Kiana J. Guarino

Arizona State University, *Quantitative Research Methods*

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Education

Exp. 2028 | **Ph.D. in Psychology (Quantitative Research Methods)**
Arizona State University, Department of Psychology
Advisor: Dr. Samantha Anderson

2025 | **M.A. in Psychology (Quantitative Research Methods)**
Arizona State University, Department of Psychology
Advisor: Dr. Samantha Anderson
Thesis: Inference in Randomized Pretest-Posttest Studies Under Missing Data: Influence of MAR Sub-Patterns on Statistical Power and Precision

2023 | **B.S. in Psychology, minor in Statistics**
Arizona State University, Department of Psychology

Peer-Reviewed Manuscripts

2025 | **Guarino, K. J.** & Anderson, S. F. (2025). The Consequences of Optional Stopping on the Research Literature. *Collabra: Psychology*, *11*(1), 143711.

2022 | Berberian, S., Patock-Peckham, J. A., **Guarino, K. J.**, Gupta, T., Sanabria, F., & Infurna, F. (2022). Does loneliness before the age of twelve indirectly affect impaired control over drinking, alcohol use, and problems through perceived stress? *Addictive Behaviors Reports*, *16*, 100448.

Talks and Presentations

Research Presentations

2025 | **Guarino, K. J.** (2025, November). *Mind the gaps: Investigating the consequences of MAR sub-patterns on statistical power and precision for RPP studies.* Talk given at the Arizona State University Design and Data Analysis Seminar.
Guarino, K. J. (2025, April). *Missing data in randomized pretest posttest studies: Influence of MAR sub-patterns on power and precision.* Talk given at the Arizona State University Design and Data Analysis Seminar.

2024 | **Guarino, K. J.** (2024, April). *The impact of optional stopping on literature-wide effect size bias and error rates.* Presentation of first-year research project given at the Arizona State University Design and Data Analysis Seminar.

Guest Lectures

2025 | **Guarino, K. J.** (2025, October). *Validity.* Guest lecture delivered in the graduate-level course Intermediate Statistics taught by Dr. Samantha Anderson at Arizona State University.

2024 | **Guarino, K. J.** (2024, March). *Statistical Power in Regression.* Guest lecture delivered in the graduate-level course Multiple Regression taught by Dr. Roy Levy at Arizona State University.

Invited Talks

2026 | **Guarino, K. J.** (2026, March). *Mind the gaps: Investigating the consequences of MAR sub-patterns on statistical power and precision for RPP studies.* Virtual presentation to be given at the Michigan State University Methods Discussion Group.

Talks and Presentations (cont.)

Poster Presentations

2024 | **Guarino, K. J.** & Anderson, S. F. (2024, November). *The consequences of optional stopping on the research literature.* Poster presented at the 2024 Arizona State University Institute for Social Sciences poster contest.

2022 | **Guarino, K. J.**, Smyth, H., Alvarez-Bartolo, D., Tein, J. Y., MacKinnon, D. (2022, July). *Systematic review of parenting measures in prevention science.* Poster presented at the 2022 Society for Prevention Research Conference, Seattle, WA.

Research Experience

2023-present | **Graduate Researcher**
Advisor: Dr. Samantha Anderson

- Investigating the differential impact of MAR sub-patterns on statistical power and precision within the context of a randomized pretest-posttest design.
- Exploring factors that can have impacts on the likelihood of a successful scientific replication.
- Examined the impact of optional stopping on effect size bias, heterogeneity, and errors within a hypothetical research literature via simulation methods.

2021-2023 | **Research Assistant – Research in Prevention Laboratory (RiPL)**
Director: Dr. David MacKinnon
Supported by National Institute on Drug Abuse (R37DA009757)

- Investigated the psychometric properties and reporting of parenting measures within the context of prevention science research.
- Worked extensively with Mplus and SAS software: wrote and implemented syntax for mediation analyses, developed teaching materials for junior research assistants.
- Attended the Society for Prevention Research (SPR) 2022 Conference and presented a poster.
- Managed correspondence with grant consultants to document collaboration and ensure timely compensation.

2021-2023 | **Research Assistant – Social Addictions Impulse Laboratory (SAIL)**
Director: Dr. Julie Patock-Peckham

- Organized and collected data for large-scale longitudinal study for in progress prevention research.
- Met weekly to prepare and discuss new published works on addiction and quantitative analysis.

2020-2021 | **Research Assistant – Embodied Games for Learning Laboratory**
Director: Dr. Mina Johnson-Glenberg

- Ran participant trials for a study which explored the impact of an embodied, augmented reality interface for students learning introductory chemistry.
- Aided in the development of novel virtual/augmented reality interfaces for learning.

Teaching Experience

2024-present
Lab Instructor
Arizona State University
Undergraduate Course: Research Methods
- Planned and presented weekly, full-length lectures to multiple lab sections.
- Developed teaching materials such as lecture slides, in-class software demonstrations (R, SPSS), and academic writing exercises.
- Hosted classes, held in-person and virtual office hours, and provided additional support to discuss feedback on student research projects.

2023-present
Graduate Teaching Assistant
Arizona State University
Undergraduate Courses: Introduction to Statistics, Global Health and Child Development, Research Methods
Graduate Courses: Intermediate Statistics, Multiple Regression
- Organized and delivered multiple full-length guest lectures and brief lessons.
- Developed teaching materials such as lecture slides, instructional software videos (R, SPSS), and assignment rubrics.
- Attended classes, held in-person and virtual office hours for additional instruction.

2022-2023
Academic Success Coach
Arizona State University
- Held one-on-one tutoring sessions for statistics and research methods courses.
- Offered writing support for developing academic papers and research projects.

2021-2022
Undergraduate Teaching Assistant
Arizona State University
Undergraduate Course: Statistical Methods
- Developed assignment rubrics and accessible tutorials for data analyses in SPSS.
- Held individual office hours to provide additional assistance.

Service

2024-2025
Graduate Studies Committee – Quantitative Area Representative
Arizona State University
- Attend bi-monthly meetings to participate in administrative discussions and decision-making.
- Collaborate with fellow graduate student representatives to design and present original research to inform future policy.

Program Recruitment Co-Leader
Arizona State University
- Helped organize prospective student visitation including drafting itineraries, arranging travel, and planning events.
- Initiated correspondence with prospective students to provide visit information and address questions.

Grant Activities

2021-2023
National Institute on Drug Abuse (R37DA009757)
Prinicipal Investigator: David MacKinnon
Title: Estimating Mediation Effects in Prevention Studies
Grant funded July 1, 2019, to June 30, 2024
Role: Research Aide

Technical Skills and Qualifications

Software: R, SPSS, Mplus, SAS, LISREL, MATLAB

Methods: Analysis of variance (ANOVA), Bayesian methods, factor analysis (EFA, CFA), item response theory (IRT), longitudinal models, mediation analysis, multilevel/mixed effects models, regression, structural equation models (SEM)

Coursework: Advanced Bayes Analyses, Applied Linear Algebra, Calculus I/II/III, Intermediate Statistics (ANOVA), Longitudinal Growth Modelling, Mathematical Structures, Mediation Analysis, Multilevel Models, Multiple Regression, Probability, Psychometric Methods, Quantitative Meta-Science, Statistical Machine Learning, Statistical Methods of Prevention Research, Structural Equation Modelling, Time-Varying Equation Models