

Graham Buhrman

PHD STUDENT · EDUCATIONAL PSYCHOLOGY: QUANTITATIVE METHODS

University of Wisconsin-Madison, 1025 W Johnson St, Madison, WI 53706

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Education

University of Wisconsin-Madison

PHD EDUCATIONAL PSYCHOLOGY

- Advisors: Dr. Jee-Seon Kim and Dr. James Pustejovsky

Madison, WI

2022 - present

University of Wisconsin-Madison

MS EDUCATIONAL PSYCHOLOGY

- Advisors: Dr. Jee-Seon Kim and Dr. James Pustejovsky

Madison, WI

2022 - 2024

North Carolina State University

BS INTERDISCIPLINARY STUDIES

- Minor in statistics
- Honors thesis advisor: Dr. Vanessa Volpe

Raleigh, NC

2018 - 2022

Professional Experience

University of Wisconsin-Madison - Testing and Evaluation Services

PROJECT ASSISTANT

- Conduct and summarize analyses of placement testing data for item evaluation and development
- Describe trends in accommodated testing and utilization of testing space on campus

Madison, WI

2024-present

Development Services Group, Inc.

CONSULTANT

- Write and review procedures for calculating and coding effect sizes from crime and justice literature
- Troubleshoot errors in effect size calculation and advise coding decisions

Bethesda, MD (remote)

2024-2025

University of Wisconsin-Madison - Center for Teaching, Learning, and Mentoring

EVALUATION SPECIALIST

- Evaluate the efficacy of programs for academic staff and faculty via descriptive analysis and data visualization
- Interview academic staff about experience with professional development programs

Madison, WI

2023-2024

North Carolina State University - University Honors and Scholars Program

RESIDENT MENTOR

- Serve as an academic assistant for Honors and Scholars Program seminars
- Mentor first-year undergraduates in the Honors and Scholars Program

Raleigh, NC

2019-2020

University of North Carolina at Chapel Hill - Carolina Institute for Developmental

Disabilities

PSYCHOLOGY INTERN

- Administer and score developmental assessments
- Conduct behavioral observations and discuss optimal intervention plans

Chapel Hill, NC

2019

Manuscripts

PUBLISHED

Buhrman, G. W., Tan, H. L., Hanita, M., Campos-Pereira, M., Kennedy, J. L., Zweig, J., Kaiser, A., Waterman, K. P., & Tally, W. (accepted). Measuring Historical Empathy in middle and high school students: The Historical Empathy Measure. *Journal of Social Studies Research*

- Volpe, V. V., Ross, J., Holland, M., Badejoh, O., & **Buhrman, G. W.** (accepted). Online health information searching and health advertisement exposure among Black young adult social media users. *Journal of Health Psychology*.
- Buhrman, G. W.**, Liao, X., & Kim, J.-S. (2025). Using nonparametric regression trees to estimate different forms of heterogeneous treatment effects. In Kim, J.-S., Wu, H., Sweet, T. M., Molenaar, D., Junker, B. W., Moustaki, I., Harring, J., Bulut, O., Tong, X., Wallin, G., & Di Plinio, S. (Eds.), *Proceedings of the International Meeting of the Psychometric Society: The 89th Annual Meeting, Prague, Czech Republic, 2024*. <https://doi.org/10.64028/pulr698375>
- Kim, J.-S., **Buhrman, G. W.**, & Liao, X. (2025). Beyond averages: Portraying treatment effect variation. In Kim, J.-S., Wu, H., Sweet, T. M., Molenaar, D., Junker, B. W., Moustaki, I., Harring, J., Bulut, O., Tong, X., Wallin, G., & Di Plinio, S. (Eds.), *Proceedings of the International Meeting of the Psychometric Society: The 89th Annual Meeting, Prague, Czech Republic, 2024*. <https://doi.org/10.64028/xvhr927961>
- Buhrman, G. W.**, Liao, X., & Kim, J.-S. (2024). Exploring conceptual differences between nonparametric estimators of treatment heterogeneity in the context of clustered data. In Wiberg, M., Kim, J.-S., Hwang, H., Wu, H., & Sweet, T. (Eds.), *Quantitative psychology: The 88th Annual Meeting of the Psychometric Society, College Park, Maryland, 2023*. New York: Springer.
- Volpe, V. V., **Buhrman, G. W.**, Boaheng, P., Holliday, D., Nick, E. A., & Criss, S. (2023). “Speak[ing] my mind”: Reasons for using Twitter and the online experiences, critical media literacy, and racial identity of Black American emerging adults. *Journal of Media Psychology*, 35(5). <https://doi.org/10.1027/1864-1105/a000387>.
- Ganguly, I., **Buhrman, G. W.**, Mun, S. K., Kline, E., & Sengupta, S. (2023). Automated error labeling in radiation oncology via statistical natural language processing. *Diagnostics*, 13(7). <https://doi.org/10.3390/diagnostics13071215>.
- Neukrug, H., Benson, G. P., **Buhrman, G. W.**, & Volpe, V. V. (2022). Affect reactivity and lifetime racial discrimination among Black college students: The role of coping. *American Journal of Orthopsychiatry*, 92(4). <https://doi.org/10.1037/ort0000630>.

