

Ana Bravo

BIostatistician | Data Scientist

University of Miami, Miller School of Medicine

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Specialized in cleaning, modeling, and visualizing data using advanced programming languages such as R, SAS, and STATA.

Education

Florida International University

MPH - Biostatistics

Florida, USA

2023

Florida International University

BA - Psychology

Florida, USA

2018

Miami Dade College

AA - Psychology

Florida, USA

2016

Research Experience

University of Miami Miller School of Medicine

Department of Public Health

Data Scientist I, Primary Investigator: Mariano Kanamori, Ph.D.

Aug 2023 - Present

- Utilize R for data wrangling, manipulation, cleaning, statistical analysis, and visualizations to extract insight from social network data.
- Develop and deploy custom R scripts and functions to automate data import, summarization, and transformation to streamline processes.
- Skilled in visualizing ego-centric (personal network) data using a variety of different R packages such as egoR, igraph, and SNA to analyze different patterns of communication within a network.
- Skilled in creating dynamic and static reproducible reports using Quarto and Shiny to create informative visualizations to show survey response trends in Likert scale data.
- Utilize ggplot2, ggstatplot, and Plotly to create health-related visualizations on Pre-exposure prophylaxis (PrEP) use among a Latino sample in South Florida.
- Proficient in Tidygraph principles such as adding graphs, edge, and centrality measures to provide tidy API for network manipulation.

Center for Research on U.S. Latino HIV/AIDS and Drug Abuse

Florida International University

Data Analyst Intern, Primary Supervisors: Weize Wang, MPH and Patria Rojas, Ph.D., MPH, MSW

Dec 2022 - Jun 2023

- Analytical skills and proficiency in SAS, STATA, SQL and R Programming language to analyze longitudinal, repeated measures, and cohort data.
- Performs various data analytics manipulation tools such as cleaning, transforming, pivoting and visualizing data for optimal data use.
- Performed statistical analysis using a variety of statistical models such as parametric, non-parametric hypothesis testing, linear regression, logistic regression, survival analysis, and longitudinal data modeling using GEE and mixed effects model methods.
- Experienced in cleaning and merging big data using pivoting techniques in R, SAS, and SQL.
- Skilled in using a wide variety of data analytical methodologies to address issues such as data missingness and trouble shooting technical difficulties.
- Interpreted data analysis results to investigators with and without statistical subject matter knowledge

Substance Use Neuropsychology Lab

Florida International University

Senior Research Assistant, Primary Investigator: Raul Gonzalez, Ph.D.

Feb 2020 - Jul 2023

- Conduct assessment for the longitudinal Adolescent Brain Cognitive Development (ABCD) Study under the direct supervision of Dr. Raul Gonzalez.
- Administer clinical interviews (e.g., KSADS, PPS, Substance use questionnaires, Alcohol, Nicotine and Marijuana TLFB measurements to school aged children for a ten-year longitudinal study.
- Administer and score neuropsychological and neuro-behavioral tasks (RAVL-T, NIH Tool Box, Emotional Stroop Task) with ABCD participants.
- Conduct suicide-risk assessment under the supervision of an onsite clinician during protocol visits and conduct suicidality follow up with parents.
- Conduct Time Line Follow Back Interview (TLFB) to obtain youth estimates of past year marijuana, cigarette and other substance use.
- Collection of different biological specimen samples from a variety of different domains such as hair, urine, saliva, blood, DNA saliva sample, and Dräger breathalyzer.

Child Anxiety and Phobia Program

Florida International University

RESEARCH ASSISTANT, PRIMARY INVESTIGATOR: JEREMY PETTIT, PH.D.

Apr 2017 - Feb 2020

- Assisted during the administration of evidence based assessment e.g., exposure therapy and treatment to children and adolescents with anxiety and depression threshold and sub-threshold disorders.
- Organization of clinical case files for youth and adolescents that come into phobia center for anxiety and depression treatment.
- Conduct intake phone interviews on potential participants to determine treatment plan for anxiety and depressive disorders (GAD, MDD, SAD etc.)
- Assisted in the completion of psychosocial questionnaires during clinical interview as well as administer computer based tasks such as Flanket test for executive functions.
- Participated in data capture for diagnostic code of children and parents with anxiety disorder that meet criteria for DSM-5 related disorders for different time points (pre, post, and follow-up.)
- Assist, recruit, and schedule participants for incoming projects such as Attention Training (AT-RCT) for social anxiety study that included EEG assessment for participants.

