

Aberystwyth University

All inside our heads?

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Author, year	Setting	Population	Aims	Sample	Type of training	Methodology
1. Cahn (2017)	Health professions schools	Faculty Search Committees	Provide learners with a definition of unconscious bias and its impact on hiring decisions in the health professions. Generating new ideas for mitigating the impact of UB.	Sample not reported N=22 completed evaluation	2h introductory workshop on unconscious bias and small group activities	Feedback questionnaire
2. Casad (2012)	Psychology department	Psychology students	Providing students with a learning experience to raise awareness of their UB	N=68, 48 women, 20 men	IAT and reflective essay writing	Feedback essay writing
3. Devine (2012)	Psychology department	Psychology students	Developing and testing the effectiveness of a habit breaking intervention for long-term reductions in implicit race bias	N=91, 67% female	12-week training course on bias reduction strategies	Longitudinal RCT
4. Gatewood (2019)	Nursing schools	Nursing students	Raising awareness of implicit bias and ways to mitigate its impact on health outcomes	N=110	Learning activities combined with IAT and discussions	Feedback questionnaire
5. Ghoshal (2013)	Large public university	Sociology students	Raising awareness of UB and its impact on thoughts and behaviours	N=155-290 (class size)	IAT exercises	Before-after survey
6. Jackson (2014)	4 US universities	STEM faculty	To investigate the effect of gender diversity training on explicit attitudes and implicit associations of STEM faculty	N=251	IATs and diversity training course	RCT
7. Stone (2020)	Medical school	Medical students	To assess if having first-year medical students complete active learning workshops would reduce their implicit stereotyping of Hispanics as medically noncompliant	Study 1 N=97 (51 female, 46 male) Study 2 N=30 (21 female, 19 male)	IATs and Active Learning workshops	Pretest-posttest

Table 1 IAT-based interventions

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Author, year	Setting	Population	Aims	Sample	Type of training	Methodology
1. Carnes (2015)	STEMM departments	STEMM faculty	To assess the effectiveness of a gender bias habit-breaking interventions	N=301(intervention)	2.5h workshop	Pair-matched, single-blind, cluster RCT
2. Hannah (2013)	Medical school	Medical students	Key goals of the course were self-reflection, self-awareness, discovering, and dispensing with “blind spots,” and discussion of often shameful past experiences of bias.	N=16	Faculty course on reducing unconscious bias	Ethnography
3. Lueke (2016)	University campus	Psychology students	To examine the potential for a mindfulness exercise to affect discriminatory behaviour	N=124 (78 female, 46 male)	Mindfulness meditation exercise and Trust Game task	Randomised mixed factorial design
4. Saetermoe (2017)	US university	Biomedicine students	To empower students in learning about and overcoming institutional barriers to their progress and transform institutions	Not reported	BUILD PODER programme research training and mentoring	Evaluation, ethnography and quasi experiments
5. West (2019)	Medical school	Medical students	To facilitate reflection on unconscious biases among medical students and discussions about race and ethnicity	N=357	Student activity for reflection on ethnoracial diversity	Evaluation, survey

