Brenna Gomer

✉ brenna.gomer@psych.utah.edu

Education

2021 **Ph.D., University of Notre Dame** Psychology.
Area: *Quantitative.*
Advisor: Ke-Hai Yuan
Dissertation: *Quantifying the Impact of Missing-Data Mechanism Uncertainty: A Tailored Sensitivity Analysis Approach for the Behavioral Sciences.*

2018 **M.S., University of Notre Dame** Applied and Computational Mathematics and Statistics (ACMS).
Advisor: Fang Liu
Thesis: *A Bayesian Approach to Identify Missing Data Mechanisms.*

2014 **B.A., University of California, Berkeley**
Major (Double): *Statistics, Psychology.*

Professional Positions

2024-Present Assistant Professor of Psychology, University of Utah

2021-2024 Assistant Professor of Psychology, Utah State University

Publications

* refers to graduate students, ** refers to graduate students of whom I was the primary advisor

Published and In Press Manuscripts

1 Odum, A., Willis-Moore, M., Callister, K., Haynes, J., Frye, C., Scribner, L., Legaspi, D., Da Silva, D. S., Olsen, A., Truscott, T., Alden, P., Bevins, R., Leventhal, A., Lee, S., & **Gomer, B.** (2025). The rodent electronic nicotine delivery system:apparatus for voluntary nose-only e-cigarette aerosol inhalation. *Journal of the Experimental Analysis of Behavior.*

2 *Subedi, A., Singleton, P., **Gomer, B.**, & Acharya, S. (2025). Role of innovativeness in us electric air taxi adoption dynamics. *Findings.*

3 Whitwer, M., Wilson, S., Hammer, J., & **Gomer, B.** (2025). Mental health in undergraduate engineering students: A comparative analysis to students in other academic fields of study. *Journal of Engineering Education.*

4 **Gomer, B.**, & Yuan, K.-H. (2023a). Missing data analysis. In D. McCaffrey & A. Rupp (Eds.), *International Encyclopedia of Education*, (4th ed.), Oxford, UK: Elsevier.

5 **Gomer, B.**, & Yuan, K.-H. (2023b). A realistic evaluation of methods for handling missing data when there is a mixture of MCAR, MAR, and MNAR mechanisms in the same dataset. *Multivariate Behavioral Research.* 🔗 https://doi.org/10.1080/00273171.2022.2158776

6 Yuan, K.-H., **Gomer, B.**, & Marcoulides, K. (2022). Smoothed quantiles for χ^2 type test statistics with applications. *Multivariate Behavioral Research*, *57*, 223–242. 🔗 https://doi.org/10.1080/00273171.2020.1858018

7 **Gomer, B.**, & Yuan, K.-H. (2021). Subtypes of the missing not at random mechanism. *Psychological Methods*, *26*(5), 559–598. 🔗 https://doi.org/10.1037/met0000377

8 Merluzzi, T., Philip, E., Heitzmann, C., **Gomer**, **B.**, & Kim, D. (2021). Comorbidity, functional impairment, and emotional distress: A coping mediation model for persons with cancer. *Annals of Behavioral Medicine*, *55*(10), 994–1004. 🔗 `https://doi.org/10.1093/abm/kaaa122`

9 O'Loughlin, C., **Gomer**, **B.**, & Ammerman, B. (2021). The social context of nonsuicidal self-injury: Links to severity, suicide risk, and social factors. *Journal of Clinical Psychology*, *77*(4), 1004–1017. 🔗 `https://doi.org/10.1002/jclp.23073`

10 Yuan, K.-H., & **Gomer**, **B.** (2021). An overview of applied robust methods. *British Journal of Mathematical and Statistical Psychology*, *74*, 199–246. 🔗 `https://doi.org/10.1111/bmsp.12230`

11 **Gomer**, **B.** (2019). MCAR, MAR, and MNAR values in the same dataset: A realistic evaluation of methods for handling missing data (abstract). *Multivariate Behavioral Research*, *54*, 153–155. 🔗 `https://doi.org/10.1080/00273171.2018.1557033`

12 Deng, L., & **Gomer**, **B.** (2018). Review of tests and measurement for people who (think they) hate tests and measurement. *Structural Equation Modeling: A Multidisciplinary Journal*, *57*, 492–494. 🔗 `https://doi.org/10.1080/10705511.2018.1437349`

13 **Gomer**, **B.**, Jiang, G., & Yuan, K.-H. (2018). New effect size measures for structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, *26*, 371–389. 🔗 `https://doi.org/10.1080/10705511.2018.1545231`

Presentations

Talks

1 Vick, E., Whitwer, M., **Gomer**, **B.**, Hammer, J., & Wilson, S. *Engineering student mental health status across gender identities: Analysis of data from the healthy minds study*. Paper presented at the American Society for Engineering Education, Montreal, CA. 2025.

2 **Gomer**, **B.** *A tailored sensitivity analysis procedure for missing data in the social sciences*. Invited talk given at the USU Data Science Seminar. 2023.

3 **Gomer**, **B.** *A tailored sensitivity analysis procedure for the social sciences*. Paper presented at the Annual Meeting of the Psychometric Society, College Park, Maryland. 2023.

