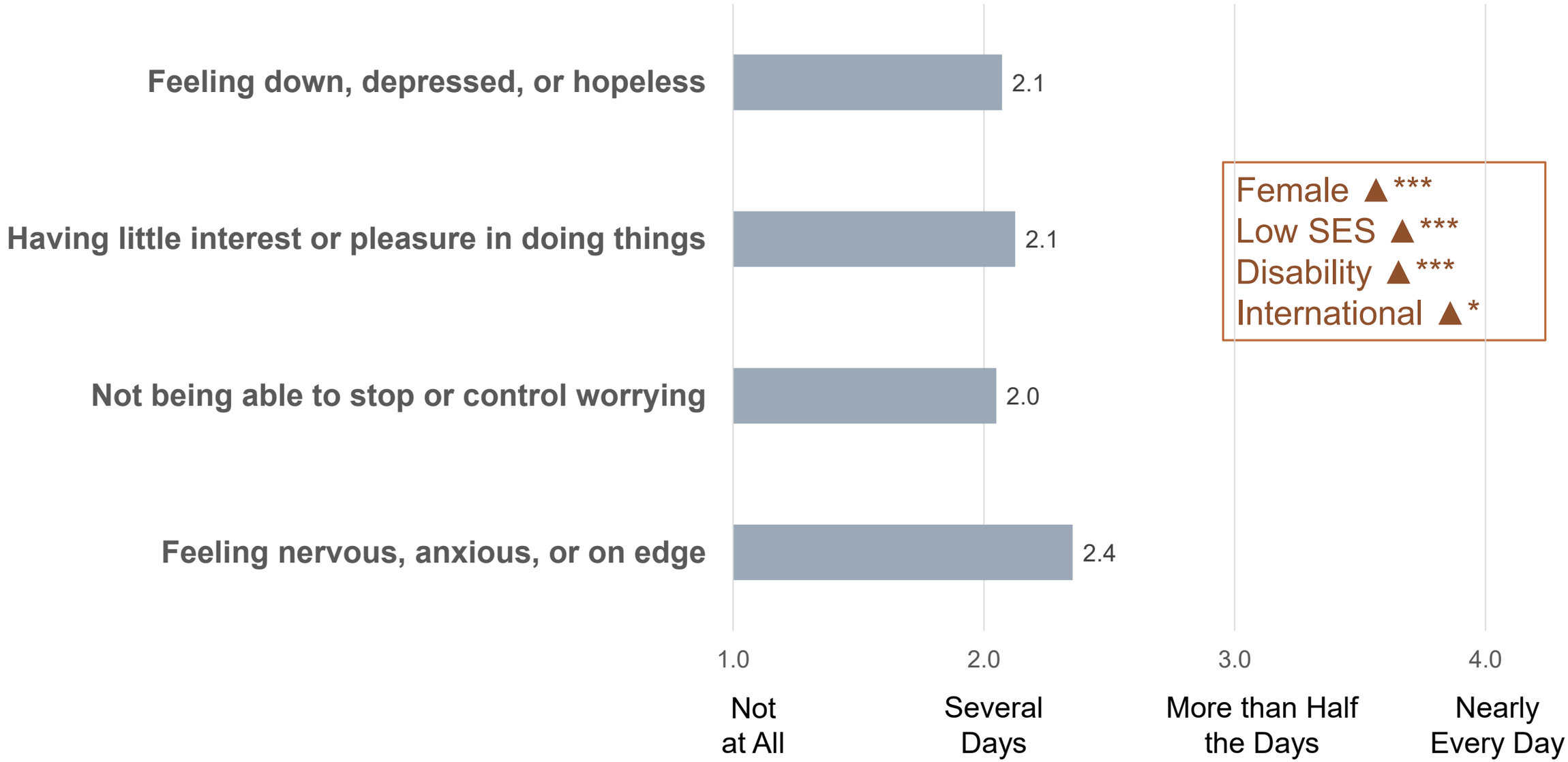
Job Search Self-Efficacy

Since the COVID-19 outbreak occurred, how confident have you become in finding…



