

Reviewer Feedback on Bias Awareness and Mitigation Training

Hope Cummings, Ph.D.
Senior Social Science Analyst
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CSR Advisory Council Working Group: Bias Awareness Training Module Development

CSR AC Members



Scott Miller, Ph.D.
Yale University



Julie Price, Ph.D.
Harvard Medical School



Narasimhan Rajaram, Ph.D.
University of Arkansas at
Fayetteville

Working Group Ad Hoc



Doug Andres, Ph.D.
University of Kentucky



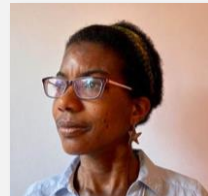
Markus Brauer, Ph.D.
University of
Wisconsin-Madison



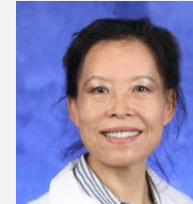
**Elizabeth Cosgriff-Hernandez,
Ph.D.**
University of Texas, Austin



Carlos Crespo, Ph.D.
Portland State
University



Karine Gibbs, Ph.D.
University of California,
Berkeley



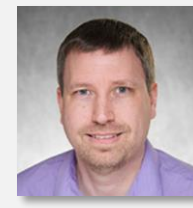
Xuemei Huang, Ph.D.
Pennsylvania State
University



Rakale Quarells, Ph.D.
Morehouse College



Germán Rosas-Acosta, Ph.D.
University of Texas at El Paso



Steve Varga, Ph.D.
University of Iowa

NIH Staff



Hope Cummings, Ph.D.
CSR



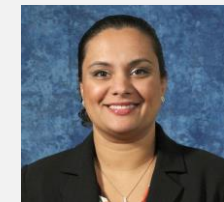
Kristin Kramer, Ph.D.
CSR



**Charlene Le Fauve,
Ph.D.**
NIH Off. of Sci.
Workforce Diversity



Michael Sesma, Ph.D.
NIGMS



Tasmeen Weik, Ph.D.
CSR

Learning Objectives and Structure

1. Increase awareness of potential sources of bias in peer review.
2. Provide reviewers with tools to intervene if and when they see potential bias.
3. Provide reporting avenues for reviewers.

Listen to testimonials from NIH applicants. These stories are told in their words and are real examples.

Reviewing your fellow reviewers' critiques

You are reading the critiques of your fellow reviewer for an R01 application when you see the following critique under the investigator criterion.

Investigator(s):

Strengths

- Very strong team with ample experience.
- PI has participated in several projects on policy evaluation.
- Co-investigators have expertise in physical activity promotion, economics, and the policy impact of public health.
- An important aspect is the connectedness of the research team and entities at [redacted] and within the state.

Weaknesses

- Senior leadership is not present.

There are common words and phrases we use in peer review, each with their own connotations.

What do you think of when you hear or read the following phrase:

This is a young investigator.

Type your response here. Responses will be captured to improve future trainings.



Study section meetings are busy and each application review only takes 10 to 15 minutes. It can go by fast.

Select the picture to watch this scenario. While watching, try to identify potential sources of bias.



Training Completion and Survey Response Rates

For the January 2022 Advisory Council Round

Bias Awareness Training:

- 9,963 reviewers asked to take training 4 weeks before their fall meeting
- 412 study section meetings held
- 6,006 completed the training
- 60% response rate

Evaluation Survey:

- 3,166 (of the 5,991) reviewers completed the survey
- Represented 389 study section meetings
- 53% response rate

UPDATE: For the May 2022 Council Round (spring review meetings), 5,332 reviewers have taken the training as of March 21st.