Assess Behavior, Cognition, and Emotion Regulation in Children and Adolescents Lab

Florida International University

RESEARCH ASSISTANT, PRIMARY INVESTIGATOR: ERICA D. MUSSER, PH.D.

May 2017 - May 2019

- Participate in FIU's Summer Treatment Program (STP) in collaboration with ABCDERICA Lab to collect physiological data (e.g., heart rate electrodermal activity) from school ages children with ADHD and comorbid disorders.
- Set up Mindware/BioLab electrodes on youth during assessment of ADHD and Emo meds protocol
- Run and conduct ADHD protocol task such as: resting baseline, neutral picture assessment, COIN, BARTLG to compare control vs. ADHD diagnosis group.
- Perform video transcripts of youth during Emotional and Parenting in Childhood (EPIC) Study conducted by Rachel Tenenbaum, Doctoral student.
- Conduct data cleaning procedures on heart rate variability (HRV) cardiac impedance (IMP) and electrodermal activity (EDA) measurements on Mindware software using participant data.

Professional Experience

Lab Instructor

Miami Dade College

MATHEMATICS DEPARTMENT

Feb 2019 - Oct 2020

- Serve as a role model to motivate students to achieve their academic needs.
 - Advisement service.
 - SMART Plan creation.
 - Advising appointments.
 - Meeting with students on repeated attempts.
 - Assist with enrollment.
 - Create, review, and modify student academic progress (MAP) for newly enrolled, transfer and transient students.
 - Assist students with academic planners such as major changes and pre-requisite requirements.
 - Participate in recruitment services such as orientation for First time in College (FTIC) students
 - Advice and guide students who were on academic probation to implement alternative courses of action to achieve graduation.

Mathematics Tutor

Miami Dade College

MATHEMATICS DEPARTMENT

Oct 2016 - Jan 2019

- Provide homework help, assist in the creation of study plans, and develop an in-depth knowledge in College Mathematics.
 - Attend instructor meetings or requires yearly training for online courses.
 - Grade and score day one diagnostics exam to identify students current mathematics background
 - Help in the Navigation of online modalities for students such as ALEKS, myMathLab, and BlackBoard
 - Create study plan for students identified as at risk based on students day one diagnostics exam.
 - Monitor online BlackBoard Retention Center and communicate weekly with professor.
 - Conduct Mastery sessions (e.g., review sessions) during tutoring service hours in preparation for exam week.

Language Skills

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|-----------------------|--|
| Software | Microsoft Office, SPSS, ArcGIS |
| Programming Languages | R, SAS, STATA, Python, Julia |
| Reproducible Report | Shiny, Quarto, Markdown/Rmarkdown, LaTeX |
| Project Management | REDCap, Qualtrics |
| Version Control | Git, GitHub |
| Web Development | HTML, CSS, GitHub Pages |
| Languages | Spanish, English |
| Operating Systems | Windows, MacOS, Linux |

Presentations

1. Bravo, A. (2024). *Interpreting data in public health*. Florida International University, Robert Stempel College of Public Health; Social Work; PHC 6930C - Intergrative Seminar in Public Health.
2. Rodriguez, E., Bravo, A., Skvoretz, J., Cracker, L., & Kanamori, M. (2024). *Exploring PrEP stigma homophily and PrEP discussions in latino men who have sex with men in south florida*. University of Miami, Miller School of Medicine; Sunbelt 2024.
3. Cracker, L., Bravo, A., Rodriguez, E., Fallen, S., & Kanamori, M. (2024). *Examination of PrEP use disclosure among latino men who have sex with men: Implications for future social network interventions to address HIV-related disparities*. University of Miami, Miller School of Medicine; Sunbelt 2024.
4. Bravo, A. (2024). *Social network analysis: Data collection instruments for egocentric networks*. University of Miami Miller School of Medicine. anbrav0.github.io/teaching/
5. Kanamori, M., Bravo, A., Craker, L., Johnson, A. L., Self, K. J., Skvoretz, J., & Rodriguez, E. (2024). *Social network analysis: An approach that fast-track cities can use to engage latinx men who have sex with men in PrEP programs including those who identify as gay, bisexual, and straight*. Fast-Track Cities Conference.
6. Rodriguez, E., Craker, L., Bravo, A., & Kanamori, M. (2024). *PrEPArados: An innovative social network strategy and community-based participatory research approach to engaging latino men who have sex with men in HIV prevention programs*. HIV Research for Prevention Conference.
7. Bravo, A., Wang, W., Colon-Burgos, J., Gomez-Estern, B., Behar-Zusman, V., & Rojas, P. (2023). *Examining sociocultural factors of hispanic stress: A community based remote study among latino adolescents in south florida*. Florida International University, University of Miami; American Public Health Association 2023 Annual Meeting and Expo.
8. Rojas, P., Wang, W., Novoa, O., Colon-Burgos, J., Ravelo, G. J., Sanchez, M., Cano, M. A., Khalona, M., Bravo, A., De La Rosa, M., & Behar-Zusman, V. (2023). *A remote intervention on HIV and substance use during the COVID-19 pandemic: A community based participatory randomized clinical trial targetting adult latino men in south florida*. Florida International University, University of Miami; American Public Health Association 2023 Annual Meeting and Expo.
9. Bravo, A. (2023). *Interpreting data for public health research, policy, or practice*. Florida International University, Robert Stempel College of Public Health; Social Work; PHC 6930C - Intergrative Seminar in Public Health.

