

# Gender-Science Stereotypes, Science Identity, and Gender Identity as Predictors of Intentions to Pursue Science



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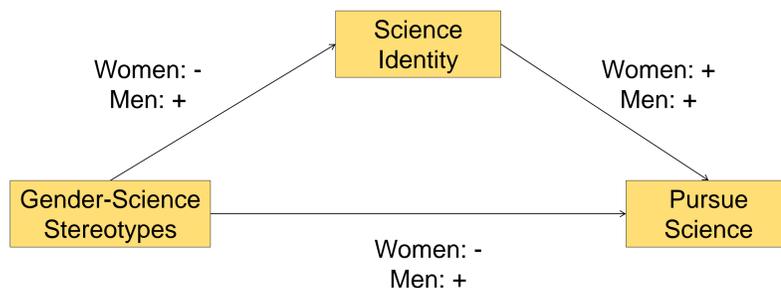


## INTRODUCTION

Women continue to be underrepresented in science. One factor contributing to women's underrepresentation is *choice*; qualified women often choose to pursue other career paths. The current research examines whether interest in pursuing science is constrained by gender-science stereotypes.

In addition, stereotypes signal who belongs and who does not belong in a domain, contributing to one's sense of belonging in and identification with science. Therefore, we also examine whether science identity mediates the relation between gender-science stereotypes and one's intentions to pursue science.

## HYPOTHESES



Should be stronger among those for whom gender stereotypes are most relevant (i.e., highly gender-identified people).

## METHOD

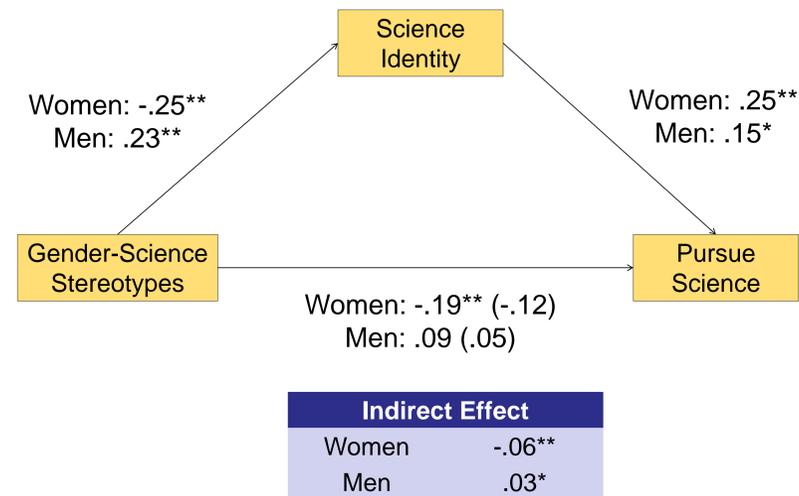
876 female and 826 male undergraduate science majors completed IAT and self-report measures of the following variables:

- Science Stereotypes: *science=male* vs. *humanities=male*
- Science Identity: *me=science* vs. *me=humanities*
- Gender Identity
  - IAT: *me=own gender group* vs. *me=other gender group*
  - Self-report: *Importance of gender to self-concept*
- Intentions to Pursue Science (self-report only)
  - e.g., "How likely is it that your career will pertain to science?"

## RESULTS

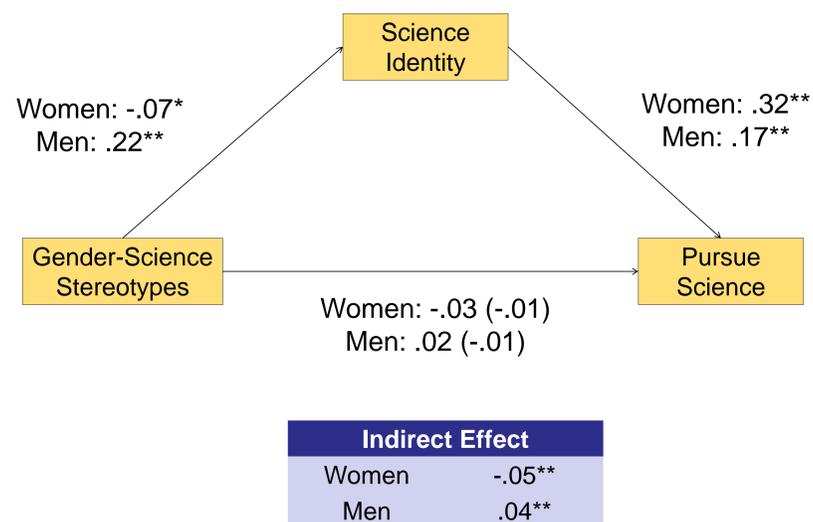
### Implicit Associations

Figure 1.



### Self-Report Measures

Figure 2.



Note. All regression weights are unstandardized. \*  $p < .05$  and \*\*  $p < .01$ .

## RESULTS (Continued)

### Does gender identification moderate the effects?

First, we examined whether gender identification moderated the relation between gender-science stereotypes and intentions to pursue science, as indicated by a significant Stereotype x Gender Identity interaction:

	Implicit		Self-Report	
	Women	Men	Women	Men
<b>Stereotype x Gender Identity</b>	<b>-.11</b>	<b>-.02</b>	<b>.07*</b>	<b>-.05*</b>
<i>Weak Gender Identity</i>	--	--	<b>-.09*</b>	<b>.09*</b>
<i>Strong Gender Identity</i>	--	--	.02	-.01

Second, we examined whether science identification mediated the moderated effect for self-report measures (i.e., mediated moderation)

In addition to showing a significant moderated relation between the IV and DV, three conditions must be met to demonstrate mediated moderation:

1.  $IV \times Moderator \rightarrow Mediator$  (i.e., Path  $a \neq 0$ )
2.  $Mediator \rightarrow DV$ , when controlling for  $IV \times Moderator$  (i.e., Path  $b \neq 0$ )
3.  $a \times b \neq 0$  (i.e., Total effect  $\neq$  residual effect)

These conditions were not met for either women or men:

	1. Path a	2. Path b	3. Indirect Effect
<b>Women</b>	.07	.32**	.02
<b>Men</b>	.00	.17**	.00

Therefore, gender identity does not appear to moderate the mediation pattern shown in Figures 1 and 2.

## CONCLUSIONS

Stereotypes have an indirect effect on intentions to pursue science:

- Stereotypes (implicit & self-report) predict science identity:
  - Among women, greater stereotyping  $\rightarrow$  weaker identity
  - Among men, greater stereotyping  $\rightarrow$  stronger identity
- Science identity, in turn, predicts intentions to pursue science.

Inconsistent with hypotheses, however, this mediation pattern does not appear to be stronger among those strongly (vs. weakly) gender identified.

Unexpectedly, the direct effect of self-reported stereotypes on intent to pursue science was stronger among those *weakly* (but not strongly) identified with their gender. This result is inconsistent with hypotheses and with prior research (e.g., Kiefer & Sekaquaptewa, 2007). We are currently analyzing additional data to see if we replicate the unexpected findings.