Reviewer Feedback on Bias Awareness and Mitigation Training

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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.
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%

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

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

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%

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

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

![Pre-training: Confidence in Identifying Bias in Review](chart)

![Pre-training: Intervening on Bias in Peer Review](chart)

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.*

General Satisfaction with Training

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<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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<tbody>
<tr>
<td>Met Needs and Expectations</td>
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<td>Testimonials were Relatable</td>
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<td>Interesting and Engaging</td>
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Percent of Reviewers
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?

Knowledge and Awareness Gained From Training

- Identify Review Bias
- Understand Importance of Review Criteria for Bias Prevention
- Present an Unbiased Review
- Aware of Personal Review Biases
70% of reviewers thought the training helped them to a *large extent* feel more comfortable intervening.
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.
Qualitative Results: Common and Salient Themes

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”.

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