

# Using a Virtual Platform to Teach Residents How to Respond to Bias



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## INTRODUCTION

Resident physicians frequently experience bias.<sup>1</sup> Women residents experience patient-held bias more frequently than men, and Black, Latinx, and Asian residents experience bias more frequently than their White colleagues.<sup>1</sup> Recurrent experiences of bias contribute to trainee burnout<sup>2</sup> and to depressive symptoms<sup>3</sup>; however, many residents feel inadequately trained to respond to bias.<sup>2</sup>

Microaggressions, brief statements or behaviors that communicate negative messages regarding minority group identity related to race/ethnicity, sex, gender, sexual orientation, etc.,<sup>4</sup> occur frequently in clinical settings. Because of COVID-19, in-person microaggression trainings, which provide the tools to navigate these challenging encounters,<sup>5</sup> were suspended. We thus created a virtual microaggression training session, which we hypothesized would improve interns' ability to respond to bias directed towards themselves or colleagues.

## METHODS

All 85 PGY-1 internal medicine residents participated in a 1-h-long, Zoom-based workshop. The workshop included a 20-min didactic, which provided a framework for responding to microaggressions, followed by small groups (4–6 interns and 1 trained faculty facilitator) where participants applied the framework to vignettes and developed responses to experienced or observed bias. Interns were surveyed prior to and immediately after the workshop (*Mentimeter.com*). Respondents provided their self-identified race/ethnicity and gender identity. Respondents who selected Asian, Black, Latinx, or other were categorized as non-White. Facilitators were surveyed after the workshop.

The two primary endpoints were the change in interns' comfort with responding to bias directed towards colleagues or themselves. Wilcoxon signed-rank test was used to compare pre- vs. postworkshop survey responses. Mann-Whitney *U* test (Wilcoxon rank sum test) was used to assess

between-group differences in medians (female vs. male and non-White vs. White). Data are expressed as median and 25<sup>th</sup>–75<sup>th</sup> percentile. All tests were two-sided tests with  $p < 0.05$  considered statistically significant; there was no correction for multiple comparisons (GraphPad Prism version 9.1.0 for Windows, GraphPad Software, San Diego, CA, USA).

## RESULTS

All internal medicine interns attended the workshop and completed some elements of the survey (Table 1); 88% reported observing gender bias during residency; 72% observed racial bias. Fifty-nine percent reported personally experiencing gender bias during residency; 32% reported personally experiencing racial bias. More commonly, females experienced gender bias ( $p < 0.0001$ ) and non-White interns experienced racial bias ( $p < 0.0001$ ) (Table 2). Patients/families were the most common source of bias (78%), 8% identified non-physician colleagues, and 7% identified peers, attendings, or others.

The training increased participants' comfort in responding to biased statements directed towards themselves (median score preworkshop = 3 (25<sup>th</sup>–75<sup>th</sup> percentile, 3–4), median score postworkshop = 5 (25<sup>th</sup>–75<sup>th</sup> percentile, 4–5);  $p < 0.0001$ ). Similarly, after the training, participants felt more comfortable responding to bias directed towards a colleague (median score preworkshop = 5 (25<sup>th</sup>–75<sup>th</sup> percentile, 4–5), median score postworkshop = 6 (25<sup>th</sup>–75<sup>th</sup> percentile, 5–6);  $p < 0.0001$ ). Nearly all (95%) interns would recommend the session to a friend or colleague (Likert score of  $\geq 5$  out of 10). Ninety-one percent of the facilitators completed the survey, and all faculty respondents endorsed the effectiveness of their training, the workshop itself, and the virtual format.

**Table 1 Demographics of Participants Who Responded to Questions (All Participants) and Those Who Completed Both Pre- and Postworkshop Survey Questions**

	All participants ( <i>n</i> = 85)	Participants who completed both pre- and postworkshop surveys ( <i>n</i> = 60)
<b>Gender identity</b>		
Female	43 (51%)	35 (58%)
Male	35 (41%)	25 (42%)
Declined to answer	7 (8%)	0
<b>Race/ethnicity</b>		
Non-White	38 (45%)	30 (50%)
White	37 (43%)	28 (47%)
Declined to answer	10 (12%)	2 (3%)

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Table 2 Observation of and Personal Experience of Gender or Racial Bias During Training

	Observed gender bias	<i>p</i> value <sup>†</sup>	Observed racial bias	<i>p</i> value <sup>†</sup>	Experienced gender bias	<i>p</i> value <sup>†</sup>	Experienced racial bias	<i>p</i> value <sup>†</sup>
All <i>n</i> = 85	75 (88%)		61 (72%)		50 (59%)		27 (32%)	
Female*	41 (95%)	<i>p</i> = 0.07	32 (74%)	<i>p</i> = 0.62	39 (91%)	<i>p</i> < 0.0001*	15 (35%)	<i>p</i> = 0.81
Male*	28 (80%)		24 (69%)		6 (17%)		11 (35%)	
Non-White*	34 (89%)	<i>p</i> = 0.99	25 (66%)	<i>p</i> = 0.30	22 (58%)	<i>p</i> = 0.99	23 (61%)	<i>p</i> < 0.0001*
White*	33 (89%)		29 (78%)		21 (57%)		2 (5%)	

\*Data for participants who declined to provide their gender or race are not included

†*p* values reflect the differences in observed or experienced bias between female vs. male or non-White vs. White participants by Mann-Whitney test

## DISCUSSION

To our knowledge, there has not been a prior report on using a virtual platform to conduct a microaggressions workshop for residents. Facilitators assessed the virtual format to be effective. Participants were similarly positive about the format and remained engaged in the small-group discussions. Importantly, the workshop improved residents' readiness to respond to bias. These data support the ongoing utilization of virtual workshops, particularly as trainee-experienced bias continues to rise.<sup>1</sup>

Limitations of this study include the small sample size, the use of a single internal medicine residency program, and survey-based outcomes.

While our workshop promotes trainee resilience in addressing microaggressions and bias, health systems should also focus on implementing policies that promote inclusion at all levels of the learning environment.<sup>6</sup> In addition to workshops for trainees, similar training for faculty and the wider hospital community would mitigate the impacts of bias more broadly.<sup>6</sup> This study demonstrates that the virtual format is an effective platform for conducting skill-building workshops to address microaggressions. Future studies should include using virtual platforms for faculty and staff bystander training and further evaluation of virtual versus in-person settings for these important workshops.

## Declarations:

**Conflict of Interest:** The authors declare that they do not have a conflict of interest.

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