

Co-creation of Digital Tools to Enhance Participation in COVID-19 Clinical Trials Among Young Racial and Ethnic Minority Adults

Investigators

- Joshua S. Yang, MPH, PhD - California State University, Fullerton
- Tim K. Mackey, MAS, PhD, - S-3 Research LLC

Project Summary

Increasing participation of young racial and ethnic minority adults in COVID-19 clinical trials is essential to reducing health disparities in the uptake of COVID-19 vaccinations and associated treatment burden. In response, this research study utilizes novel approaches involving big data, machine learning, data science, and community-driven qualitative research methodologies to develop and evaluate a digital tool to encourage young racial and ethnic minority adults to participate in clinical trials. The efficacy of the digital health tool will be evaluated by conducting a controlled before-and-after study among a population of college students at a minority serving institution. This project will result in co-creation of a digital health tool to increase participation among young racial and ethnic minority adults in various clinical trials, including COVID-19.

Populations Served: Asian, Black or African American, White, and Hispanic or Latino

Goals/Aims:

- Use data mining and machine learning methodologies to perform a geospatial analysis of ClinicalTrials.gov listed COVID-19 clinical trial studies to understand the distribution of clinical trials sites and its proximity to underrepresented clinical trial populations.
- Analyze multiple social media platforms to identify and characterize user self-reported knowledge, attitudes and lived experiences with COVID-19 clinical trials.
- Identify specific rationalities, cultural norms, and historical influences related to COVID-19 clinical research engagement with racial and ethnic minority young adults in the Los Angeles-Long-Beach-Anaheim Metropolitan Statistical Area (LALBA-MSA) through deep, nuanced focus group discussions.
- Jointly create and design a digital health tool to encourage clinical trial participation through co-design sessions and pilot testing held with racial and ethnic minority young adults in LALBA-MSA.
- Evaluate the efficacy of the co-created digital health tool by conducting a controlled before-and-after study among young adult college students at a university designated as a minority serving institution.

Publications/Abstracts/Posters, etc.

- Mackey, T., Xu, Q., McMann, T., Li, J., Cuomo, R.E., Li, Z., Le, N., Wenzel, C., and Mabrouk, I. [Leveraging Multiplatform Infodemiology to Detect and Characterize Barriers to COVID-19 Vaccine Clinical Trial Participation](#) (poster presentation). American Public Health Association Annual Meeting, Boston, MA, November 8, 2022.
- Mackey, T., Xu, Q., Li, J., Cuomo, R.E., and Mabrouk, I. [Characterizing Twitter Public Sentiment on COVID-19 Clinical Trials Using Unsupervised Machine Learning and Longitudinal Analysis](#) (poster presentation). American Public Health Association Annual Meeting, Boston, MA, November 8, 2022.
- Cuomo, R.E., Yang, J., Li, Z., and Mackey, T. [Demographic Disparities and Spatial Variability of COVID-19 Clinical Trials in the United States](#) (oral presentation). American Public Health Association Annual Meeting, Boston, MA, November 8, 2022.