Mental Health Problems: Depression & Anxiety

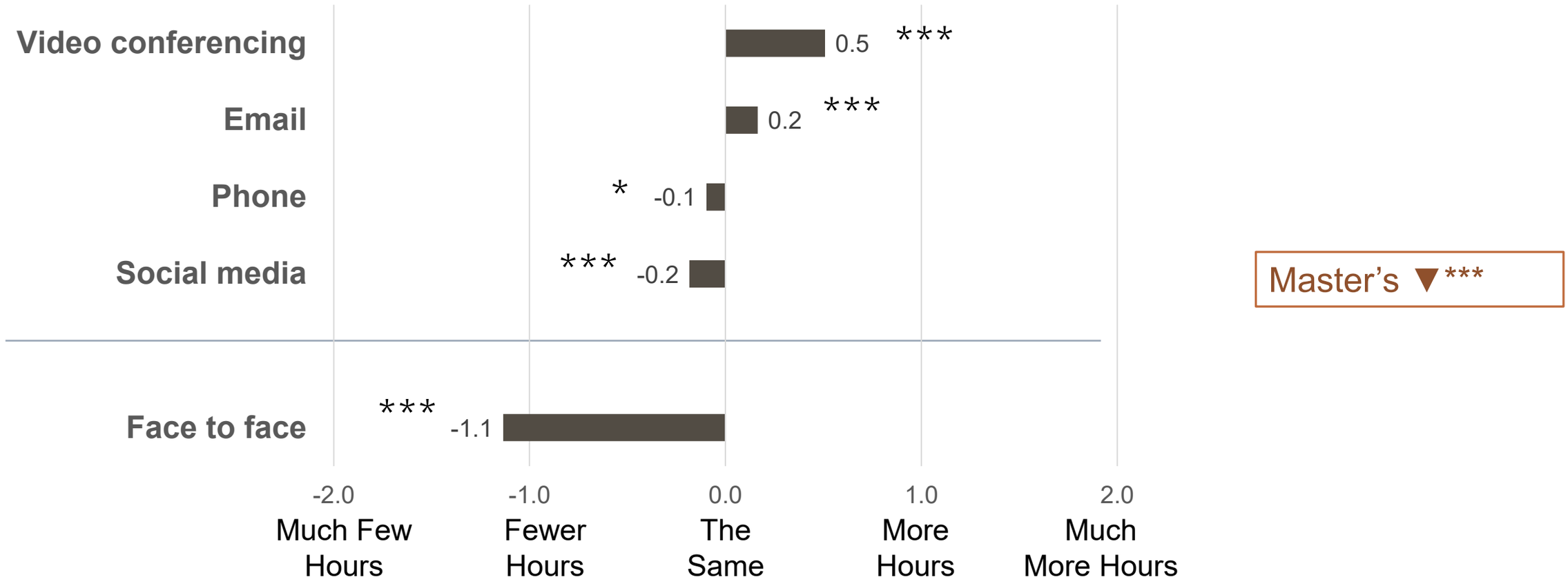
Over the last 7 days, how often have you been bothered by the following problems?



