

Implicit Bias Toward Cervical Cancer: Provider and Training Differences

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ABSTRACT

Objective. Implicit prejudice and stereotyping may exist in health care providers automatically without their awareness. These biases often correlate with outcomes that are consequential for the patient. This study examined gynecologic oncology care providers' implicit prejudice and stereotyping toward cervical cancer.

Methods. Members of professional gynecologic oncology organizations were asked to complete two Implicit Association Tests (IAT) to determine if they implicitly associate cervical cancer with feelings of anger (prejudice) or beliefs about culpability for the disease (stereotypes), compared to ovarian cancer. Linear regression models and Student t-tests examined average levels of implicit bias and moderators of the implicit bias effects.

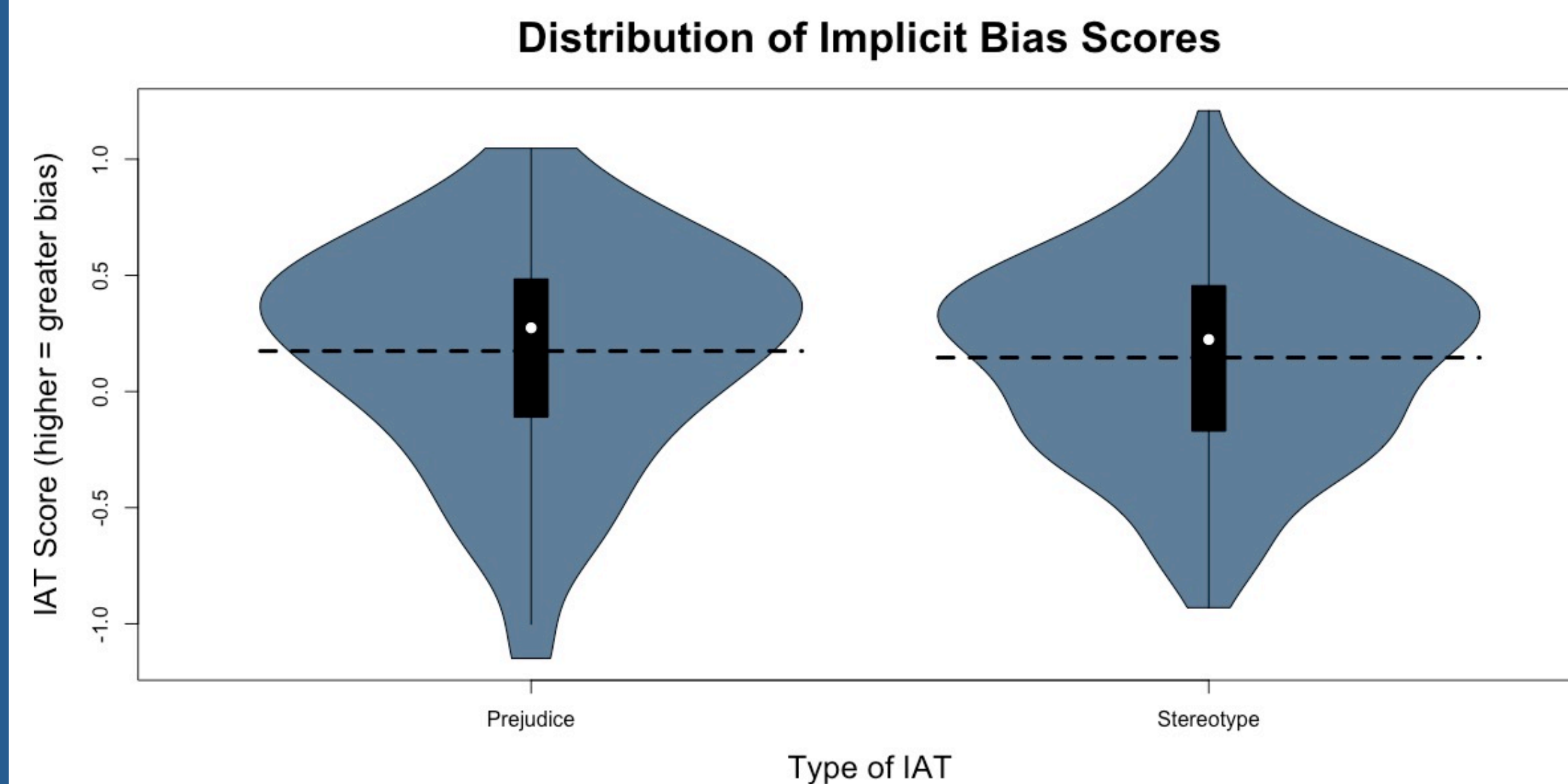
Results. One-hundred seventy-six (132 female, 43 male, 1 nonresponse; mean age = 39.18 years, SD age = 10.58 years) providers were recruited and the final sample included 151 participants (93 physicians and 58 nurses, mean age=38.93, SD age=10.59). Gynecologic oncology providers showed significant levels of implicit prejudice, $X = 0.17$, $SD = 0.47$, 95% CI: (0.10, 0.25), toward cervical cancer patients. They also showed significant levels of implicit stereotyping of cervical cancer patients, $X = 0.15$, $SD = 0.42$, 95% CI: (0.08, 0.21). Whereas physicians did not demonstrate significant levels of implicit bias, nurses demonstrated greater levels of implicit prejudice and implicit stereotyping. Providers without cultural competency training or implicit bias training demonstrated greater implicit bias than those who had completed such training ($p < .05$).

