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Women in physics: A comparison to science, technology, engineering, and math education over four decades[1]

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Women have been underrepresented in many STEM fields including physics. The gap appears to be largely attributable to a lack of women pursuing physics in college, and little is known about the characteristics and career interests of women who do plan to major in physics. Using nationwide data on first-time, full-time college students, this study set out to: (1) document national trends in plans to major in physics among women entering college; (2) document the career aspirations of women who intend to major in physics; and (3) explore the characteristics of women who intend to major in physics and how this population has evolved across time. The results show that women's interest in physics has been consistently low in the past four decades. The most popular career aspiration among women who plan to major in physics is research scientist, although this career aspiration is declining in popularity. Further, this study identifies a distinctive profile of the average female physics student as compared to women in other STEM fields and women across all majors. Women who plan to pursue a physics major tend to be confident in their math abilities, value college as an opportunity to learn, plan to attend graduate school, and are less likely than women in other fields to have a social activist orientation. The paper concludes with implications for scholars, educators, administrators, and policymakers as they seek to recruit more women in to the physics field.

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