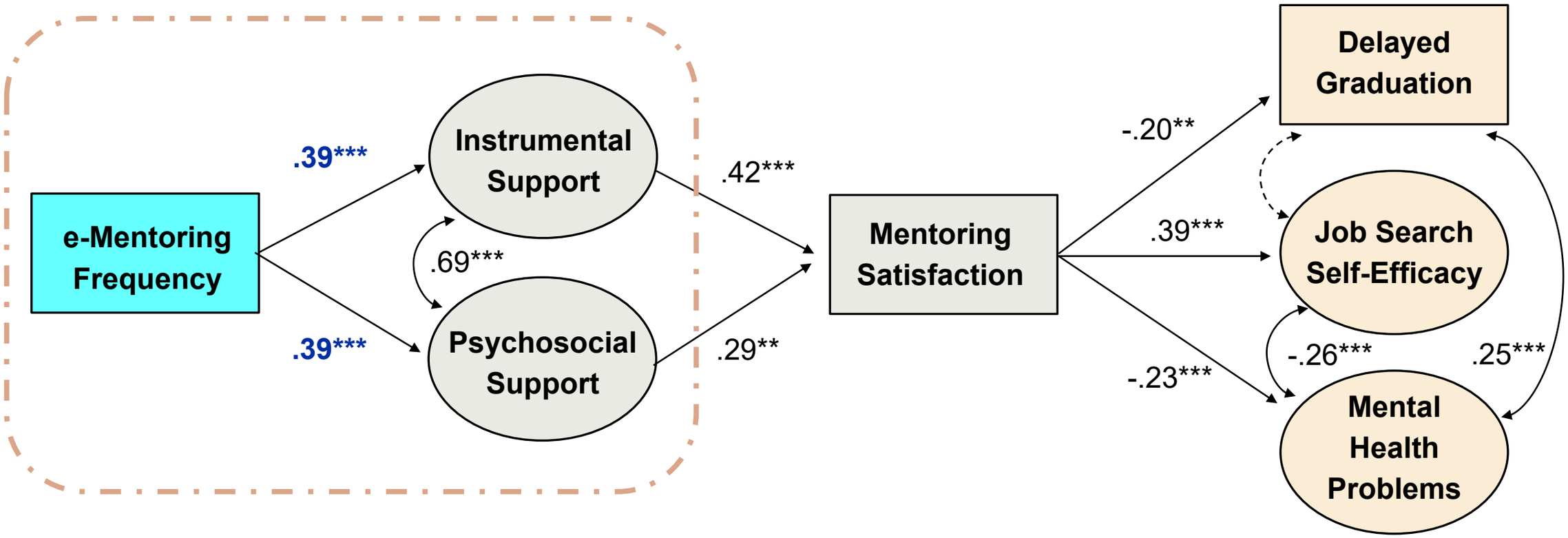
Can e-Mentoring Address these Challenges?

e-Mentoring Frequency during the Pandemic

among 566 Engineering Graduate Students

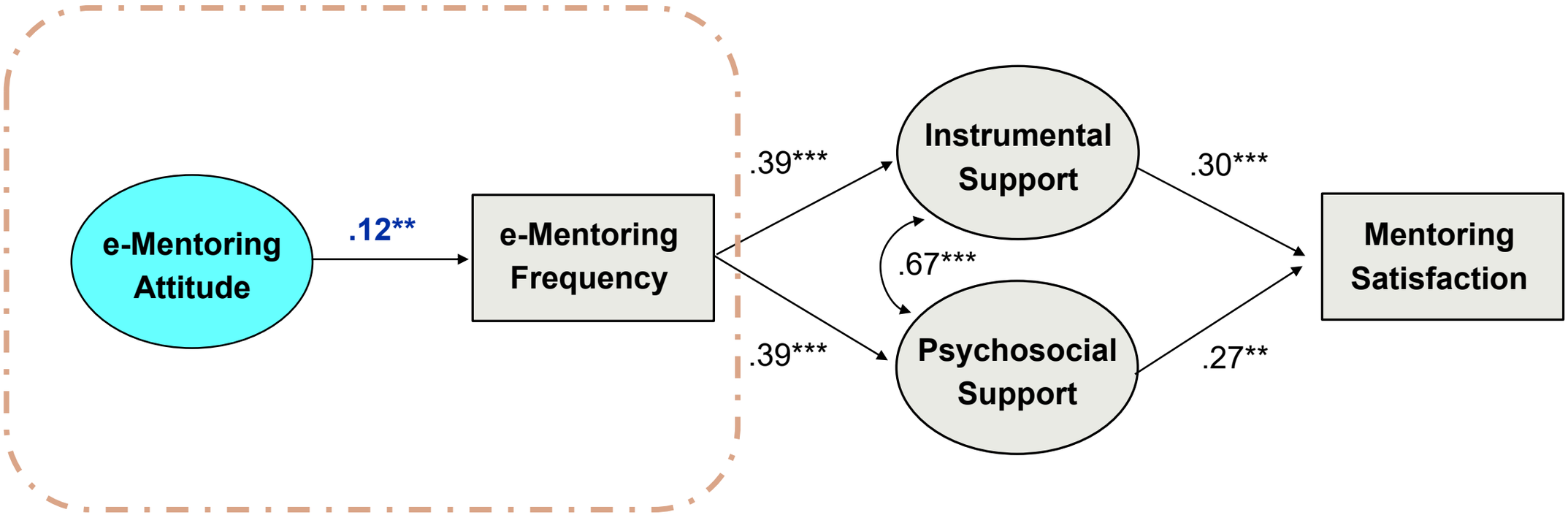


How e-Mentoring Supports Student Outcomes during the Pandemic?



