

Abstract Submitted
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Examining how discussing underrepresentation may mediate female engagement in physics¹ ROBYNNE M. LOCK, REGANNE TOMPKINS, ZAHRA HAZARI, Department of Engineering and Science Education, Clemson University — Despite the large number of female students taking high school physics, only about a fifth of physics bachelor's degrees are awarded to women. In a previous study, we tested five factors commonly proposed to positively impact female students' choice of a physical science career using multivariate matching methods on national survey data. Four of these factors (having a single-sex class, having female scientist guest speakers, having a female physics teacher, and discussing the work of female scientists) were found to have no effect. The only factor found to have a positive effect was the explicit discussion of the underrepresentation of women in physics. In order to explore this further, a case study of the classes of one teacher reported to discuss the underrepresentation of women was conducted. Two classroom underrepresentation discussions were recorded, students and teacher were interviewed, and relevant student work was collected. Analyzing the case study data, we report on how discussing underrepresentation may mediate female engagement in physics.

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