Survey Measures

Training-Specific Measures

- Knowledge and awareness of bias in peer review
- Comfort intervening on bias
- Future actions to reduce bias in peer review
- Usefulness of specific training activities
- General satisfaction with training

Measures not related to the Training

- Presence of bias in peer review
- Ability to identify bias in peer review (in the last year)
- Intervening on peer review bias (in the last year)

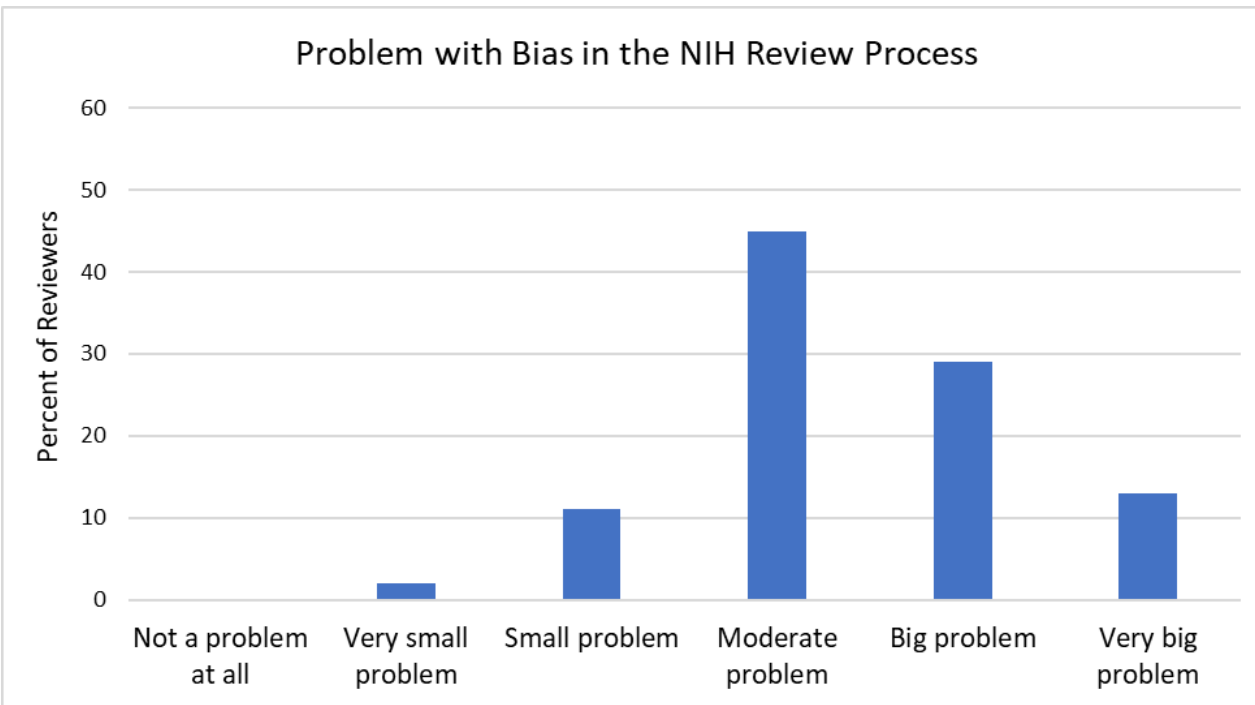
Qualitative Feedback

- Opportunity to share general comments about bias in NIH review and recommendations for improving training

