

I am an applied microeconomist interested in the design and evaluation of policies that address inequalities in education and mental health access. Most of my research focuses on two questions:

- What is the effect of increased access to mental health services in primary and secondary schools on adolescent outcomes?
- What are the determinants of, and potential solutions to, race and gender specific gaps in STEM fields?

At the intersection of these two research strands is the fundamental issue of identifying barriers to long-run academic and labor market productivity, especially those that may adversely impact women and individuals from minority backgrounds. This research agenda originated from personal experiences with public school education: in my own public high school I observed how school-based healthcare filled a critical gap for many students; in my volunteer work as a computer science instructor in low-income public schools, I witnessed how stereotypes and misinformation can deter girls and minority-background youth from developing an interest in STEM fields; and in my own collegiate experiences, I learned how gaps that form in early education can impact one's college decisions. My research employs data-driven methods and a deep understanding of the policy contexts I study. I hope to continue expanding this work with the goal of designing and evaluating policies to improve outcomes for underserved individuals throughout the education pipeline.

### ***Mental Health Access in Schools***

My job market paper, *The Effect of School-Based Healthcare on Adolescent Mental Health and Behavior*, attempts to fill a gap in the literature on interventions to address adolescent mental health. Specifically, I study the impact of access to School-Based Health Centers (SBHCs) on delinquent behaviors and mental health. SBHCs are full-service health clinics located in or near K-12 schools, that provide adolescent-focused health services at low or no cost to students. While these clinics originated to fill gaps in primary healthcare for low-income students, they have expanded to serve students of all backgrounds and to provide a wide range of services, including mental health care. The SBHC model of healthcare provision is well-positioned to address the three main documented barriers to take-up of mental health services: financial cost, physical distance, and stigma. Yet, there is little rigorous evidence of the impact of SBHC access on adolescent behavior.

In this paper, I link data on SBHC openings between 2011-2019 in California to school-level data on suspensions, dropout rates, and self-reported mental health from the California Department of Education (CDE) to examine the effects of SBHC access on suspensions and dropout behavior. To address selection into opening an SBHC, I use a propensity-score matching approach to select control schools in combination with a difference-in-differences identification strategy. I find that in the years following the opening of an SBHC, school-level suspension rates decrease by between 0.9 - 1.1 percentage points, a nearly 27% decrease from the control baseline rate. Exploring mechanisms, I find that this decrease is driven by a decrease in suspensions caused by disruptive behavior rather than suspensions caused by offenses such as violence, weapon possession, or drug use. I find no effect on dropout rates, suggesting that the decline in suspensions is unlikely to be caused by the crowd-out of delinquent behavior by an increase in dropouts. I also provide descriptive evidence that worse reported mental health and school climate are positively correlated with higher suspension rates but not necessarily with higher dropout rates. These results suggest that school-based health centers warrant further consideration as an effective means of addressing adolescent mental health.

I am currently expanding this work in two directions. The first is to look at the effect of SBHC access during COVID-19, a documented exacerbator of the adolescent mental health crisis. Through my partnership with the California School-Based Health Alliance, I have acquired data on the operations of California's SBHCs during the pandemic. In joint work with Julian Betts, the Public Policy Institute of California (PPIC), and the CDE, I am assessing whether access to existing school-based health centers mitigated the impact of the pandemic on students' test scores, absenteeism, and socioemotional well-being. A second expansion of my research on this topic focuses on evaluating telehealth as a vehicle for mental health service provision. I am working with Sally Sadoff and Alex Wellsjo at UC San Diego in partnership with Hazel Health, a telehealth provider, to evaluate the rollout of telemental health services in Los Angeles County schools. We plan to begin evaluation design in November 2023.

### *Gender and Racial Gaps in STEM majoring*

The second strand of my research agenda focuses on understanding the barriers to majoring in certain high-return fields for women and underrepresented minority (URM) students. Low levels of racial and gender diversity in STEM fields have been well documented for multiple decades; yet there is minimal evidence on the exact barriers that preclude individuals from entering these fields. One potential barrier that may be especially relevant for URM students is incomplete information about STEM fields due to a lack of exposure prior to college.

In my primary paper on this topic, *What You Don't Know Might Deter You: The Effect of Information Provision on Minority Retention in Undergraduate Economics*, I run two waves of a large-scale randomized controlled trial at a research university to test whether incomplete information poses a barrier to majoring in Economics for URM students, and whether this barrier can be addressed with a simple information intervention administered in an introductory undergraduate Economics course. I design an information intervention that addresses misconceptions about the types of research topics, types of careers, and expected income associated with Economics, and emphasizes the diversity of Economics researchers. In addition to partnering with the university registrar's office to collect administrative data on students' future Economics course selections, performance, and major declarations, I design and administer baseline and endline surveys to examine how students update their beliefs in response to the information intervention. Results from the first wave of the experiment suggest that the intervention increased the likelihood of taking a subsequent Economics course for URM students by around 12.3 percentage points and that this increase in enrollment likelihood is driven by lower-performing students. Additionally, I find evidence that URM students primarily update their beliefs on the areas of study and research covered by Economics. These results are consistent with the theory that information on the breadth of the Economics field may appeal to a URM student who is "on the margin" between staying in the field and dropping out, by changing their perceptions of the field. Absent receiving this information, those students may be deterred from persisting in the field by poor performance in difficult introductory courses.

A related paper (joint work with Tara Sullivan) examines the determinants of college-major switching behavior and how those determinants differ by gender in STEM fields. In Sullivan's dissertation, she uses the Beginning Postsecondary Survey to show that conditional on the same average GPA, women are more likely to switch out of STEM majors than men. Our extension of this project aims to disentangle whether these gender differences are driven by GPA signals or confounding factors. Quasi-experimental evidence on the drivers of gender-differences in major switching will motivate the design of interventions that better target barriers to entry in high-return majors.