Advancing Women in STEMM Through Bias Literacy
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Preliminary Results for 35 Department Pairs

Motivation to Respond Without Prejudice
- Intervention group reports higher levels of both internal and external motivation to reduce prejudice over time, relative to the control group.

Actions to Reduce Gender Bias
- Intervention group reports increased actions to reduce gender bias, with sustained effects.

Decisional Balance: Risk vs. Benefits
- Intervention group increasingly acknowledges benefits of reducing gender bias, however perceptions about the risks of taking action to reduce bias remain unchanged.

Gender & Leadership IAT Distributions
- Implicit Association Test (IAT) indicates bias toward males and leadership in both male and female respondents (N=718 men, 619 women).

Self-Efficacy
- Some evidence of increasing self-confidence with regard to reducing gender bias for intervention group.

Awareness of Gender Bias
- Slight evidence of increased awareness in intervention group.

Background
Although women and men are near parity at early career levels in many fields, women are under-represented in senior ranks, leaving unrealized the full potential of their vital contributions to science, technology, engineering, mathematics, and medicine (STEMM) disciplines.

The National Academies of Science examined reasons for career advancement inequities for women and concluded that biases deeply rooted in assumptions about gender – sometimes conscious but more frequently unconscious – pose the greatest barrier to gender equity.

Based on faculty self-report, this study examines the influence of a Bias Literacy Workshop on:
- Motivation to respond without bias (1 & 2)
- Positive equity outcomes expectations (3 & 4)
- Equity self-efficacy (5)
- Awareness of bias (6)
- Actions to reduce gender bias (7)
- Implicit bias with regard to gender and leadership (8 & 9)

Methods
- Group-randomized controlled trial with 45 matched pairs of STEMM departments
- Intervention: 2.5-hour workshop incorporates principles of adult learning and behavioral change and emphasizes origins of bias, naming of important bias concepts, and evidence-based actions that have been shown to reduce bias

- Identical measures for both intervention and control departments
  - 7 scale measures plus Implicit Association Test
  - All measures administered pre-workshop, 3-day post-workshop, 3-month post-workshop

Implications
- Outcomes of interest appear to be changing in a positive direction (e.g., more awareness and more action) for faculty in intervention departments
- Mechanisms of change (motivation, decisional-balance, self-efficacy) are less clear
- Administering workshops within departments may contribute to the increase in external motivation to reduce bias

Future Plans/Directions
- Improve workshop format and delivery by administering to control departments
- Assess effects of workshop on overall department climate via a campus-wide climate survey
- Create “Train the trainer” materials
- Offer workshops on other campuses, possibly expanding to the business community and non-profit organizations

Funded by NIH grant R01GM088477
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