Survey Results: Prevalence of Bias in Review Process

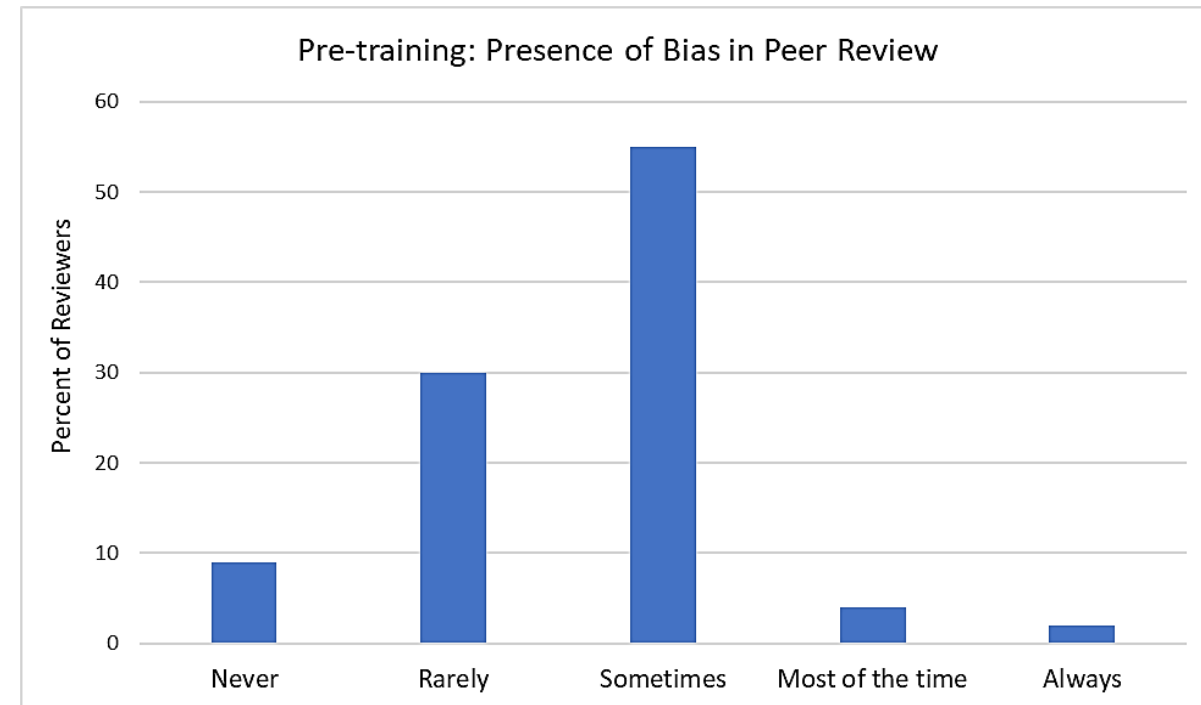
- Problem with bias in the NIH review process:
 - Moderate problem = 45%
 - Big or very big problem = 42%

To what extent do you think bias is a problem in the NIH review process?



- Encountered review bias in the last year:
 - Sometimes = 55%
 - Rarely or never = 39%

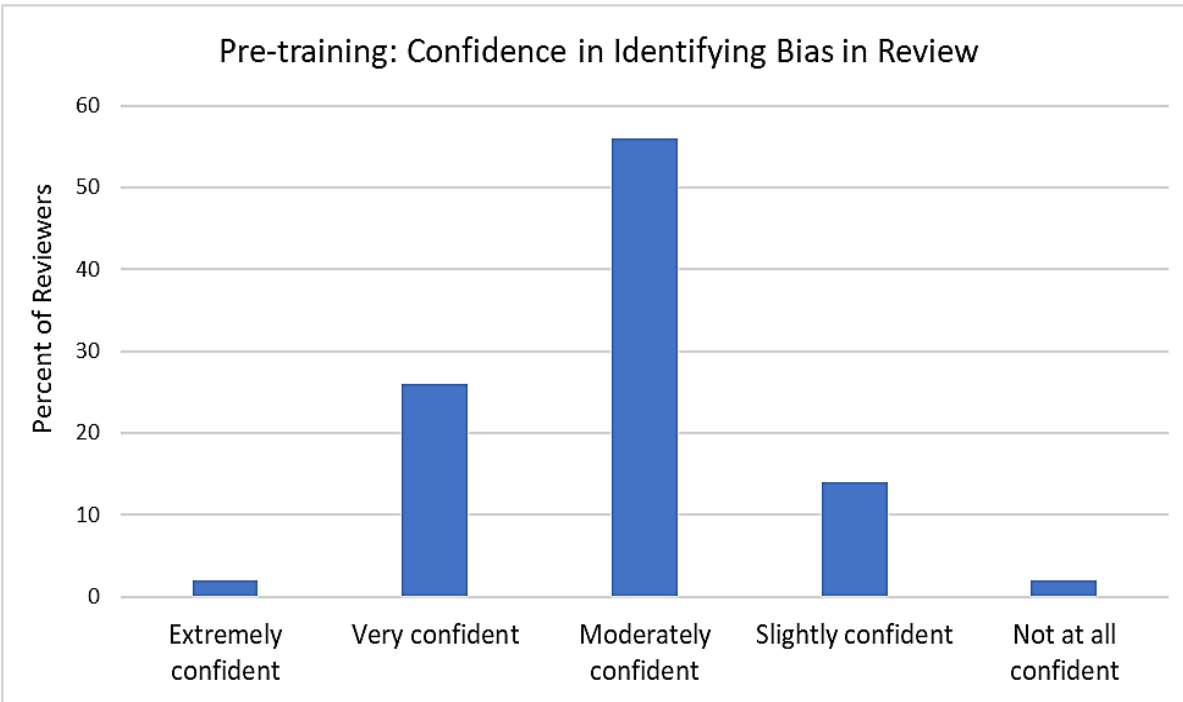
In the last year, how often did you read a critique or attend a review meeting where you thought bias (or potential bias) was present?



