



My Thoughts / My Surgical Practice

Female students evaluated more harshly by female trainees



The field of surgery has been criticized for discouraging female students from joining its ranks.¹ Evidence suggests that discrimination perceived by medical students influences specialty and residency program choice, and female medical students are subject to implicit and overt biases that may push them to choose specialties other than surgery.² The effects of this perceived discrimination is further compounded by the fact that subjective measures are routinely used to evaluate medical students' clinical performance on their clerkships. Disconcertingly, there is a perception among medical students that some faculty members award differential ratings based on gender.³ Because higher clerkship grades are correlated with a higher likelihood of matching, this creates a scenario where underlying evaluator bias impacts not only a student's desire to enter a competitive field of surgery, but also their ability to do so.⁴ We conducted an exploratory study at our institution to determine if female students are being evaluated differently than their male counterparts and who may be driving that difference. By identifying bias and its possible source, we can begin to address some of the potential barriers to female medical students entering surgical specialties.

Surgical clerkship evaluations were analyzed for the 2017–2018 academic year. 866 evaluations were analyzed from 156 evaluators regarding 150 students. Our institution uses the RIME-P method of evaluation, which includes 5 domains – Reporting, Interpreting, Managing, Educating, and Professionalism. The RIME-P assessment used in this study was on a 3-point scale, with 1 indicating poor performance, 2 indicating expected performance, and 3 indicating superior performance. We found that male students scored higher in the areas of Interpreting and Managing when all evaluations were considered. When looking at evaluations from female trainee evaluators only, female students scored lower in all five domains compared to their male peers (Table 1). There were no significant gendered rating differences from female faculty, male faculty, or male trainees.

As there was no difference found for any of the other evaluator groups, it is likely that the difference in scores represents a difference in evaluation practices of female trainees rather than a true performance difference between male and female students. Our results are concerning, as they provide evidence that female medical students are being subject to bias which is negatively impacting their evaluations for the surgical clerkship. Furthermore, the differential evaluations seen in this study have implications for the lack of gender parity in surgery. Lower evaluation scores correlate with both a decreased interest in pursuing surgery⁵ and a lower likelihood of matching into that specialty if it is pursued.⁴ While causation cannot be implied from these associations, harsher evaluations may exacerbate the already decreased interest in the surgical specialties that is seen in female medical students.⁵ Given that the decreased evaluation scores likely represent unequal rating practices rather than true performance difference, this is a serious and unfairly applied barrier that needs to be addressed.

Our exploratory study was not designed to determine why female trainees were evaluating female medical students more harshly, however there are several possible explanations. The difference in evaluation scores may represent something as benign as a difference in expectations for male and female students. However, we must also consider that this difference may represent a maladaptive coping mechanism that may be both the source of gender discrimination and the result of it.⁶ Female surgical trainees experience gender bias themselves and this has been known to have deleterious effects. They are less likely to recommend their specialty,⁷ report greater levels of mental and emotional problems,⁸ and are more likely to drop out of residency⁹ than their male colleagues. It is possible that the harsher evaluation of female medical students by female trainees represents a maladaptive transference of this increased stress to a group perceived as being more vulnerable.

It is unclear what drives the unequal evaluating practices by

Table 1

Summary of evaluation scores with breakdown by gender for all evaluators and female trainee evaluators only.

All Evaluators			Female Trainee Evaluators	
All Evaluations n = 866	Evaluations of Female Students n = 488	Evaluations of Male Students n = 378	Evaluations of Female Students n = 75	Evaluations of Male Students n = 73
R 2.79 ± 0.42	2.78 ± 0.43	2.81 ± 0.40	2.72 ± 0.48	2.85 ± 0.40*
I 2.73 ± 0.45	2.70 ± 0.46	2.77 ± 0.43*	2.67 ± 0.47	2.85 ± 0.36*
M 2.67 ± 0.47	2.66 ± 0.48	2.73 ± 0.46*	2.60 ± 0.49	2.78 ± 0.42*
E 2.74 ± 0.45	2.72 ± 0.45	2.77 ± 0.44	2.69 ± 0.46	2.84 ± 0.41*
P 2.86 ± 0.36	2.86 ± 0.37	2.87 ± 0.34	2.77 ± 0.48	2.93 ± 0.25*

Mean ± SD, *P ≤ 0.05.

female surgical trainees in our data. Further study is needed to determine the pervasiveness of this practice and what steps should be taken to address the underlying bias. While we will be exploring this further at our own institution, we feel that our results should also serve as a call to other academic institutions to examine their evaluation process for underlying gender disparities. Future work should focus on elucidating the cause of these disparities and identifying possible interventions to address the potential implicit and explicit biases involved.

Declaration of competing interest

The authors have no conflicts of interest or external funding to declare.

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