Active Projects Contributions

Project Title: ÚNETE: Combining Friendship Support Networks and Targeted Messaging from Celebrity Influencers to Reduce Latinx Substance Use Disparities (NIH/NIDA DP1DA058988)

- **Timeline:** 08/01/2023 - 06/30/2028
- **Science Team:** PI: Mariano Kanamori (UM Department of Public Health Sciences). Significant Contributors: Guillermo “Willy” Prado (UM School of Nursing and Health Studies), Ariana Johnson (UM Department of Public Health Sciences), Donna Spiegelman (Yale Biostatistics and Epidemiology Departments), Kayo Fujimoto (University of Texas Health Science Center at Houston, School of Public Health-Sociology), Laura Forastiere (Yale Biostatistics), Tong Guangyu (Yale Biostatistics), Suzanne Randolph-Cunningham (Professor Emerita of Family Science at University of Maryland)
- **Community Engagement:** MUJER, Open Arms, Rain Makers Florida Media, Ms. Carmel Mulvani (International Celebrity Expert) and Mr. José Gallegos (Latinx Media and Marketing Partner).
- **Direct Costs:** \$3,500,000.00
- **Total Costs:** \$5,372,500.00
- **Current Role:** Statistician

Project Title: LatiNET: Multilevel Social Network Model to Examine and Address SARS-CoV-2 Misinformation in Low-Income Latinx Communities (NIH/NIMHD R01MD018343)

- **Timeline:** 09/20/2022-05/31/2027
- **Science Team:** PI: Mariano Kanamori (UM Department of Public Health Sciences). Co-Is: Justin Stoler (UM Department of Geography and Sustainable Development), Rosina Cianelli (UM School of Nursing and Health Studies), Joseph Uscinski (UM Department of Political Science), Kayo Fujimoto (University of Texas Health

Science Center at Houston, School of Public Health-Sociology)

- **Community Engagement:** MUJER, Open Arms
- **Direct Costs:** \$2,509,329
- **Total Costs:** \$3,714,492
- **Current Role:** Statistician

Project Title: FINISHING HIV: An EHE Model for Latinos Integrating One-Stop-Shop Prep Services, A Social Network Support Program and A National Pharmacy Chain (NIH/NIAIDS R01AI169643)

- **Timeline:** 06/23/2022-05/31/2027
- **Science Team:** PI: Mariano Kanamori (UM Department of Public Health Sciences). Co-Is: Susanne Doblecki-Lewis (UM Division of Infectious Diseases), Kayo Fujimoto (University of Texas Health Science Center at Houston, School of Public Health-Sociology), Adrienn Borsika Rabin (UC San Diego, Herbert Wertheim School of Public Health and Human Longevity Science), Laramie Rae Smith (UC San Diego, Department of Medicine), Donna Spiegelman (Yale Biostatistics and Epidemiology Departments)
- **Community Engagement:** Latinos Salud, CVS Health®
- **Direct Costs:** \$2,742,005
- **Total Costs:** \$3,546,308
- **Current Role:** Statistician

Project Title: PrEPParados: A Multi-Level Social Network Model to Increase PrEP Enrollment by Latino MSM Self-Identified as Gay, Bisexual or Straight in Miami (NIH/NIMH 1R01MH125727)