Results: Identifying Bias and Intervening in the Last Year

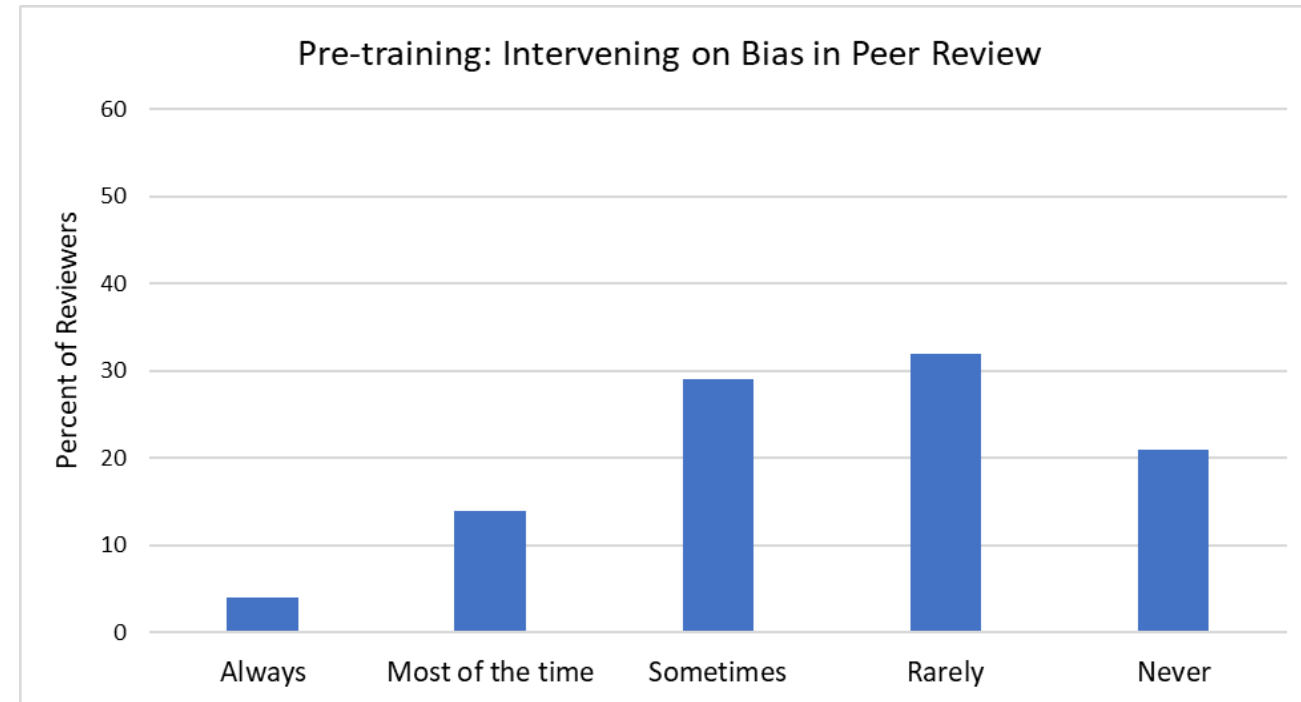
- Ability to identify bias in the last year:
 - Moderately confident = 56%
 - Very or extremely confident = 28%

In the last year, how confident were you in your ability to identify bias in a review?



