

Supplemental Material

CBE—Life Sciences Education

Salehi *et al.*

Supplementary materials

Context matters: social psychological factors that underlie academic performance across [seven](#) institutions

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Supplemental materials include:

Table S1. Survey items with descriptive statistics

Table S1. Items used in a survey of undergraduate biology students across multiple institutions. Students responded to survey items on a 7-point Likert scale. Here we include the survey item, as well as descriptive statistics of each individual item along the 7-point scale. In the structural equation model (SEM), we normalized the two social-psychological constructs across our whole sample. For more explanation about this choice see Salehi *et al.* (2020).

Test Anxiety Construct (Pintrich et al., 1993)	Mean (M) and Standard deviation (SD)
<p>TA1. I have an uneasy, upset feeling when I take a test.</p> <p>TA2. I am so nervous during a test that I cannot remember facts that I have learned.</p> <p>TA3. I worry a great deal about tests.</p> <p>TA4. When I take a test, I think about how poorly I am doing.</p>	<p>TA1</p> <p>$M_{cc} = 3.94, SD_{cc} = 2.07$</p> <p>$M_{Inc} = 4.14, SD_{Inc} = 2.00$</p> <p>$M_{Sel} = 4.23, SD_{Sel} = 1.78$</p>
	<p>TA2</p> <p>$M_{cc} = 3.77, SD_{cc} = 2.03$</p> <p>$M_{Inc} = 3.89, SD_{Inc} = 2.00$</p> <p>$M_{Sel} = 3.87, SD_{Sel} = 1.80$</p>
	<p>TA3</p> <p>$M_{cc} = 4.81, SD_{cc} = 2.07$</p> <p>$M_{Inc} = 4.94, SD_{Inc} = 1.96$</p> <p>$M_{Sel} = 4.75, SD_{Sel} = 1.76$</p>
	<p>TA4</p> <p>$M_{cc} = 3.79, SD_{cc} = 1.99$</p> <p>$M_{Inc} = 3.91, SD_{Inc} = 1.96$</p> <p>$M_{Sel} = 4.04, SD_{Sel} = 1.76$</p>
<p>Ethnicity Stigma Consciousness Construct (Picho & Brown, 2011)</p> <p>ESC1. My ethnicity affects how I interact with people of other ethnicities</p> <p>ESC2. My ethnicity influences how teachers interact with me</p> <p>ESC3. People from other ethnic groups interpret my behavior based on my ethnicity</p> <p>ESC4. My ethnicity affects how my peers interact with me</p> <p>ESC5. Most people judge me on the basis of my ethnicity</p>	<p>ESC1</p> <p>$M_{cc} = 2.96, SD_{cc} = 1.95$</p> <p>$M_{Inc} = 3.41, SD_{Inc} = 1.97$</p> <p>$M_{Sel} = 3.16, SD_{Sel} = 1.30$</p>
	<p>ESC2</p> <p>$M_{cc} = 2.44, SD_{cc} = 1.59$</p> <p>$M_{Inc} = 3.30, SD_{Inc} = 1.81$</p> <p>$M_{Sel} = 2.78, SD_{Sel} = 1.19$</p>
	<p>ESC3</p> <p>$M_{cc} = 3.16, SD_{cc} = 1.72$</p> <p>$M_{Inc} = 3.80, SD_{Inc} = 1.69$</p> <p>$M_{Sel} = 2.01, SD_{Sel} = 1.16$</p>
	<p>ESC4</p> <p>$M_{cc} = 2.85, SD_{cc} = 1.63$</p> <p>$M_{Inc} = 3.56, SD_{Inc} = 1.69$</p> <p>$M_{Sel} = 3.00, SD_{Sel} = 1.18$</p>
	<p>ESC5</p> <p>$M_{cc} = 2.75, SD_{cc} = 1.59$</p> <p>$M_{Inc} = 3.47, SD_{Inc} = 1.61$</p> <p>$M_{Sel} = 2.81, SD_{Sel} = 1.15$</p>

References

Picho, K., & Brown, S. W. (2011). Can stereotype threat be measured? A validation of the social identities and attitudes scale (SIAS). *Journal of Advanced Academics*, 22(3), 374–411.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ). *Education and Psychological Measurement*, 53(3), 801–813.

Salehi, S., Cotner, S., & Ballen, C. (2020). Variation in incoming academic preparation: Consequences for minority and first-generation students. *Frontiers in Education* (5), 552364.