UNDER REVIEW

- Buhrman, G. W.**, Kim, J.-S., & Lyu, W. (under review). Adaptive shrinkage with Student’s t: Limited gains over Gaussian hierarchical linear models. In Kim, J.-S., Wu, H., Sweet, T. M., Wallin, G., Junker, B., Moustaki, I., Harring, J., Bulut, O., Tong, X., & Di Plinio, S. (Eds.), *Proceedings of the International Meeting of the Psychometric Society: The 90th Annual Meeting, Minneapolis, United States, 2025*.
- Kim, J.-S., **Buhrman, G. W.**, & Liao, X. (under review). Cluster-specific estimands: Identification and uncertainty in multilevel analysis. In Kim, J.-S., Wu, H., Sweet, T. M., Wallin, G., Junker, B., Moustaki, I., Harring, J., Bulut, O., Tong, X., & Di Plinio, S. (Eds.), *Proceedings of the International Meeting of the Psychometric Society: The 90th Annual Meeting, Minneapolis, United States, 2025*
- Badejoh, O. O., **Buhrman, G. W.**, & Volpe, V. V. (under review). The role of online social support in the association between online racial discrimination and anxiety symptoms in Black adults. *Cultural Diversity & Ethnic Minority Psychology*.

IN PREPARATION

- Buhrman, G. W.**, & Kim, J.-S. (in preparation). Targeted Bayesian shrinkage for estimating site-specific effects in multisite trials.
- Kennedy, J. L., Tally, W., Zweig, J., Hanita, M., **Buhrman, G. W.**, Tan, H. L., Kaiser, A., Campos-Pereira, M., & Waterman, K. P. (in preparation). Conducting rigorous research in social studies classrooms: Lessons from a pandemic-era randomized controlled trial.

Awards, Fellowships, & Grants

2026	Student Travel Award , University of Wisconsin-Madison School of Education	\$ 1,500
2024	Student Travel Award , Psychometric Society	\$ 1,250
2022-present	Interdisciplinary Training Program in Education Sciences Fellowship , United States Department of Education	\$ 36,000
2022	Richard L. Blanton Outstanding Capstone Award , North Carolina State University Honors and Scholars Program	\$ 250

2021	Undergraduate Research Award , North Carolina State University Office of Undergraduate Research	\$ 2,000
2021	Summer Research Award , North Carolina State University Honors and Scholars Program	\$ 1,000
2019-2022	Caldwell Fellowship , North Carolina State University	\$ 7,500
2019-2020	James F. Kelly Scholarship , North Carolina State University	\$ 350

