ABSTRACT

Objective: To assess for the presence of gender bias in resident surgical evaluations.

Design: Single institution cross-sectional study.

Participants and Controls: Participants were faculty cataract surgery attendings and post-graduate year 4 (PGY-4) residents.

Method: Faculty used the International Council of Ophthalmology's Ophthalmology Surgical Competency Assessment Rubric (ICO-OSCAR) for phacoemulsification surgery, a standardized assessment tool to grade videos of cataract surgeries performed by the residents, whose identities were masked to their evaluators. These scores were compared to the residents' PGY-4 surgery evaluation scores by cataract surgery attendings. Two way ANOVA was used determine the effect of resident gender and evaluator gender and the interaction between the two variables on residents' scores. Unpaired two sample t-tests were used to compare the residents' scores.

Main Outcome Measures: ICO-OSCAR scores (gender unknown to evaluators) and surgical evaluation scores by female and male cataract surgery attendings (gender known to evaluators).

Results: Participants included 6 faculty evaluators (three women, three men) and 10 residents (five women, five men). A total of 120 scores were recorded in both the masked and unmasked groups. Two way ANOVA found no significant interaction between resident gender and evaluator gender in both masked and unmasked data ($F(1, 116) = .088$, $P=.77$ and $F(1, 116) = .229$, $P=.63$), respectively. No significant difference was found between female and male residents' masked scores ($P=.45$). However, a significant difference was found when gender was unmasked with female residents scoring lower than male residents ($P<.001$). Female residents' unmasked scores were significantly lower than their masked scores ($P<.001$), whereas no significant difference was found between male residents' masked and unmasked scores ($P = .49$).

Conclusions: When gender was known to evaluators, female residents scored significantly lower than both their male counterparts and their own scores when gender was masked. The masked versus unmasked gender approach to resident evaluations may uncover and highlight the presence of implicit bias in residency training programs.