

# Effects of gender bias and stereotype threat within the third-year surgical clerkship

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## INTRODUCTION

### • Research Question

- Do perceptions of gender bias and measures of susceptibility to stereotype threat correlate with medical student sense of belonging and sense of well-being within the third-year surgical clerkship?

### • Hypothesis

- Female third year medical students who are susceptible to stereotype threat and perceive the presence of gender bias within the clerkship training environment will express a decreased sense of belonging and a diminished sense of well-being within the surgical clerkship.

### • Background

- Gender bias is pervasive throughout surgical training<sup>1</sup>, beginning in medical school and extending through residency and into surgical practice.<sup>2,3</sup>
- Perceptions of gender bias within surgical fields existed in first year medical students prior to direct surgical experiences potentially impacting recruitment of women to surgical fields.<sup>4</sup>
- Stereotype threat has been described as one mechanism by which perceptions of gender bias may impact women during surgical training.<sup>3</sup>
- The effects of perceived gender bias or stereotype threat on the experiences of medical students on clinical clerkships have not been thoroughly explored.

## METHODS

- Currently in progress, a survey-based investigation into perceptions of gender bias and susceptibility to stereotype threat among medical students rotating on a clinical clerkship in general surgery at a single academic medical center, Virginia Tech Carilion School of Medicine in Roanoke, Virginia.
- Enrolled participants will complete two identical surveys administered first during the orientation period to the surgical clerkship and again at the conclusion of the surgical clerkship.
- The survey to be employed will be a 36-question instrument to assess domains including perceptions of gender bias, susceptibility to stereotype threat, sense of belonging, and sense of well-being.
  - Eight items to assess perceptions of gender bias will be adapted from the equity and fairness subscale of the Employee Environment Diagnostic Survey (EEDS).
  - Nine items to assess susceptibility to stereotype threat will be adapted from the gender identity and gender stigma consciousness subscales of the Social Identity and Attitudes Scale (SIAS).
  - Seven items to assess sense of belonging will be adapted from the Sense of Belonging Index psychological experience subscale (SOBI-P).
  - Collectively, subscale items from the EEDS, SIAS, and SOBI-P have previously been employed for characterization of intended domains in surgical trainees.<sup>5</sup>
  - Seven items to assess well-being will be adapted from the Medical Student Well-Being Index (MSWBI)
  - Five additional items will be included to assess participant demographics of age, race, gender identity, sexual orientation, and marital status.

## RESULTS

- Adapted survey items will be scored on a 1-5 Likert scale and summarized to yield a subscale score for each of the domains assessed. In the case of items adapted from the MSWBI, items will be scored on a yes/no basis. Internal consistency of subscale areas will be determined by Cronbach  $\alpha$ .
- Mann-Whitney U Testing will be used to assess differences in subscale scores based on gender. Wilcoxon matched pairs signed rank testing will be used to compare pre and post clerkship surveys. Additional post hoc analysis will be performed to determine the effect of susceptibility to stereotype threat on the relationship between perceptions of gender bias and subscale scores.

## CONCLUSION

- We expect to determine if gender bias and measures of susceptibility to stereotype threat correlate with medical student sense of belonging and sense of well-being within the third-year surgical clerkship.
- Future directions may include interventions to improve perceptions of gender bias should an association be established.

## REFERENCES

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