

Using “Bias Literacy” to Improve Department Climate

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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.

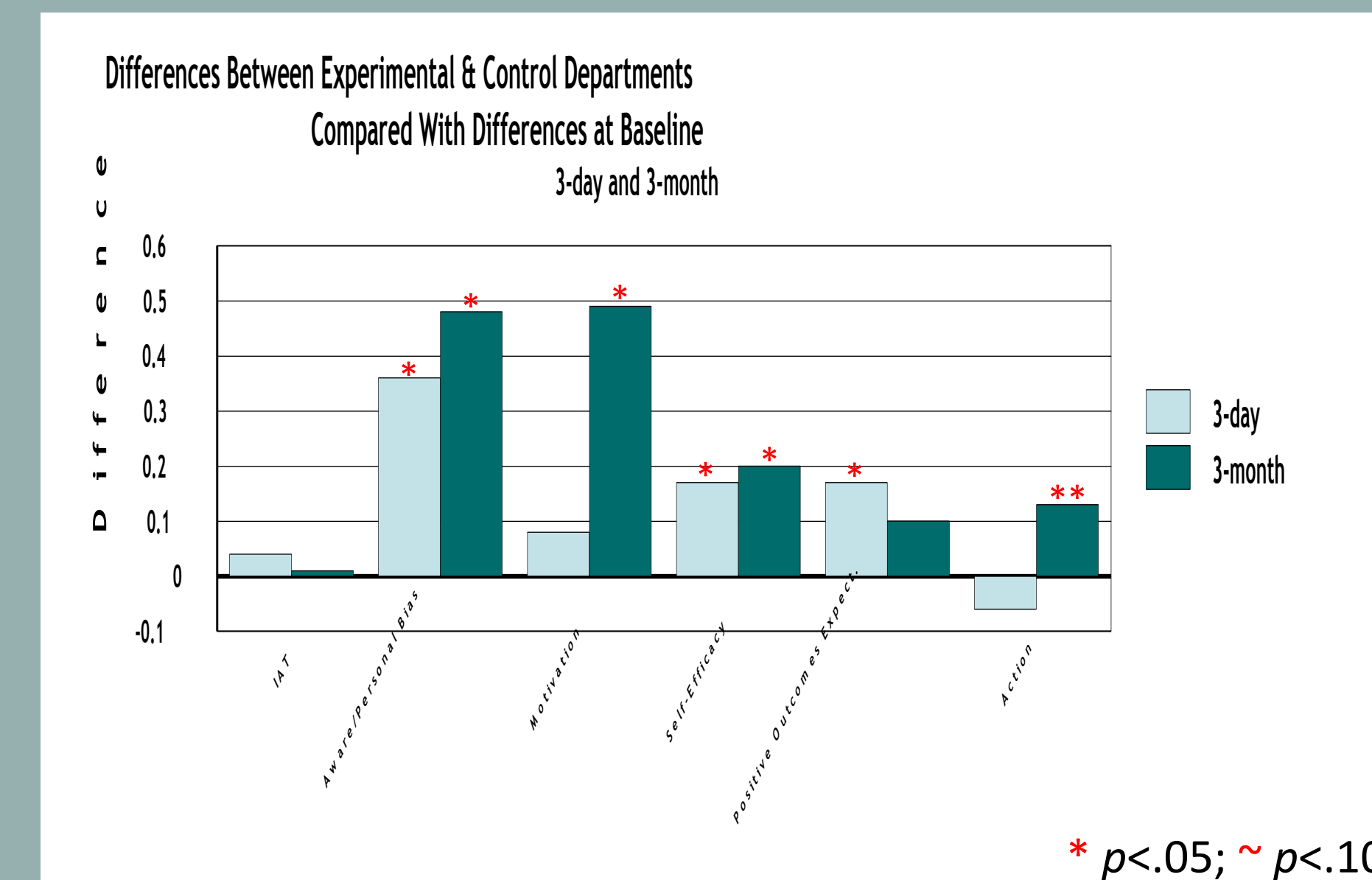
The National Academies of Science examined reasons for career advancement inequities for women and concluded that biases deeply rooted in assumptions about gender – sometimes conscious but more frequently unconscious – pose the greatest barrier to gender equity.

