



Advancing Women in STEMM Through Bias Literacy

Molly Carnes, Jennifer Sheridan, Patricia Devine, Cecilia E. Ford, Linda Baier Manwell, Angela Byars-Winston, Carol Isaac, and Eve Fine

University of Wisconsin-Madison



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.

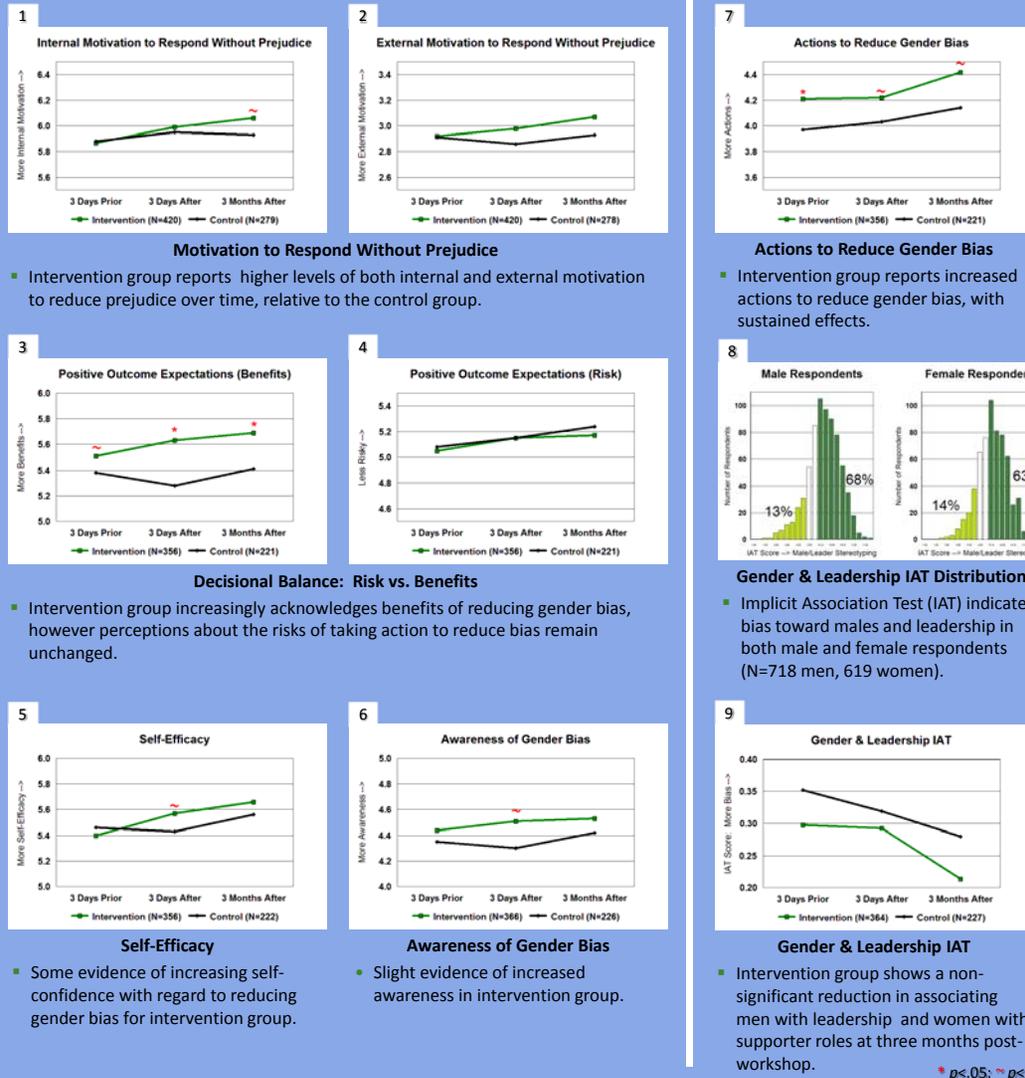
Based on faculty self-report, this study examines the influence of a Bias Literacy Workshop on:

- 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

Preliminary Results for 35 Department Pairs



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

For additional information, contact:
Molly Carnes, MD,MS mlcarnes@wisc.edu
WISELI (608) 263-1445 <http://wiseli.engr.wisc.edu/>