



The Analytics for Equity Initiative

Job Satisfaction, Stress, and Burnout: Impact of Postdoctoral Experience and the Moderating Effect of Institutional- and Individual-Level Factors

Lead Researcher: Dr. Deepak Ganta and Dr. Marcus Ynalvez

Lead Institution: Texas A&M International University

Research Theme: Equity of Access to STEM Research and Education Opportunities Research

Research Questions: How does postdoctoral experience impact the mental health and well-being of early career STEM doctorates? How do institutional and individual attributes condition the impact of postdoctoral experience on mental health and well-being of early career STEM doctorates? What postdoctoral experience results in high job satisfaction, low stress, and reduced burnout among STEM early career doctorates?

Data: The data set we will use comes from the NSF/NIH-sponsored 2017 Early Career Doctorate Survey.

Abstract:

Postdoctoral status (postdocs) is a temporary position for newly minted doctorates to gain more years of research experience and technical training and prepare them for permanent jobs as independent researchers. Postdocs typically receive low remuneration, are not appropriately and adequately recognized for their accomplishments and work, have long work hours stretching to the weekends, and are under pressure to write grant proposals, generate novel results, and publish in top-tier outlets. Such a situation can adversely affect mental and physical health and well-being. Using the NSF's and the National Institutes of Health's (NIH) Early Career Doctorates Survey (ECDS) data set, we examine the postdoctoral experience. Specifically, our focal research questions are: How does postdoctoral experience impact early career STEM doctorates' mental health and well-being? How do institutional and individual attributes condition the impact of postdoctoral experience on the mental health and well-being of early career STEM doctorates? What postdoctoral experience results in high job satisfaction, low stress, and reduced burnout among STEM early career doctorates? Advanced statistical modeling and machine learning techniques will be used to process the data. Identifying factors that impact mental health and well-being in scientific life may assist in the development of evidence-based policies and best practices to mitigate inequality in science, reduce discrimination, prejudice, and stereotyping in scientific life, and improve diversity, equity, and inclusion in science.



Photo Credit: Photo from ATE Impacts 2018-2019 book (<https://ateimpacts.net/book>)