We created a 2.5 hour workshop, delivered at the department level, to educate STEMM faculty about implicit gender bias in an academic setting. We found that the workshop had a positive impact on personal attitudes, behavioral change, and department climate.

Methods

- Cluster-randomized controlled trial with 46 matched pairs of STEMM departments
- Intervention: 2.5-hour workshop identifies important bias concepts and evidence-based actions that successfully 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
 - All-faculty climate survey administered in 2010 and 2012

Results



Awareness of Gender Bias

- Evidence of increased awareness in intervention group, especially over time.

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.

Self-Efficacy

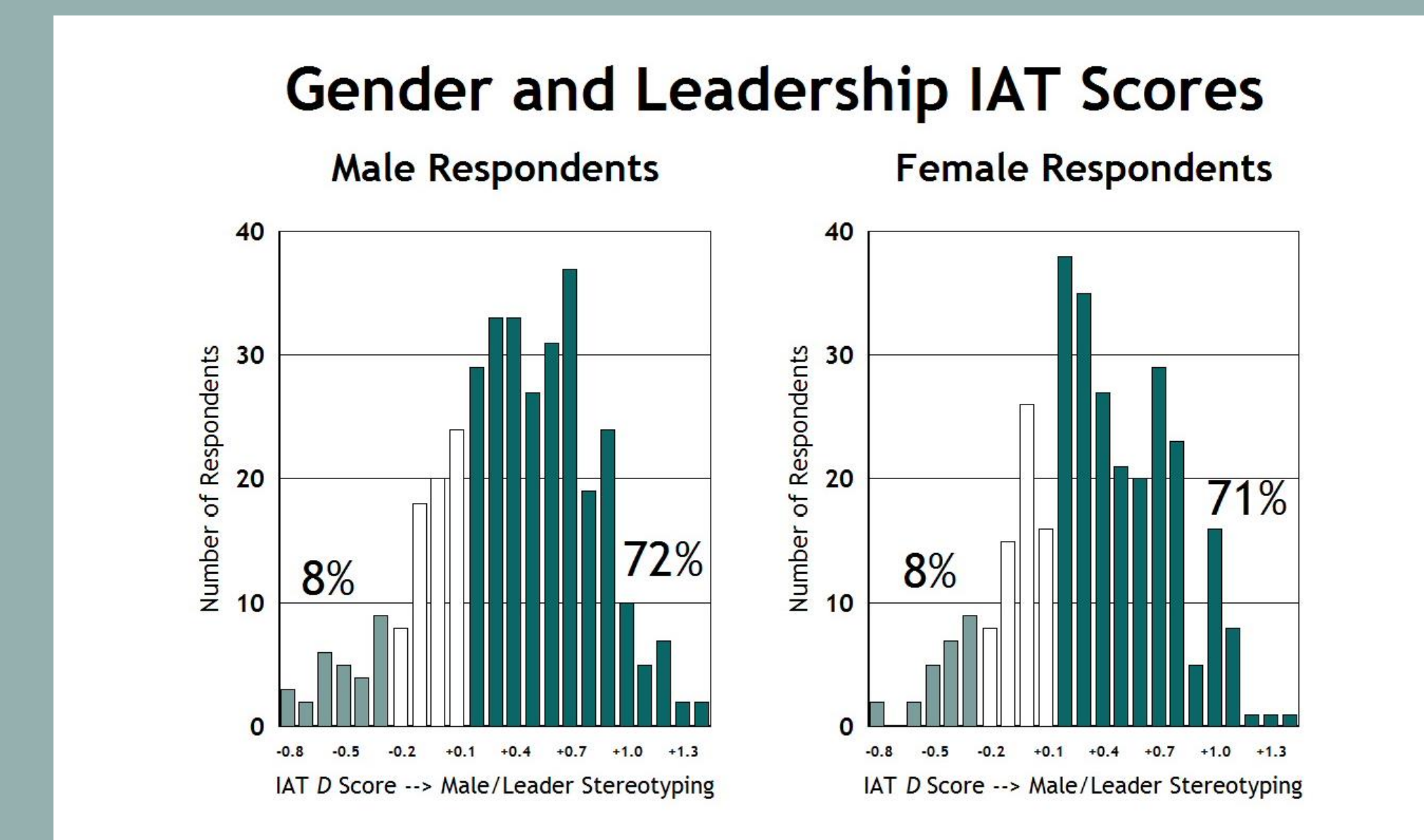
- Some evidence of increasing self-confidence with regard to reducing gender bias for intervention group.