- Intervened on bias in the last year:
 - Rarely or never intervened = 53%
 - Always intervened = 4%

In the last year, how often did you intervene when you thought bias (or potential bias) was present in a review (written critique or meeting)?



Results: General Satisfaction with Training

- Over 90% of reviewers were highly satisfied with the training.

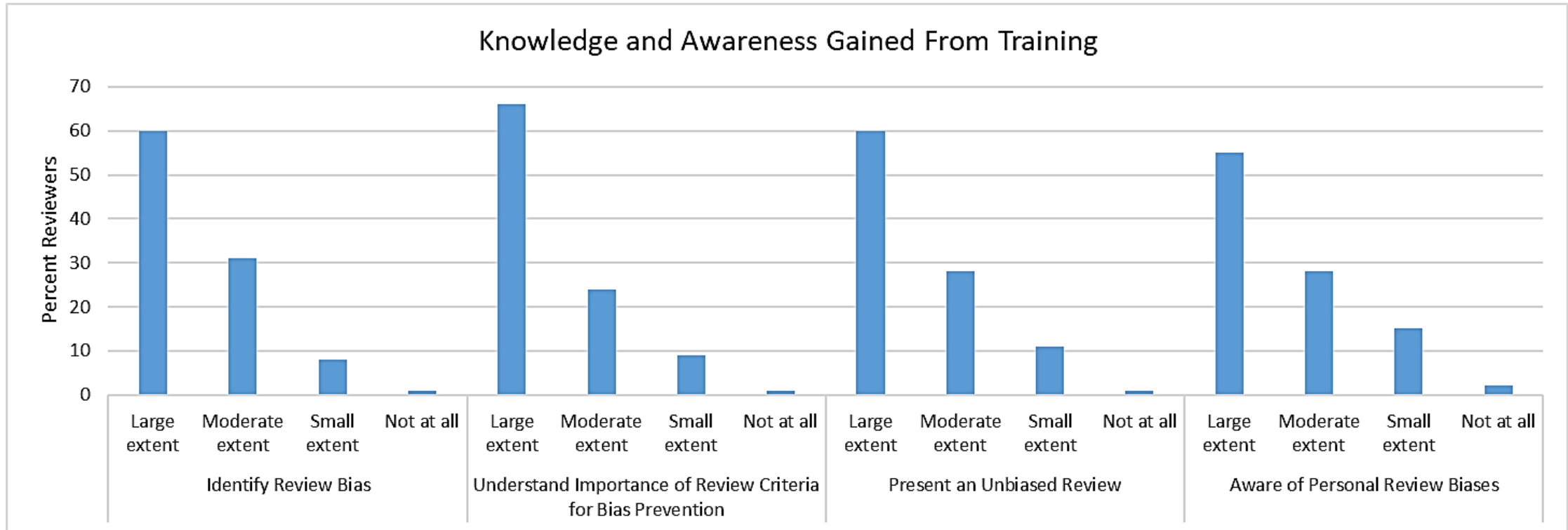
Please mark how strongly you agree or disagree with the following statements.