Presentations

* *presenting author(s)*

CONTRIBUTED PRESENTATIONS

- Kim, J.-S.*, **Buhrman, G. W.**, & Liao, X. (2026, April 11). *Bridging theory, data, and method: A framework for modeling heterogeneous treatment effects in educational research* [Poster presentation]. AERA, Los Angeles, CA, United States.
- Buhrman, G. W.***, & Kim, J.-S. (2026, April 10). *Toward robust prediction and classification of cluster-specific effects in hierarchical linear modeling* [Paper presentation]. AERA, Los Angeles, CA, United States.
- Buhrman, G. W.***, Kim, J.-S. & Lyu, W. (2025, July 18). *Can we turn the dial on shrinkage? A comparative study of models for heavy-tailed random effects* [Paper presentation]. International Meeting of the Psychometric Society, Minneapolis, MN, United States.
- Kim, J.-S.*, **Buhrman, G. W.**, Liao, X., & Loh, W. W. (2025, July 18). *A taxonomy of heterogeneity in causal effects* [Paper presentation]. International Meeting of the Psychometric Society, Minneapolis, MN, United States.
- Hanita, M., **Buhrman, G. W.***, Kennedy, J. L.*, Zweig, J., Tan, H. L., Kaiser, A., & Waterman, K. P. (2024, September 21). *U.S. history through young people's eyes: a randomized controlled trial of Mission US* [Paper presentation]. Society for Research on Educational Effectiveness, Baltimore, MD, United States.
- Buhrman, G. W.***, Liao, X., & Kim, J.-S. (2024, July 18). *Monotonicity matters: Evaluating heterogeneous treatment effect estimation via nonparametric regression tree methods* [Paper presentation]. International Meeting of the Psychometric Society, Prague, Czech Republic.
- Kim, J.-S.*, Liao, X., **Buhrman, G. W.**, & Loh, W. W. (2024, July 18). *An overarching framework for examining diverse forms of heterogeneous causal effects* [Paper presentation]. International Meeting of the Psychometric Society, Prague, Czech Republic.
- Buhrman, G. W.***, Liao, X., & Kim, J.-S. (2023, July 25). *Exploring conceptual differences between nonparametric estimators of treatment heterogeneity in the context of clustered data* [Poster session]. International Meeting of the Psychometric Society, College Park, MD, United States.
- Buhrman, G. W.***, & Volpe, V. V. (2022). Stress from hateful anti-Black Twitter content and the mental health of Black young adult Twitter users. Poster: North Carolina State University, Interdisciplinary Studies, Raleigh, NC.

INVITED TALKS

- 2024, October 4. *U.S. history through young people's eyes: a randomized controlled trial of Mission US*. [Seminar presentation] Interdisciplinary Training Program, University of Wisconsin-Madison, Madison, WI.

Teaching Experience

Spring 2025	Hierarchical Linear Modeling , Teaching Assistant	Madison, WI
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Research Experience

Education Development Center

Madison, WI

SUPERVISOR: DR. JOY KENNEDY

2023-2025

- Project: National efficacy trial for Mission US
- Funded by: United States Department of Education

University of Wisconsin-Madison - Dept. of Educational Psychology

Madison, WI

SUPERVISOR: DR. JEE-SEON KIM

2022

- Project: RISE Iowa: Developing training for addiction treatment interventions
- Funded by: National Institutes of Health

North Carolina State University - Dept. of Psychology

Raleigh, NC

ADVISOR: DR. VANESSA VOLPE

2020-2022

- Honor's Thesis: Stress from hateful anti-Black Twitter content and the mental health of Black young adult Twitter users
- Projects: Effects of online racism, Affect reactivity and lifetime racial discrimination among Black college students: The role of coping, Online experiences of and reasons for using Twitter among Black young adults
- Funded by: Office of Undergraduate Research, University Honors and Scholars Program, and National Institutes of Health

North Carolina State University - Dept. of Statistics

Raleigh, NC

ADVISOR: DR. SRIJAN SENGUPTA

2021

- Project: Natural language processing tools for error detection in radiation oncology treatments
- Funded by: National Institutes of Health

Outreach & Professional Development _____

SERVICE AND OUTREACH

- 2023-2025 **Undergraduate Research Symposium**, Volunteer
- 2020-2022 **Campus Conversations Project**, Student Facilitator
- 2019 **Neighbor2Neighbor**, Enrichment Mentor
- 2019 **Fundación Comunitaria del Bajío**, Volunteer

Madison, WI
Raleigh, NC
Raleigh, NC
Guanajuato,
Mexico

AD HOC REVIEWER

- Psychometrika
- Advances in Methods and Practices in Psychological Science

PROFESSIONAL MEMBERSHIPS

- American Statistical Association
- Psychometric Society
- Society for Research on Educational Effectiveness
- American Educational Research Association