Conclusions. This study provides the first evidence that gynecologic oncology providers hold implicit biases related to cervical cancer. Interventions designed to target specific groups in gynecologic oncology may help improve interactions with patients.

BACKGROUND

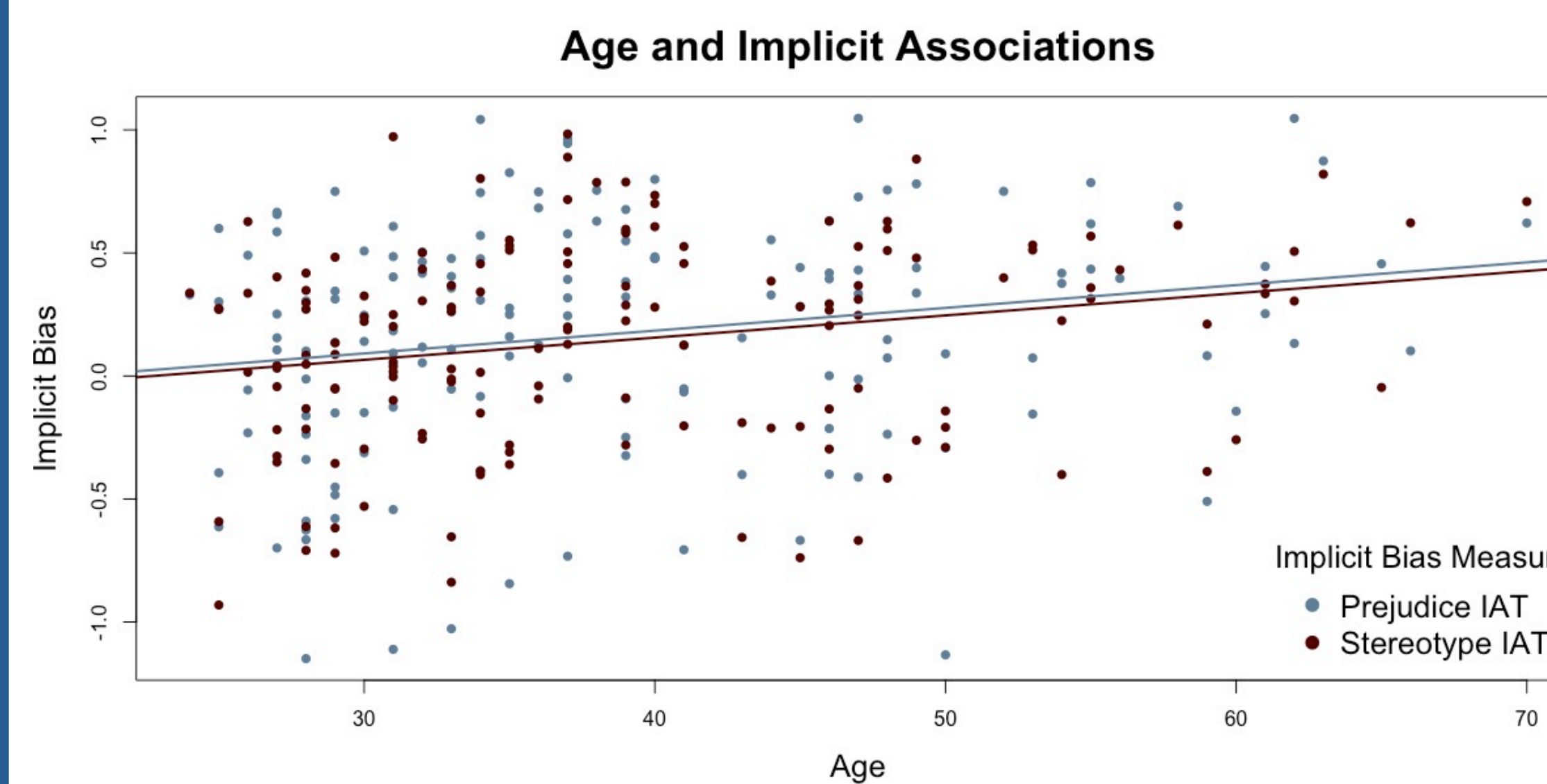
- Provider implicit bias in gynecologic oncology has not been studied extensively, and disparities in cancer care exist in both cervical and ovarian cancers.^{1,2}
- There is evidence that compared to women with ovarian cancer, women with cervical cancer are viewed more negatively by the general public and are frequently blamed for their condition.^{3,4} However, it is unclear whether providers hold implicit biases against women with a cervical cancer diagnosis.
- **Research question.** When considering women with cervical cancer versus women with ovarian cancer, does provider implicit bias, as measured by the IAT, affect patient outcomes?
- **Purpose.** To examine two forms of implicit bias toward women with cervical cancer versus women with ovarian cancer among gynecologic oncology providers and correlate numerical metrics with providers' demographics, medical training, and experience.

