

Organizational Policies and Interpersonal Acceptance Predict more Positive Daily Outcomes for Women in Science and Engineering*

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Summary Maximizing innovation in science, technology, engineering, and math (STEM) requires harnessing the creative benefits of a diverse workforce. Gender stereotypes that associate STEM more with ‘male’ than with ‘female’ can make it less likely that women feel fully welcome in these fields and achieve their potential. The present research is a quantitative analysis of women’s and men’s daily experiences in engineering as predicted by the gender inclusivity of their organization.

1. Relevance

Women are extremely underrepresented in engineering and often cite workplace culture as a reason they leave the profession. Although explicit bias still exists, more subtle organizational cues and social interactions with men can signal an unwelcome environment and make women aware of being devalued on the basis of their gender, a phenomenon called social identity threat.

2. Aims & Objectives

Social identity threat has often been examined as contributing to the interest and achievement gap among female and male students in STEM subjects. Our aim was to extend this past work to understand the experience of women and men training and working in science and engineering fields. We analyzed how women’s daily experiences of social identity threat and mental burnout at work might be cued by women’s social interactions and a culture of inclusivity in the workplace.

3. Methods

The present research used daily diary survey methodology with three samples of men and women to provide a quantitative analysis of the naturalistic experience of women in STEM. Sample 1 (N = 120) included STEM graduate students; Samples 2 (N = 96) and 3 (N = 269) were working professionals. Participants rated the positivity of their interactions with colleagues over 10 work days and completed daily measures of social identity threat and psychological burnout. In Studies 2 and 3, participants also rated the presence of gender inclusive workplace policies and practices in their organizations.

4. Results

Results of multilevel modelling in all three samples revealed that: 1) women (but not men) reported greater daily experiences of social identity threat on days when their conversations with men (but not women) cued a lack of acceptance, and 2) these daily fluctuations of social identity threat predicted feelings of mental burnout only for women. Results of Studies 2 and 3 revealed that female engineers’ daily experience of social identity threat was lower in companies perceived to have more gender inclusive policies, as mediated by having more positive conversations with male colleagues. These effects were empirically distinct from having hostile interactions at work.

5. Conclusions

The present work reveals that subtle interpersonal and organization cues to exclusion predict women’s daily experiences in STEM. When companies have more gender inclusive policies in place and men communicate acceptance, women report little concern about their gender and experience less mental burnout. A culture of inclusivity might allow companies to embrace the benefits of diversity and recover human potential that would otherwise be lost under the weight of identity threats.

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