- **Timeline:** 12/2020 - 11/2025 (non-cost extension)
- **Science Team:** PI: Mariano Kanamori (UM Department of Public Health Sciences). Co-Is: Susanne Doblecki-Lewis (UM Division of Infectious Diseases), Justin Stoler (UM Department of Geography and Sustainable Development), Kayo Fujimoto (University of Texas Health Science Center at Houston, School of Public Health-Sociology), Mark Williams (University of Arkansas for the Medical Sciences), Adam Wayne Carrico (FIU, Health Promotion and Disease Prevention), Peter Lindsay Anderson (University of Colorado, School of Pharmacy), John Skvoretz (University of South Florida, Department of Sociology)
- **Community Engagement:** Latinos Salud
- **Direct Costs:** \$1,257,752
- **Total Costs:** \$1,851,208.18
- **Current Role:** Lead Statistician

Project Title: Storytelling For Non-Governmental Organizations: U-LINK's Dissemination, Implementation and Commercialization

- **Timeline:** 06/2023 to 05/2024
- **Science Team:** Contact PI: Sanjeev Chatterjee (UM School of Communication). PIs: Mariano Kanamori (UM Department of Public Health Sciences), Jyotika Ramaprasad (UM School of Communication), Scotney Evans (UM School of Education and Human Development)
- **Community Engagement:** MUJER
- **Direct Costs:** \$100,000
- **Total Costs:** \$100,000
- **Current Role:** Statistician

Project Title: Test-to-PrEP: A Randomized Hybrid Implementation/Efficacy Trial of a Social Network Strategy to Increase Equitable Reach of HIV Testing and PrEP Information (NIH/NIMH R01MH138190-01)

- **Timeline:** 09/01/2024 - 06/30/2029

- **Science Team:** PI: Susanne Doblecki-Lewis (UM Division of Infectious Diseases). Co-Is: Mariano Kanamori (UM Department of Public Health Sciences), Ariana Johnson (UM Department of Public Health Sciences), Kathryn McCollister (UM Department of Public Health Sciences), Adrienn Borsika Rabin (UC San Diego, Herbert Wertheim School of Public Health and Human Longevity Science), Laramie Rae Smith (UC San Diego, Department of Medicine), Jingn Zou (UC San Diego, Herbert Wertheim School of Public Health and Human Longevity Science)
- **Community Engagement:** Prevention 305
- **Current Role:** Statistician

Leadership, Service & Community Engagement

Advisor, Board of Directors: PLUMY
 PROTECTING LGBTQ+ UNDERSERVED MIAMI-DADE YOUTH

Miami-Dade County
Apr 2023 - Apr 2025

- Director
 - Board of Directors in nonprofit 501(c)(3) organization tasked to provide resources across Miami-Dade County for unserved LGBTQ+ youth.
 - Assist in diversity, equity, and inclusion (DEI) informed decision making for non-profit goals.

Rentetion Data Core - ABCD Student Rention Workgroup
 ABCD STUDY

ABCD Study Consortium
Apr 2023 - Apr 2024

- Retention Core Member
 - Assist in the creation of retention efforts ABCD model for at risk participants.
 - Create, clean, and model passive withdraw participatants as well as identify participants at risk of study withdrawl.

Dean Student Advisory Biostatistics Respresentative
 ROBERT STEMPEL COLLEGE OF PUBLIC HEALTH AND SOCIAL WORK

Office of Student and Alumni Affairs
Aug 2022 - Aug 2023

- Advisor Council Board Memeber
 - Biostatistics Department representative, make recommendation for improvement of departmental needs.
 - Provide knoweldge for key decision making in Biostatistics department.

Data Science Conference 2022
 DSC US HEALTH 22

FIU Kovens Conference Center
Oct 2022 - Oct 2022

- Data Science Conference Logistics Volunteer
 - Assist with logist front desk task such as check in, organization of materials.
 - Advise DSC attendees location of important events.

ABCD Study Substance Use Workgroup Member
 ABCD STUDY

ABCD Consortium
Jun 2021 - Apr 2023

- Senior Research Assistant
 - Provide localized insight on the RA groudfloor for the ABCD Study.
 - Provide assistance in reformatting script language for the ABCD Semi-structured TLFB interview.

Professional Membership

American Public Health Association
 MEMBER

2022 - 2024

Florida Public Health Association
 MEMBER

2022 - Present

International Network for Social Network Analysis
 MEMBER

2024 - Present

Publications

1. Patria, R., **Bravo, A.**, Wang, W., Colon-Burgos, J.F., Ravelo, G., Castillo, B., Fizer Robinson, M., De La Rosa M., Behar-Zusman, V. (Submitted) Higher Parental Respect is Associated with Lower Acculturation Stress Among Latino Adolescents