RESULTS



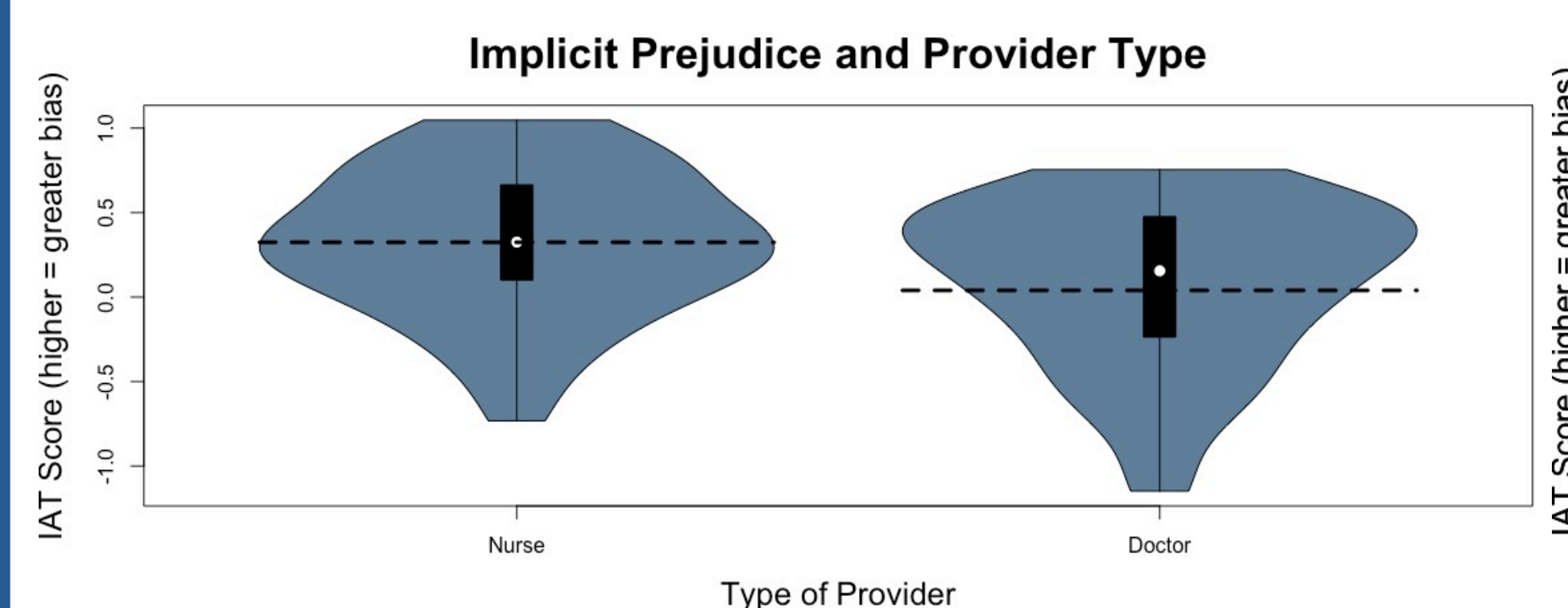
Prejudice IAT:
 $M = 0.17$, $s = 0.47$, $t(150) = 4.52$, $p < 0.001$,
 $R^2 = 0.12$

