



From the classroom to the field: Improving workplace climate in the geosciences through bystander intervention education

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Context

- Women make up 20% of geoscience faculty; of these 5% are women of color (NSF 2017) and in 2016, only 6% of PhDs were awarded to students of color (Bernard and Cooperdock 2018).
- Across disciplines, 62% of undergraduate women and 50% of women faculty experience sexual harassment (2015 AAU Survey).
- 64% of field survey respondents experienced sexual harassment and 21% sexual assault; women were more likely to experience harassment from supervisors than did men (Clancy et al. 2014).

An Intersectional Approach is Critical:

Women of color face greater risks of gendered and racial harassment (Clancy et al., 2017)

	Women of color	White women	Men
Feel unsafe at work	Due to gender 40%; Due to race 28%	Due to gender 30%	Due to gender 2%
Reported skipping professional events because they felt unsafe	18%	12%	3%



A Multi-level Approach to Cultural Change

Individual

- Raise awareness and instill sense of responsibility.
- Empower with skills for responding to incidents and supporting community.

Professional Societies & Funding Agencies

- Codify harassment, bullying and discrimination as research misconduct.
- Enforce policies to ensure safe environments.
- Require accountability from institutions.
- Provide more independent trainee funding.

Academic Institutions & Departments

- Signal no-tolerance for harassment from leadership.
- Safeguard against abuses of power.
- Disincentivize unethical behavior.
- Improve representation and build inclusive practices.

Field Research Considerations

- Expand safety plans to include harassment, bullying, discrimination.
- Safeguard against power dynamics.
- Establish clear code of conduct and reporting processes.
- Build an exit plan (but not automatically for person targeted by behavior).

Intervention

NSF ADVANCEGeo Partnership



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Project Goals

1. Collect data on workplace experiences in the geosciences.
2. Develop and test bystander intervention training with discipline-specific scenarios that incorporate intersectionality.
3. Develop teaching modules that identify harassment as research misconduct.
4. Develop a sustainable model that can be transferred to other disciplines in partnership with professional societies.

Major Activities

- Reviewed 14 existing training programs.
- Developed workshops that include active learning, bystander intervention training, discipline-specific content and examples.
- Led > 60 workshops and presentations for local and international audiences: campus department members, administrators, heads and chairs, conference attendees, alumni.
- Built relationships with Title IX offices and other campus programs.
- Generated online resources website on relevant research and tested strategies to respond to harassment, bullying and discrimination in academia.
- Expanded to other disciplines: ecology, animal behavior, evolutionary biology, neuroscience, sociology, psychology, chemistry.

Evaluation data from 18 workshops	Population
<ul style="list-style-type: none"> • 7 professional conferences • 3 Field research sites • 5 University departments • 3 professional development workshops 	<ul style="list-style-type: none"> • 590 Workshop participants • 413 Evaluation responses • 70% Response rate
Respondent demographics	Respondent demographics
<ul style="list-style-type: none"> • 115 Faculty • 57 Staff • 28 Postdoctoral researcher • 115 Graduate students • 19 Undergraduate students • 34 Other • 45 No response 	<ul style="list-style-type: none"> • 192 Female • 173 Male • 3 Non-binary • 45 No response

Evaluation Results

Workshop Evaluation Methods:

- The Kirkpatrick Model Levels 1-3
- Retrospective pre/post-test to measure learning outcomes

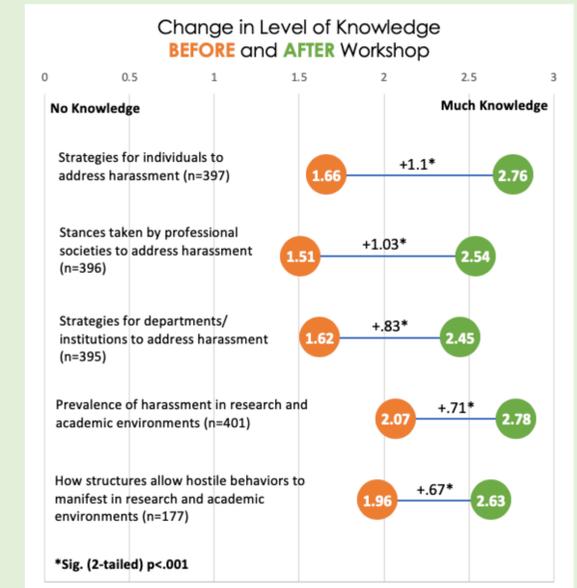


Level 1: Reaction & Satisfaction

- 99% would recommend the workshop (n=413).
- 66% of participants rate the quality of the workshop as excellent; 32% rate the quality of the workshop as good.
- 56% of participants said the scenarios are very relevant to experiences in their discipline; 33% said the scenarios are somewhat relevant to their discipline.

Level 2: Learning Outcomes

- Changes in level of knowledge about key learning outcomes have increased significantly.
- Participants enter the workshop with some knowledge about the prevalence of harassment and less knowledge about how to address harassment at individual, professional, and institutional levels.
- Participants report the greatest gains in learning about strategies for individuals to address harassment.



Level 3: Intention to Change Behavior

- 92% of participants plan to use the bystander intervention strategies presented in the workshop.

Next Steps

- Train the trainers program for workshop dissemination.
- Follow-up evaluation with workshop participants (Level 4).
- Implement workplace climate survey of professional society members.
- Expand to other disciplines.

Resources:

- AAU Climate Survey 2015 www.aau.edu/key-issues/aau-climate-survey-sexual-assault-and-sexual-misconduct-2015
- American Geophysical Union (AGU) stopharassment.agu.org
- Bernard and Cooperdock. 2018. No progress on diversity in 40 years. *Nature Geoscience* 11: 292-205.
- Clancy et al. (2014) Survey of Academic Field Experiences (SAFE): Trainees Report Harassment and Assault. *PLoS ONE* 9(7): e102172.
- Clancy et al. (2017) Double jeopardy in astronomy and planetary science: Women of color face greater risks of gendered and racial harassment. *Journal of Geophysical Research: Planets*, 122, 1610-1623.
- National Science Foundation, National Center for Science and Engineering Statistics. 2017. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017*. Special Report NSF 17-310. Arlington, VA.
- EvaluATE www.evaluate.org/webinars/2015-dec/
- Kirkpatrick Model www.kirkpatrickpartners.com/Our-Philosophy/The-Kirkpatrick-Model
- SERC serc.carleton.edu/advancegeo