Results: Gained Knowledge and Awareness of Bias in Peer Review

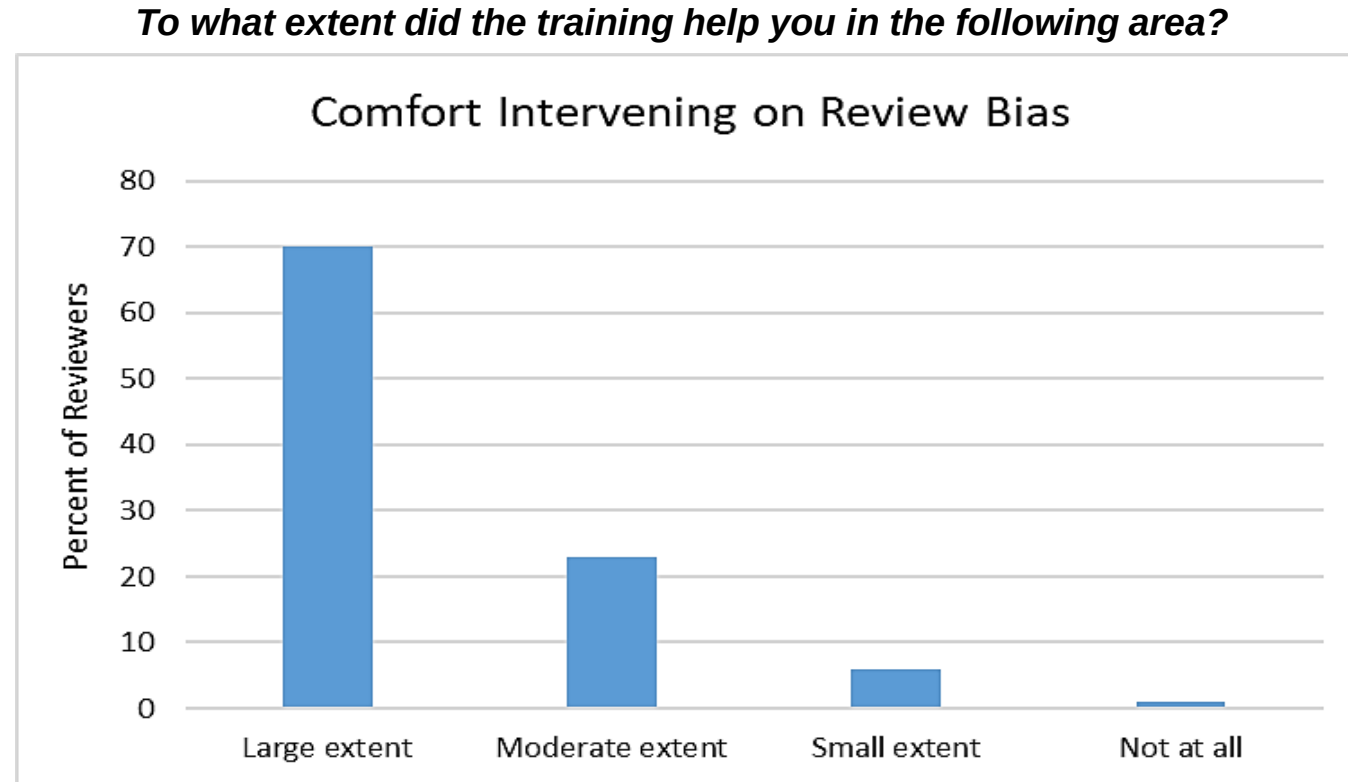
- Increased knowledge and awareness of bias in peer review:
 - Large extent = ~ 60%
 - Moderate extent = ~ 30%

To what extent did the training help you in the following areas?