Positive Outcome Expectations

- Intervention group acknowledges benefits of reducing gender bias immediately after the workshop, but the effect is not sustained over time.

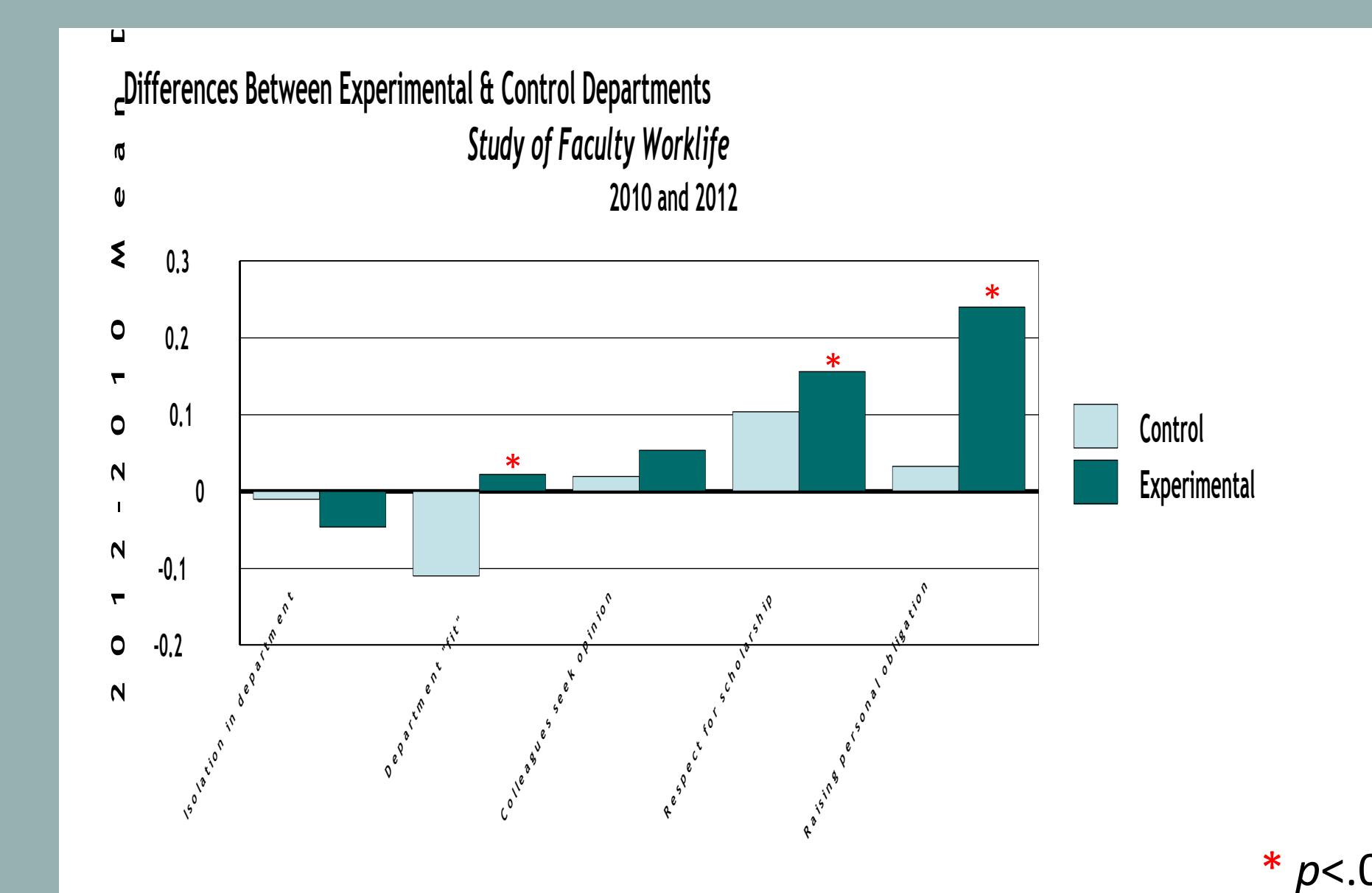
Actions to Reduce Gender Bias

- Intervention group reports increased actions to reduce gender bias after three months. This effect only occurs in departments where 25% or more of the faculty attended the workshop.



