



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

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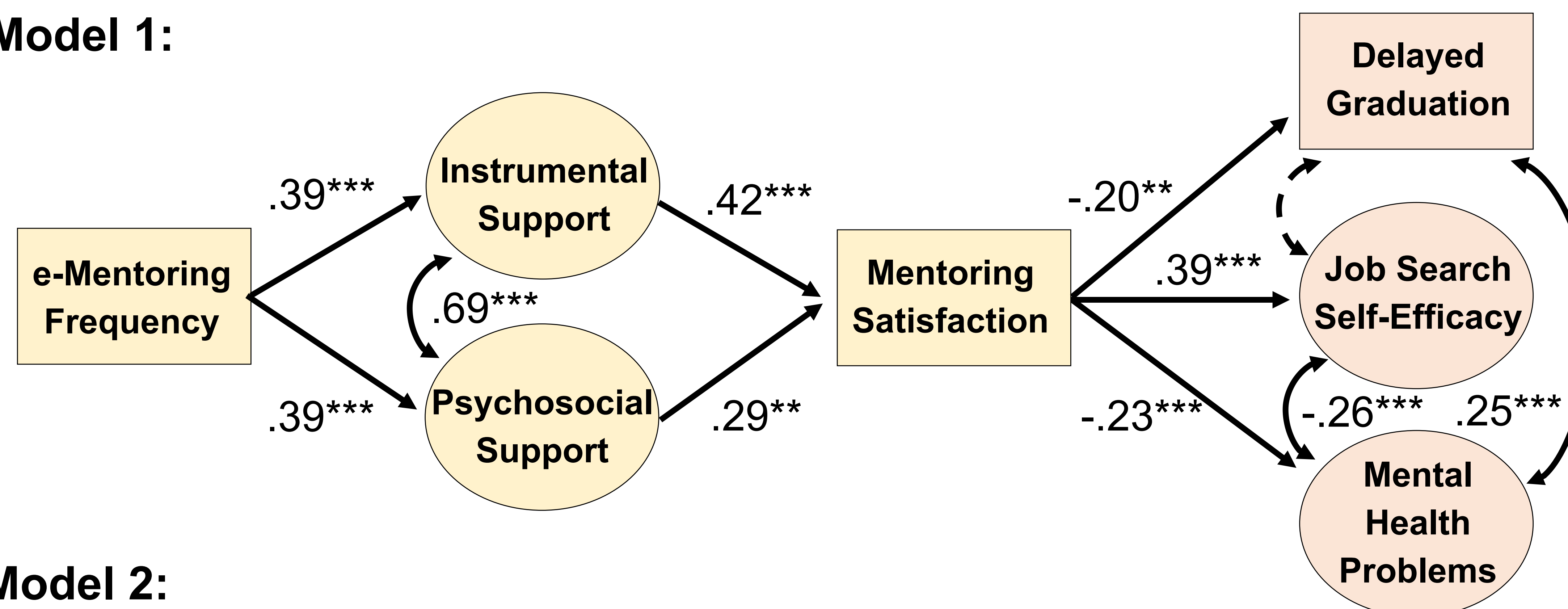


Methods

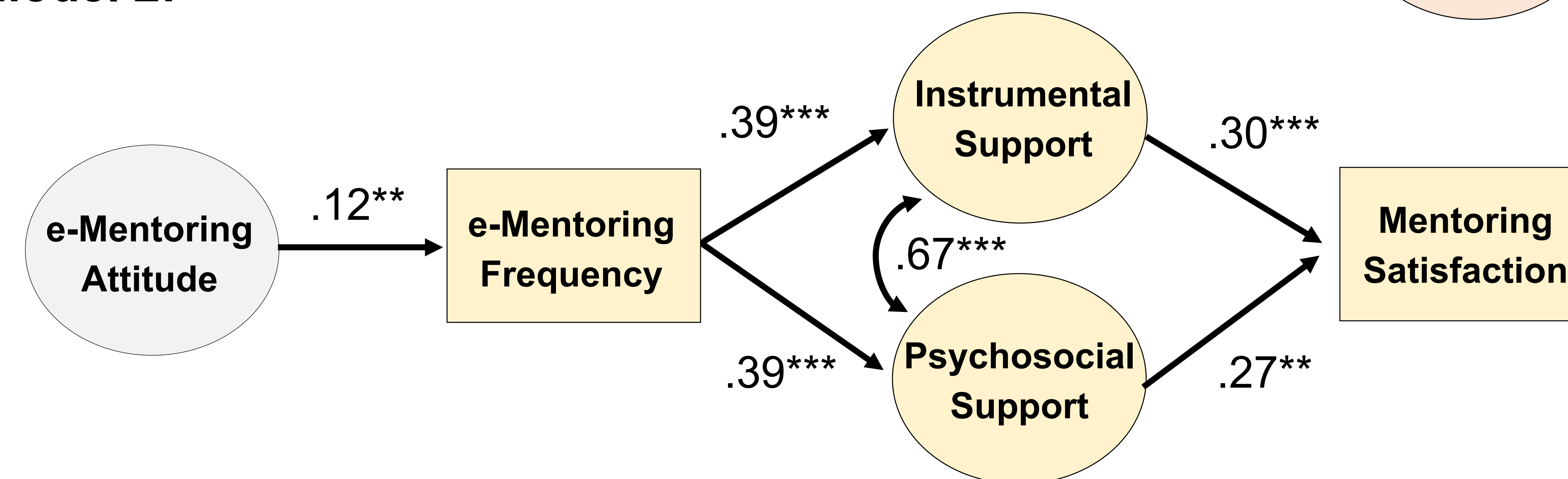
- ❑ **Online Surveys:** June 3-22, 2020 (retrospect of experience in Spring 2020)
- ❑ **Participants:** 566 engineering graduate students
 - 44 institutions in 16 states
 - Female (40.3%)
 - Black/Hispanic/Native American (13.8%)
 - Household experienced a loss of income (33.2%)
 - Disability (6 types; 12.0%)
 - International (36.4%)
 - PhD (38.7%), Master's (61.3%)
- ❑ **e-Mentoring Measures:** Video-conferencing, email, phone, social media
- ❑ **Analytic Strategy:** Structural Equation Modeling (SEM)

Results

Model 1:



Model 2:



Note: Both SEM models show good model fit. Demographics were controlled in two models. Values are standardized path coefficients. Dashed paths are not statistically significant. * $p < .05$, ** $p < .01$, *** $p < .001$.

Findings

- ❑ **Pandemic:** Negatively affected academic, career, and mental health outcomes of engineering grad students, especially among underrepresented minorities
- ❑ **e-Mentoring Frequency:**
 - More hours on video conferencing and emailing
 - Positively predict mentoring support, satisfaction, and student outcomes
- ❑ **e-Mentoring Attitude:** Positively predict e-Mentoring frequency
- ❑ **Concern:** Low SES students reported lower levels of e-mentoring attitude and satisfaction