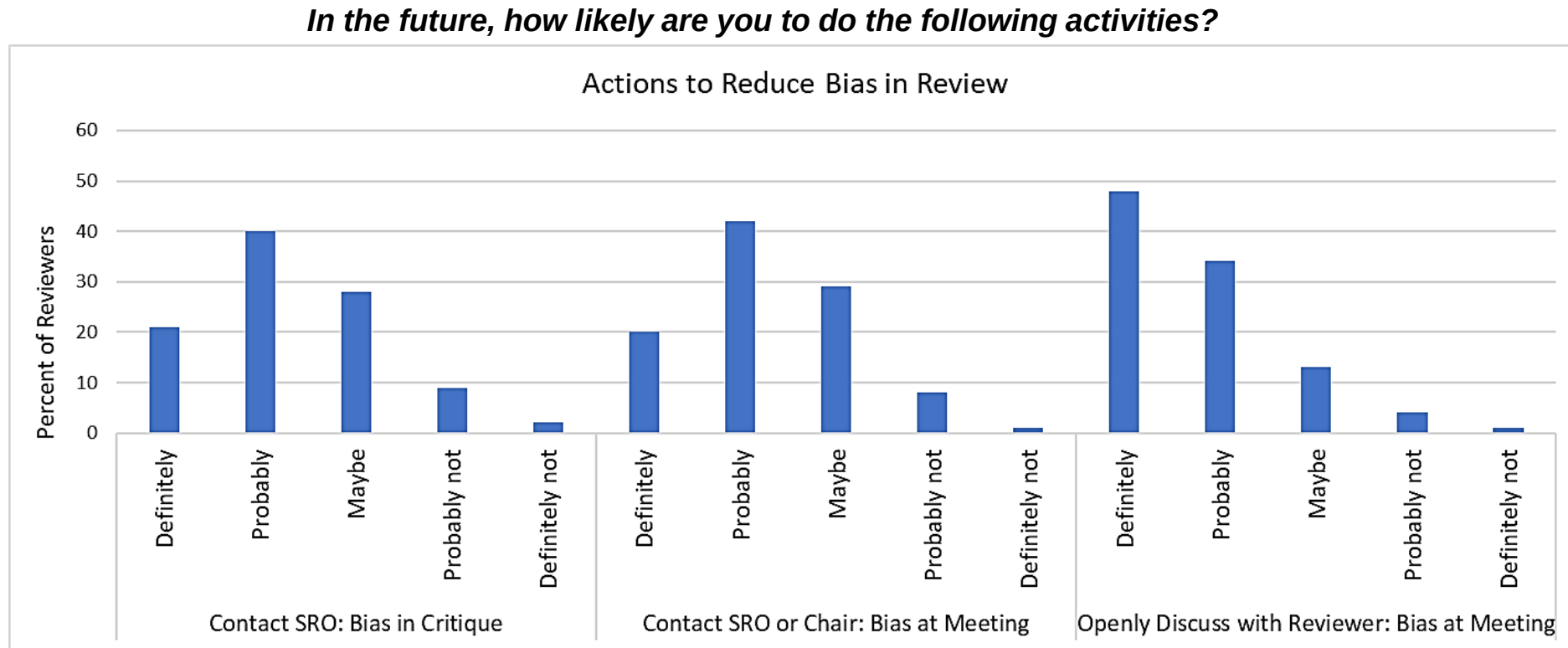
Results: Comfort Intervening on Review Bias

- 70% of reviewers thought the training helped them to a **large extent** feel more comfortable intervening.



Results: Future Actions to Prevent Bias in Peer Review

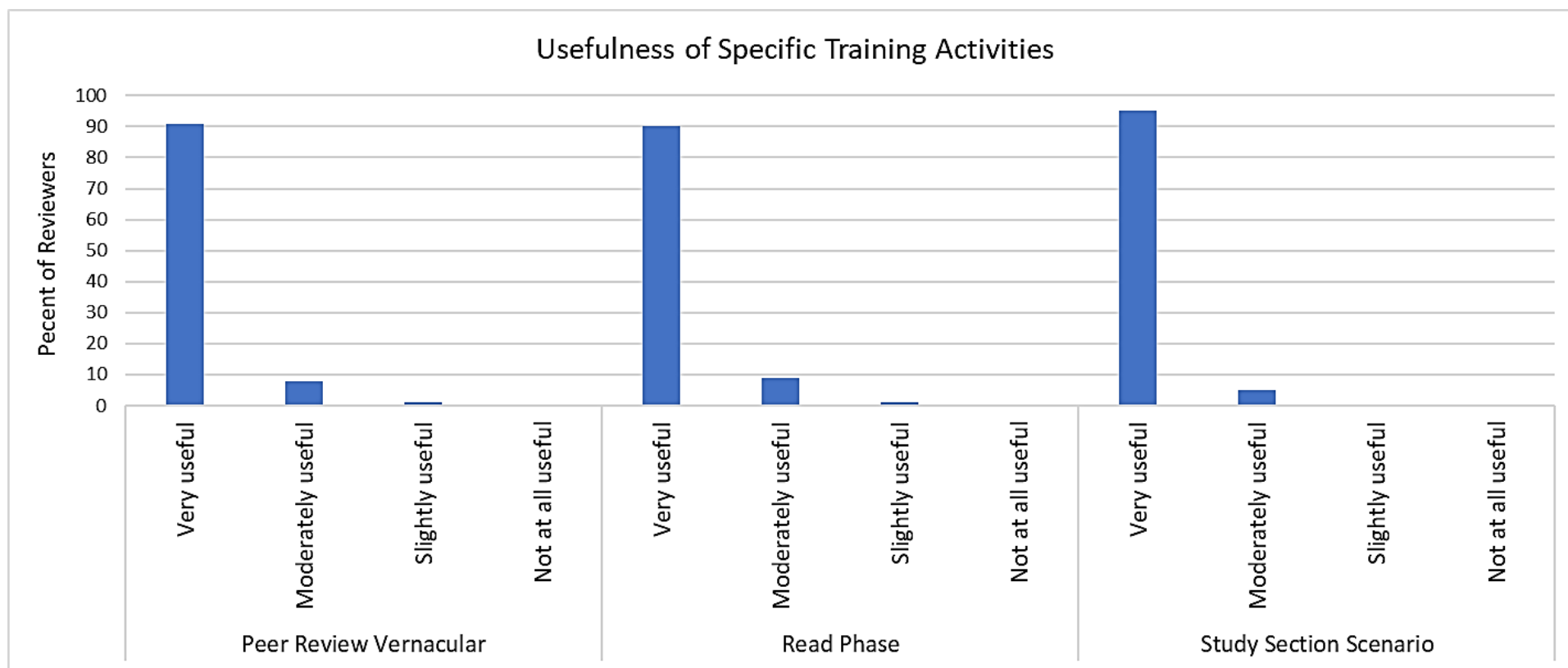
- 82% of reviewers would **definitely** or **probably** ask for clarification or justification from another reviewer at the meeting.
- ~60% of reviewers would **definitely** or **probably** contact the SRO or Chair regarding bias in a critique or at the meeting.



