Does Implicit Bias Affect Hiring in Science?

The under-representation of women in science, technology, engineering, and math (STEM) is well documented. There is a debate about whether implicit bias plays a role in hiring.

Implicit Bias
occurs when stereotypes that are automatically activated bias outcomes.

A common automatic association is between science and men. It can be linked to differences in performance and participation in STEM. Can it bias decision-making in real-world hiring contexts?

Explicit Beliefs About Bias
People sometimes feel justified in letting their implicit stereotypes bias their decisions.

If they believe bias isn’t a problem, they might not suppress their implicit stereotypes.

Implicit stereotypes can be justified by a person’s explicit beliefs, which can help us:

- control the effect of implicit bias on behavior
- increase their impact if a person believes their actions are rational or objective.

Hiring Committee Study
Do implicit stereotypes and explicit beliefs predict hiring outcomes for women in a real world STEM context?

39 committees hiring elite research positions were tested over 2 years for their implicit stereotypes, explicit beliefs, and selection outcomes. This study measured the committee average of the following biases:

- Implicit stereotypes: science=male association
- Explicit beliefs about biases: do women face external barriers to their success (e.g. discrimination)?

Explicit awareness that women face barriers to success

Group norms may affect how much stereotypes are acknowledged, set aside, or justified.

Half of the committees did not believe gender bias is a problem.

Habit-Breaking Interventions

- make decision-makers aware of implicit biases
- provide effective strategies for reducing impact of implicit biases
- understand the consequences of implicit biases

To have a greater effect, education strategies should be paired with strong accountability measures.

Learn more about implicit bias, what you can do to combat it, and our research in our white paper series on our website: successinstem.ca
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References


About Project RISE

How can we educate adults about implicit bias in a way that fosters mutual respect and creates a more inclusive culture in the workplace? Project RISE (Realizing Identity-Safe Environments) will harness our understanding of implicit bias, intergroup contact, and social identity threat to create a more “identity safe” workplace culture. Interventions designed to create identity-safe contexts have been shown to narrow the gender gap in academic performance. Project RISE aims to create positive cultural change for women and men in science and engineering by: (1) educating participants about implicit bias, (2) fostering supportive and respectful interactions between men and women in the organization, and (3) providing them with a clear understanding for how to combat bias. Learn more at: successinstem.ca/projects/rise/

About Engendering Success in STEM (ESS)

Engendering Success in STEM (ESS) is a research partnership focused on evidence-based solutions to foster positive working environments for people in STEM (Science, Technology, Engineering, and Math). We bring together social scientists, STEM experts, and stakeholders in STEM industry and education to use an evidence-based approach to break down barriers people face on their pathway to success. Canada’s Social Sciences and Humanities Research Council reviewed and funded this project.