4 Kim, Y. M., & **Gomer**, **B.** *Mixture of missing-data mechanisms in multigroup invariance testing*. Paper presented at the Annual Meeting of the Psychometric Society, College Park, Maryland. 2023.

5 **Gomer**, **B.** *Subtypes of the missing not at random mechanism*. Invited talk given at the UCLA Quantitative Psychology Brown Bag. 2021.

6 **Gomer**, **B.** *Subtypes of the missing not at random mechanism*. Paper presented at the Annual Meeting of the Psychometric Society, Virtual. 2020.

Symposia

1 **Gomer**, **B.** *A practical guide to subtypes of the Missing Not At Random mechanism*. Paper presented at the Meeting of the American Psychological Association, Washington, D.C., United States. 2023.

Posters

1 **Gomer**, **B.** *MCAR, MAR, and MNAR values in the same dataset: A realistic evaluation of methods for handling missing data*. Poster presented at the 16th Annual Society of Multivariate Experimental Psychology Graduate Student Conference, Albuquerque, New Mexico. 2018.

2 Merluzzi, T., **Gomer**, **B.**, & Philip, E. *Serious comorbidities and emotional quality of life: A coping mediation model for persons with cancer*. Poster presented at the Meeting of the International Psycho-oncology Society, Hong Kong, PRC. 2018.

3   **Gomer, B.**, Jiang, G., & Yuan, K.-H. *A comparison of three new effect size measures in SEM*. Poster presented at the Annual Meeting of the Psychometric Society, Zurich, Switzerland. 2017.

Research Funding

Funded

2023–2024   **NIH R21 CEBRA** (DA053818-01)
Co-Investigator. PI - Amy Odum.
Total Costs: $393, 528
"The Rodent Electronic Nicotine Delivery System (RENDS): Behavior, physiology, and epigenetics"

Under Review

2025–2030   **NIH R01** (DA062538)
Consultant. PI - Amy Odum.
Total Costs: $3, 529, 260.76
"Characterizing the unique effects of flavoring and dose on e-cigarette use, demand, and toxicology in a novel voluntary preclinical model to inform regulation: Tobacco Regulatory Sciences"

Teaching

Instructor

2021-2024   Psychological Statistics (PSY 3010)
Psychology Department, Utah State University.

Spring 2023   Longitudinal Data Analysis (PSY 7770)
Psychology Department, Utah State University.

Spring 2024   Statistical Methods for Messy Data (PSY 6810)
Psychology Department, Utah State University.

Spring 2025   Messy Data (PSY 6850)
Psychology Department, University of Utah.

Mentoring

Graduate Students

2022-2023   Sean Lee
Psychology, Utah State University

Support for Graduate Instructors

2023   Caleb Farley (Instructor of record), Psychological Statistics (PSY 3010)

Undergraduate Teaching Fellows

Taylor Stagg, Psychological Statistics (PSY 3010)

2022   Jayne Jones, Psychological Statistics (PSY 3010)

Mentoring (continued)

Student Committees

- **Dissertation Committee Member.** David Longhurst,
  Psychology, Utah State University
- **Dissertation Committee Member.** Umar Shehzad,
  Instructional Technology and Learning Sciences, Utah State University
- **Dissertation Committee Member.** Dongyun Han,
  Computer Science, Utah State University
- **Dissertation Committee Member.** Mudasir Mustafa,
  Sociology and Anthropology, Utah State University
- **Dissertation Committee Member.** Atul Subedi,
  Civil and Environmental Engineering, Utah State University
- **Dissertation Committee Member.** Tom Jenson,
  Mathematics and Statistics, Utah State University

Consulting

2024-Present **Statistical Consultant.**
Psychology Department, University of Utah.

2019 **Statistical Consultant.**
Psychology Department, University of Notre Dame.

Service

Professional Service

2023–2024 **Inter-Institution Quantitative Brown Bag Organizer**
Organize bi-weekly research seminar on quantitative topics across 6 institutions.

Ad-hoc Reviewer. Journal of Behavioral Data Science.
Ad-hoc Reviewer. Behaviormetrika.
Ad-hoc Reviewer. Journal of Educational and Behavioral Statistics.
Ad-hoc Reviewer. Educational and Psychological Measurement.
Ad-hoc Reviewer. Multivariate Behavioral Research.
Ad-hoc Reviewer. Structural Equation Modeling: A Multidisciplinary Journal.
2019 **Reviewer**. 17th Annual Society of Multivariate Experimental Psychology Graduate Student Conference.

University Service

2024-Present **Graduate Committee Member.**
Psychology Department, University of Utah.

2022–2024 **Equity, Diversity, and Inclusion Committee Member.**
Psychology Department, Utah State University.

Fellowships, Honors, and Awards

2024	🔖	Tanaka Award for Most Outstanding Article in *Multivariate Behavioral Research, Volume 58* *"A realistic evaluation of methods for handling missingness when there is a mixture of MCAR, MAR, and MNAR in the same dataset"*
2016 - 2021	🔖	University of Notre Dame Presidential Fellow
2020	🔖	Psychology Department's Excellence in Graduate Student Teaching Award
2018	🔖	SMEP Conference Travel Award