Table 2 Interactive workshops

References

- Carnes, M., Devine, P. G., Baier Manwell, L., Byars-Winston, A., Fine, E., Ford, C. E., . . . Sheridan, J. (2015). The effect of an intervention to break the gender bias habit for faculty at one institution: A cluster randomized, controlled trial. *Academic Medicine : Journal of the Association of American Medical Colleges*, *90*(2), 221–230. <https://doi.org/10.1097/ACM.0000000000000552>
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Author, year	Setting	Population	Aims	Sample	Type of training	Methodology
1. Adams (2014)	Five university campuses in California, US	University students	Provide learning tools and opportunities to make students more aware of their biases	N=258	Teaching module on implicit and explicit prejudice	Survey, two group pretest-posttest
2. Carnes (2012)	STEMM departments	STEMM faculty	Promoting bias literacy and changing individual attitudes and behaviours with a view to institutional transformation	N=24, 12 male, 12 female	Bias literacy workshop with written commitments to promote gender equality	Feedback questionnaire, follow-up interviews
3. Devine (2017)	STEMM departments	STEMM departments	Increasing gender bias awareness and hiring rates of female faculty	N=98 (departments)	Bias literacy workshop	Cluster RCT
4. Goldstein Hode (2018)	Large university	University faculty	Assessing the effectiveness of an online diversity course for students	N=108	4-week online diversity course	Pretest-posttest study
5. Hennes (2018)	Summer Institute (SI) on Scientific Teaching	STEM academics	Encouraging self-efficacy and a growth mindset about bias reduction	N=149	Video interventions (VIDS) and tools module (UNITE)	Longitudinal pretest-posttest study
6. Hutchins (2019)	University	University faculty	To understand the development of cultural competence among faculty and staff	N=40	Online diversity course	Qualitative online study
7. Krutkowski (2019)	University campus	Library, technology and media services departmental staff	To explore how media reporting can reinforce unconscious bias about transgender staff and to develop new support systems	Not reported	Workshop on media coverage and myths about transgender issues	Verbal feedback
8. Moss-Racusin (2016)	National Academies Summer Institute	Life scientists	To assess the extent to which the “Scientific Diversity” workshop was associated with improvements in STEM faculty participants’ awareness of diversity issues, gender bias, and readiness to take action on diversity issues.	N=126 (70% female)	Scientific Diversity workshop	Evaluation, pretest-posttest questionnaires
9. Moss-Racusin (2018)	National Academies Summer Institute	STEM academics	To develop and validate an efficacious video intervention for bias reduction in STEM	N=450	Video interventions (VIDS)	Pretest-posttest study
10. White-Davis 2018	Medical conference	Health professionals	To help medical educators teach and address discrimination and racism	N=125 N=72 (Survey)	Interactive training workshop and toolkit	Pretest-posttest

Table 3 Diversity and literacy training

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<i>Key question</i>	<i>Problems and limitations with UBT</i>	<i>Questions to ask</i>	<i>Suggestions</i>
<i>What are the aims of the intervention?</i>	<ul style="list-style-type: none"> - Raising awareness without change - Authority of Western, objective science - Origins in social cognition and behavioural science - Naturalises and normalises violence 	<p>Are they driven by institutional agendas?</p> <p>Does it allow new situated knowledge and perspectives?</p>	<ul style="list-style-type: none"> - Identify and trace dominant discourses - Recognise inequalities as structural and historically constituted
<i>Who is the target of the intervention?</i>	<ul style="list-style-type: none"> - Deficit model targeting the 'disempowered' - Growth mindset and behaviour change aligned with neoliberal agenda - Targets all individual psyches but ignores conscious violence 	<p>Who is included or excluded and why?</p> <p>What assumptions are being made about this group?</p> <p>What inequalities are being targeted?</p>	<ul style="list-style-type: none"> - Account for multiple membership categories - Target institutional practices and societal discourses
<i>Who is designing and delivering the intervention?</i>	<ul style="list-style-type: none"> - Values psychological expertise over lived experience - Becomes a marketable short-term treatment - Focus on institutional awards and visibility 	<p>Do trainers draw on own experience and background?</p> <p>Who owns and produces knowledge?</p>	<ul style="list-style-type: none"> - Conduct a needs analysis with participants - Recognise own power - Turn to discomfort and explore resistances
<i>What constitutes a successful intervention and how is it evidenced?</i>	<ul style="list-style-type: none"> - Narrow focus on IAT scores - Ignores social, historical and political context - Promises quick and easy fix 	<p>Aiming for awareness or change?</p> <p>Who is accountable for change?</p> <p>What counts as evidence?</p>	<ul style="list-style-type: none"> - Consider action research cycles and participatory methods - Consider how evidence is used to support institutional agendas

Table 4 An intersectional framework for EDI interventions