Gender & Leadership IAT Distributions

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



Departmental Climate

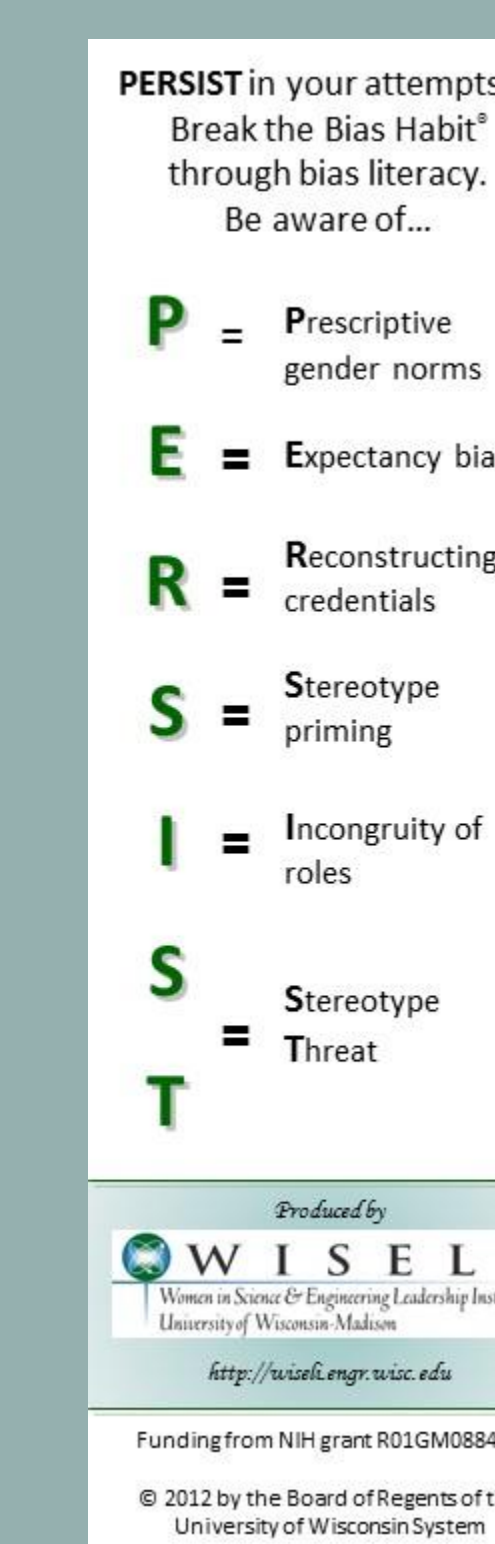
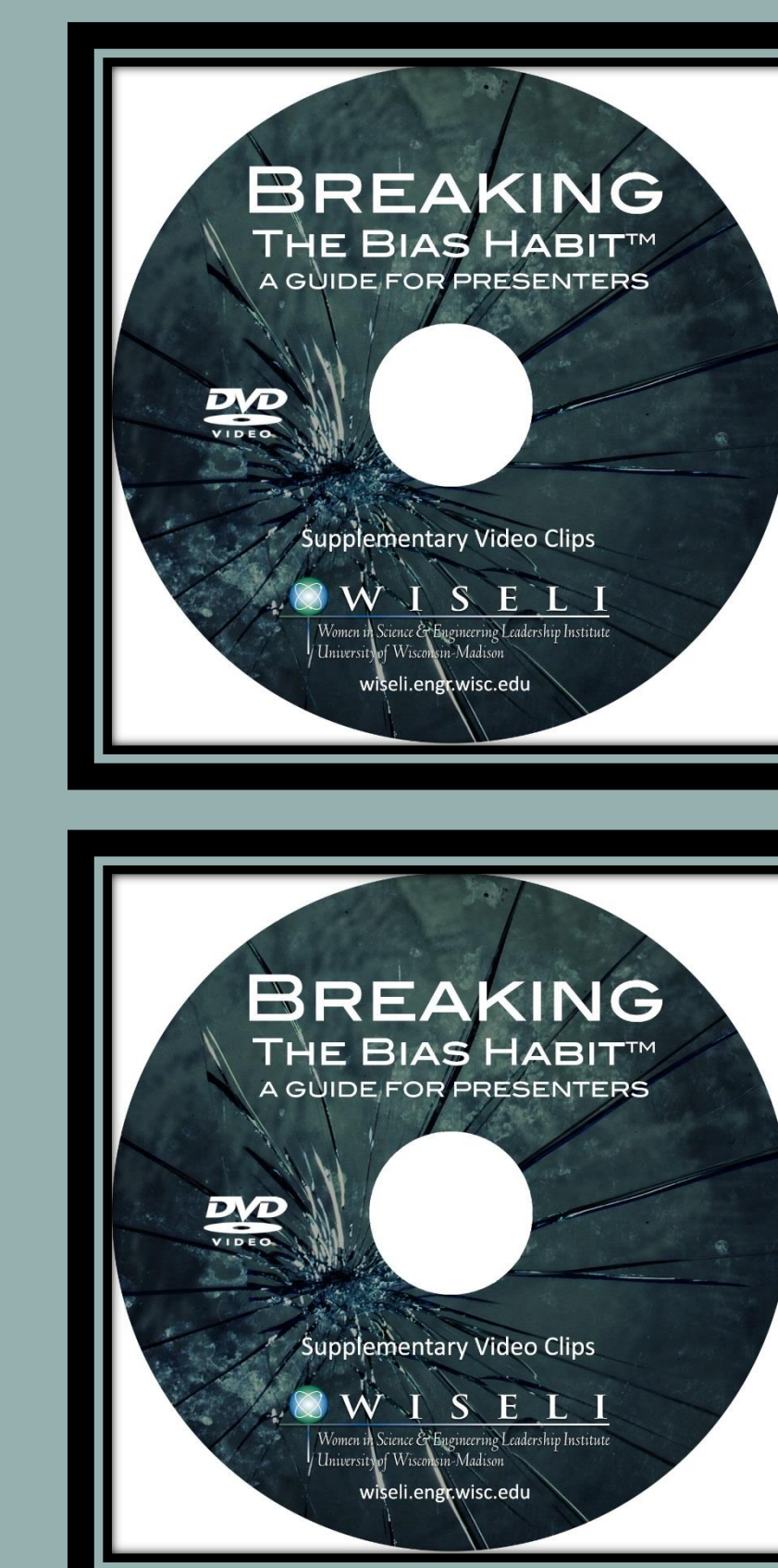
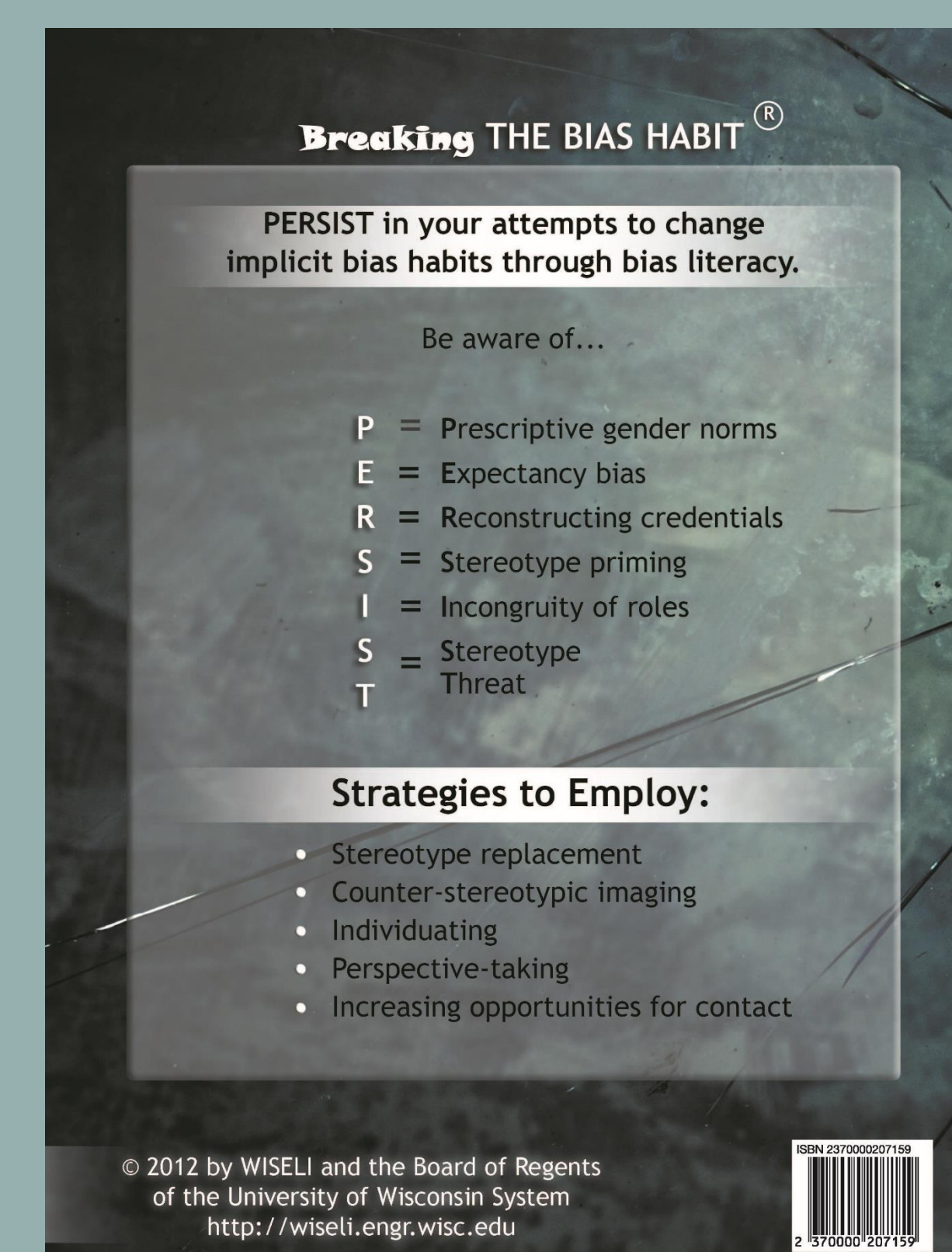
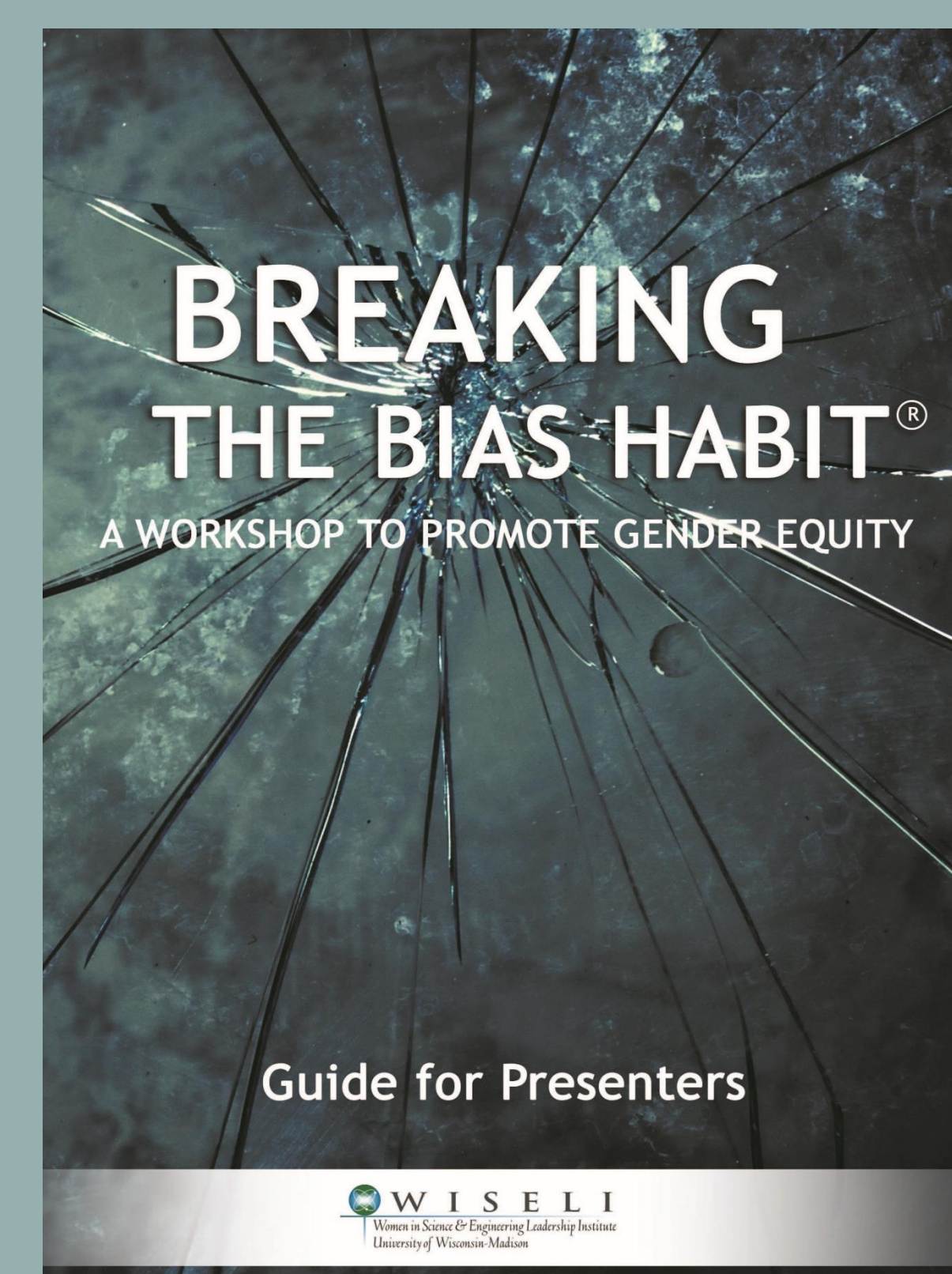
- Greater feelings of “fit”, greater perception that one’s research is valued, and more comfort raising issues of personal and professional conflict in experimental vs. control departments.

Future Plans/Directions

- Make “Train the trainer” materials available online
- Offer workshops on other campuses, possibly expanding to the business community and non-profit organizations
- Using this 2.5 hour format, create a new Bias Literacy workshop addressing racial/ethnic implicit bias

Publications

- Carnes, Molly; Patricia G. Devine; Linda Baier Manwell; Angela Byars-Winston; Eve Fine; Cecilia E. Ford; Patrick Forscher; Carol Isaac; Anna Kaatz; Wairimu Magua; Mari Palta; and Jennifer Sheridan. 2015. “Effect of an Intervention to Break the Gender Bias Habit: A Cluster Randomized, Controlled Trial.” *Academic Medicine*. 90(2): 221-230.
- Carnes, Molly; Patricia G. Devine; Carol Isaac; Linda Baier Manwell; Cecilia Ford; Angela Byars-Winston; Eve Fine; David Burke; and Jennifer Sheridan. 2012. “Promoting Institutional Change Through Bias Literacy.” *Journal of Diversity in Higher Education*. 5(2): 63-77.



Workshop materials available at the WISELI Online Bookstore: wiseli.engr.wisc.edu

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