Stereotype IAT:
 $M = 0.15$, $s = 0.42$, $t(150) = 4.26$, $p < 0.001$,
 $R^2 = 0.11$

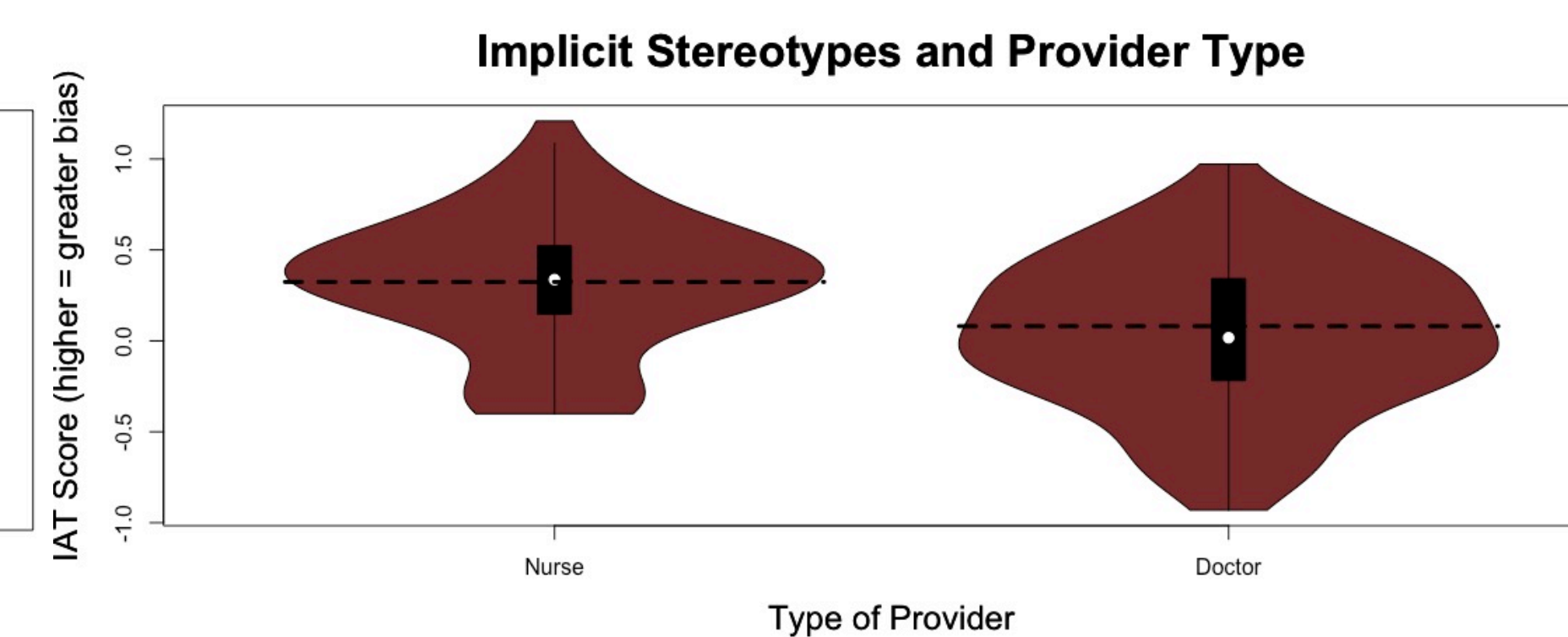


Prejudice IAT:
 $b = 0.01$, $t(149) = 2.58$, $p = 0.01$, $R^2 = 0.04$

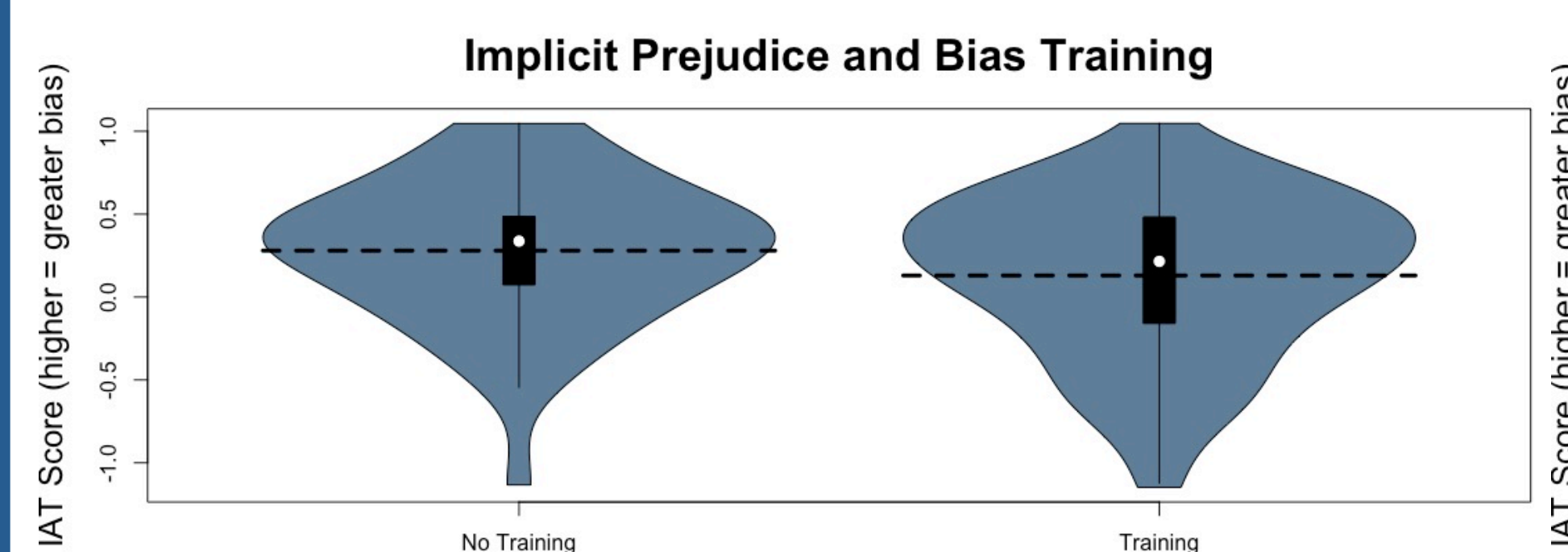
Stereotype IAT:
 $b = 0.01$, $t(149) = 2.85$, $p = 0.01$, $R^2 = 0.05$



