

README File for the Dataset Associated with the Research Article Titled: Inspiration, inoculation, and introductions: Critical elements to improving persistence for undergraduate women pursuing geoscience careers

Research Article Authors: Paul R. Hernandez¹, Amanda S. Adams², Rebecca T. Barnes³, Brittany Bloodhart⁴, Melissa Burt⁵, Sandra M. Clinton³, Wenyi Du⁶, Heather Henderson⁶, Ilana Pollack⁵, Emily V. Fischer⁵

Author Affiliations: ¹Texas A&M University, ²University of North Carolina at Charlotte, ³Colorado College, ⁴California State University San Bernardino, ⁵Colorado State University, ⁶West Virginia University

Citation: Hernandez, P.R., Adams, A.S., Barnes, R.T. et al. Inspiration, inoculation, and introductions are all critical to successful mentorship for undergraduate women pursuing geoscience careers. *Commun Earth Environ* 1, 7 (2020). <https://doi.org/10.1038/s43247-020-0005-y>

Research Article Abstract: Despite efforts to improve diversity in the geosciences, many demographic groups remain underrepresented (e.g., women) with disproportional recruitment and retention at every stage of the academic to professional pipeline. Research indicates that mentoring and role modeling programs can improve women's motivation and persistence in geoscience-related degree and career pathways. Mentorship programs, however, consist of multiple components that vary in complexity and cost, which can limit replicability, scalability, and sustainability. We conducted a randomized experiment to identify the critical elements of a prototypical successful mentorship program for undergraduate women pursuing geoscience degrees and careers. Our goal was to isolate key program factors that can be replicated across a range of institutional settings. Here we show that the combination of exposure to geoscience careers via female career role models (*Inspiration*), training on how to grow their network of mentoring relationships and overcome obstacles (*Inoculation*), and an introduction to a local female geoscientist mentor (*Introduction*) were necessary to increase mentoring, motivational, and persistence outcomes for undergraduate women interested in the geosciences.

Keywords: mentors, gender, STEM education, identity, coping skills, persistence

Data Contacts: Paul R. Hernandez (primary), prhernandez@tamu.edu, 979-464-9229
Emily V. Fischer, evf@rams.colostate.edu, 970-491-8587

Data Description: Survey data were collected via the online Qualtrics survey system one week prior and three months after a professional development workshops held in the winter (January/February) of 2019. Regional professional development workshops were held at Colorado State University (FrontRange workshop) and North Carolina State University (Carolinas workshop). This repository contains the data file associated with the pre- and post-workshop surveys utilized in the analyses presented in this research article.

Spatial coverage: Colorado, Wyoming, and North Carolina

Temporal coverage: 2019-01-01-2019-04-30

Format of Data Files: Data files are in .csv format. Files can be opened by most software (e.g., Notepad, WordPad, Excel) – anything that can read a comma delimited ASCII text file. Here, the file name is “Dataset.” In addition, a meta-data file accompanies the data file. The meta-data file contains the variable names, variable labels, and value labels for all variables contained within the “Dataset.csv” file.

Those interested in using these data are encouraged to contact Dr. Paul Hernandez (prhernandez@tamu.edu) and Dr. Emily Fischer (evf@rams.colostate.edu) for more information.

Funding for this work was provided by the National Science Foundation through grant number DUE-1431795, DUE-1431823, and DUE-1460229.