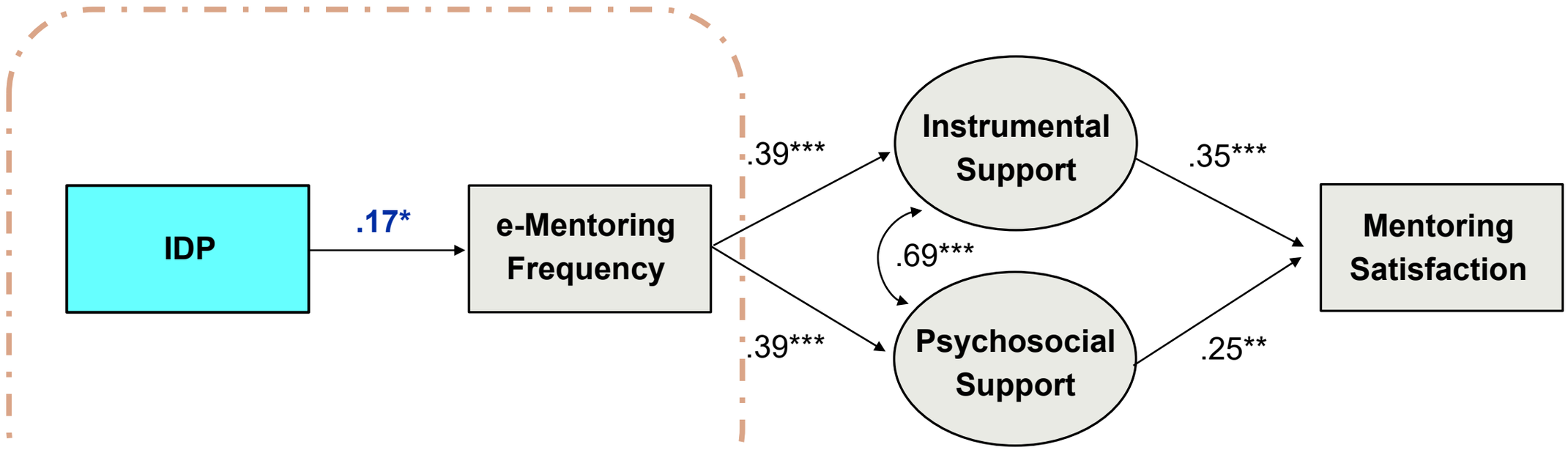
Note. Structural Equation Modeling (SEM) was employed. Good model fit (RMSEA=.03; CFI=.95; SRMR=.07). Demographics were controlled. Values are standardized path coefficients. Dashed paths are not statistically significant. *p<.05, **p<.01, ***p<.001.

How does e-Mentoring Attitude relate to Mentoring Process and Satisfaction during the Pandemic?



Note. Structural Equation Modeling (SEM) was employed. Good model fit (RMSEA=.05; CFI=.93; SRMR=.05). Demographics were controlled. Values are standardized path coefficients. Dashed paths are not statistically significant. *p<.05, **p<.01, ***p<.001.

How the Individual Development Plan (IDP) Enhances the Mentoring Process during the Pandemic?



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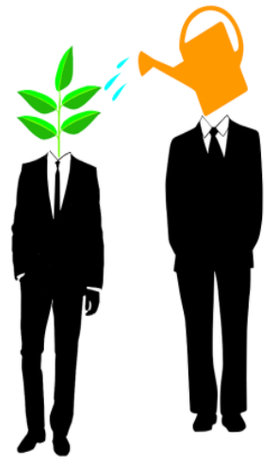
Mentoring while social distancing is challenging…

- Students and faculty generally think **face-to-face is MORE effective than e-communication**
- 25%-50% believe could be **equally effective** in certain mentoring support



Brief Report: https://nreeducation.wordpress.com/2020/10/05/electronic-mentoring-during-the-covid-19-pandemic-a-national-survey-of-stem-faculty-and-students/

Thank You!

We look forward to working together
in supporting our students and faculty

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