Results: Usefulness of Specific Training Activities

- Over 90% of reviewers thought that the training activities were **very useful**.

How useful did you find the following training activities?



Qualitative Results: Common and Salient Themes

Please share any general comments about bias in NIH review or recommendations for improving this training.

46% of reviewers provided comments (n = 1,443)

- General satisfaction and value of the training
 - *“I thought the training was outstanding and it gave me hope for the future. Thank you!”*
- Empowered and committed to future bias mitigation actions
 - *“I think this training has elevated my awareness of potential bias (in myself and others). I will be more likely to identify and push back on perceived bias in the read and meeting phases.”*
- Requests for more direct approaches to tackle bias
 - *“Provide examples of sentences, language reviewers can use to ask questions of other reviewers if they think they are being bias; examples of how to write non-bias reviews for each of the review sections”*
- Power dynamics and challenges with intervention
 - *“I imagine that people from underrepresented groups, and particularly young investigators, would not feel comfortable speaking out”.*

Qualitative Results: Common and Salient Themes

- The need of Chairs and SROs to intervene more and receive more bias training
 - *“train SROs and chairs to be more engaged in identifying bias and clearly stating it during session. These two jobs have the most weight in the room...”*
- Experiences with bias as a reviewer and applicant
 - *“While taking this training it was sad to see how so many of my grants have been hit with many of the examples that were presented...”*
- Reviewer recommendations to reduce bias in review
 - *“You cite that Investigator and Environment are the two areas at highest risk of bias. NIH should probably get rid of them. So long as these exist, the “top tier” institutions will remain with systematically higher scores than other institutions.”*
- Recommendations to improve training
 - *“There was too much emphasis on a single bias (preeminence of the PI) and not enough on other bias.”*

Summary

- Reviewers applauded NIH for tackling bias in review.
- Reviewers were highly satisfied with the training.
- The training succeeded in:
 - Increasing reviewers' awareness of bias, including their own review biases
 - Increasing reviewers' understanding of the importance of adhering to the review criteria in preventing bias
 - Making reviewers more comfortable intervening on bias
 - Empowering reviewers to actively mitigate bias

Discussion

- Increase reviewer participation in the training.
- Keep reviewers engaged about bias and bias mitigation strategies---for sustained effects.
- Continue to train Chairs and SROs to play a more active role in bias intervention.

Future training modules:

- Consider additional types of bias (e.g., scientific, gender).
- Address more subtle and implicit forms of bias.

Questions?