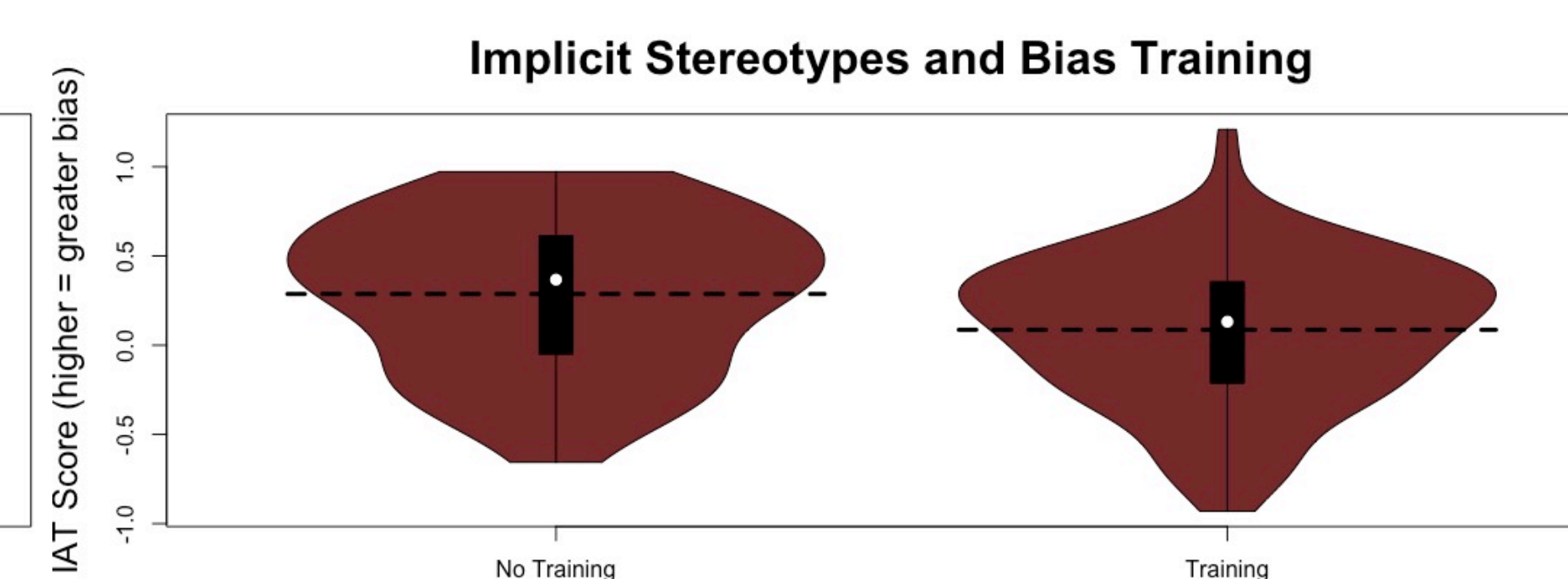
Nurses $M = 0.32$, $s = 0.42$
Doctors: $M = 0.08$, $s = 0.48$
 $t(149) = 3.16$, $p = 0.002$, $Cohens D = 0.51$



Nurses $M = 0.32$, $s = 0.37$
Doctors: $M = 0.04$, $s = 0.42$
 $t(149) = 4.14$, $p < 0.001$, $Cohens D = 0.67$



No Training $M = 0.28$, $s = 0.43$
Training: $M = 0.13$, $s = 0.49$
 $t(149) = -1.79$, $p = 0.08$, $Cohens D = 0.32$



No Training $M = 0.29$, $s = 0.42$
Training: $M = 0.09$, $s = 0.41$
 $t(149) = -2.74$, $p = 0.007$, $Cohens D = 0.48$

METHODS

Participants. One-hundred seventy-six (132 female, 43 male, 1 nonresponse) providers were recruited from professional gynecologic oncology organizations. The final sample included 151 participants (93 physicians and 58 nurses, 112 female and 39 male).

Procedure. Participants completed two IATs⁵ measuring implicit bias toward women with cervical cancer. Participants then completed the Internal/External Motivation to Respond without Prejudice Scale⁶, demographic items, and questions about their medical training and experience.

Prejudice IAT. Measured associations of “empathy” versus “anger” with cervical cancer.

Stereotype IAT. Measured associations of “compliant” versus “risky” with cervical cancer.

Demographics. Participants were asked to report age, race, gender, ethnicity, birthplace, years lived in the U.S., and first language.

Experience. Participants were asked to report years in practice, specialty, location of medical school, and self-reported completion of implicit bias or cultural competency training.

CONCLUSIONS

- Gynecologic oncology providers associate cervical cancer with feelings of anger (prejudice) and beliefs related to risk (stereotype).
- Nurses demonstrate greater implicit bias than gynecologic oncologists.
- Older providers demonstrate greater implicit bias than younger providers.
- Providers who have completed cultural competency training or implicit bias training demonstrate lower implicit bias.
- Future directions include interventions designed to target specific groups in gynecologic oncology that may help improve interactions with patients in the cervical cancer care setting.

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