

JUSTIN M. LUNINGHAM

08/2022

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EDUCATION

University of Notre Dame Ph.D., Quantitative Psychology	Notre Dame, IN May 2018
University of Notre Dame M.S., Applied & Computational Mathematics & Statistics	Notre Dame, IN Jan 2017
Baylor University B.A., Psychology	Waco, TX May 2009

POSITIONS

Assistant Professor of Biostatistics Dept. of Biostatistics and Epidemiology, School of Public Health University of North Texas Health Science Center, Fort Worth, TX	Sep 2021 -
Adjunct Assistant Teaching Professor and Faculty Developer MS in Data Science Program Dept. of Applied & Computational Mathematics & Statistics University of Notre Dame, Notre Dame, IN	Aug 2018 -
Research Assistant Professor of Biostatistics Center for Quantitative and Statistical Sciences (Quest) Dept. of Population Health Sciences, School of Public Health Georgia State University, Atlanta, GA	Nov 2019 - Jun 2021
Postdoctoral Fellow Center for Quantitative & Computational Genetics, Dept. of Human Genetics Emory University School of Medicine, Atlanta, GA	Aug 2018 - Oct 2019
Visiting PhD Student Dept. of Biological Psychology, Vrije Universiteit Amsterdam, Amsterdam, NL	Fall 2016

PUBLICATIONS

Peer-reviewed Publications

- Walters, S.T., Mun, E-Y, Tan, Z., **Lunningham, J.M.**, Hébert, E.T. & Oliver, J.A. et al. (2022). Development and preliminary effectiveness of a smartphone-based, just-in-time adaptive intervention for adults with alcohol misuse who are experiencing homelessness. *Alcoholism: Clinical and Experimental Research*, 00, 1–10. DOI: [10.1111/acer.14908](https://doi.org/10.1111/acer.14908)
- Lunningham, J. M.**, Wentz, B., Merrilees, C. E., Taylor, L. K., Goeke-Morey, M. C., Shirlow, P., Shannon, T., & Cummings, E. M. (2022). Bidirectional effects between maternal mental health and adolescent internalizing problems across six years in Northern Ireland. *JCPP Advances*, 2(2), e12078. DOI: [10.1002/jcv2.12078](https://doi.org/10.1002/jcv2.12078)
- Lunningham, J. M.**, Merrilees, C. E., Taylor, L. K., Goeke-Morey, M., Shirlow, P., Wentz, B., & Cummings, E. M. (2021). Relations among father's presence, family conflict, and adolescent adjustment in Northern Ireland. *Child Development*, 92(3), 904-918. DOI: [10.1111/cdev.13446](https://doi.org/10.1111/cdev.13446)

- Luningham, J. M.**, Chen, J., Tang, S., de Jager, P. L., Bennett, D. A., Buchman, A. S., & Yang, J. (2020). Bayesian Genome-wide TWAS method to leverage both cis- and trans- eQTL information through summary statistics. *American Journal of Human Genetics*, 107(4), 714-726. doi: 10.1016/j.ajhg.2020.08.022
- Waldman, I. D.*, Poore, H. E.*, **Luningham, J. M.***, & Yang, J. (2020) Testing structural models of psychopathology at the genomic level. *World Psychiatry*, 19(3), 350-359. doi:10.1002/wps.20772
- *these authors contributed equally to the paper.
- Luningham, J. M.**, Hendriks, A., Krapohl, E., ..., Plomin, R., Kaprio, J., Bartels, M., Boomsma, D. I., & Lubke, G. H. (2020). Harmonizing behavioral outcomes across studies, raters, and countries: Application to the genetic analysis of aggression in the ACTION Consortium. *Journal of Child Psychology and Psychiatry*, 61: 807-817. doi:10.1111/jcpp.13188
- Luningham, J. M.**, McArtor, D. B., Hendriks, A. M., van Beijsterveldt, C. E. M., Lichtenstein, P., Lundstrom, S., Larsson, H., Bartels, M., Boomsma, D. I., & Lubke, G. H. (2019). Data integration methods for phenotype harmonization in multi-cohort GWAS with behavioral outcomes. *Frontiers in Genetics*, 10, 1227. doi: 10.3389/fgene.2019.01227
- Finnicum, C. T., Doornweerd, S., Dolan, C. V., **Luningham, J. M.**, Beck, J. J., Willemsen, G., Ehli, E. A., Boomsma, D. I., Ijzerman, R. G., Davies, G. E., & de Geus, E. (2018). Metataxonomic analysis of individuals at BMI extremes and monozygotic twins discordant for BMI. *Twin Research and Human Genetics*, 21(3), 203-213. doi: 10.1017/thg.2018.26
- Bartels, M., Hendriks, A., Mauri, M., Krapohl, E., Whipp, A., Bolhuis, K., Conde, L. C., **Luningham, J. M.**, ..., Kaprio, J., & Boomsma, D. I. (2018). Childhood aggression and the co-occurrence of behavioural and emotional problems: Results across ages 3–16 years from multiple raters in six cohorts in the EU-ACTION project. *European Child & Adolescent Psychiatry*. doi: 10.1007/s00787-018-1169-1
- Luningham, J. M.** & Lubke, G. H. (2018). [Abstract]. Extending CART-based multiple imputation with gradient boosting machines. *Multivariate Behavioral Research*, 53(1), 143-144. doi: 10.1080/00273171.2017.1405785
- Luningham, J. M.**, McArtor, D. B., Bartels, M., Boomsma, D. I., & Lubke, G. H. (2017). Sum scores in twin growth curve models: Practicality versus bias. *Behavior Genetics*, 47, 516-536. doi:10.1007/s10519-017-9864-0
- Lubke, G. H. & **Luningham, J. M.** (2017) Fitting latent variable mixture models. *Behaviour Research and Therapy*, 98, 91-102. doi:10.1016/j.brat.2017.04.003
- Lubke, G. H., Campbell, I., McArtor, D. B., Miller, P., **Luningham, J. M.**, & van den Berg, S. M. (2017). Assessing model selection uncertainty using a bootstrap approach: An update. *Structural Equation Modeling*, 24(2), 230-245. doi:10.1080/10705511.2016.1252265

Submitted Journal Publications

- Bhattacharai, S., Saini, G., Rupji, M., **Luningham, J. M.**, Turaga, R. C., ..., & Aneja, R. Racial disparities in breast cancer chiefly reside in the lesser-known quadruple negative breast cancer subtype.
- Luningham, J. M.**, Seth, G., Saini, G., Bhattacharai, S., Awan, S., Swahn, M. H., Dai, D., Gogineni, K., Subhedar, P., Mishra, P., & Aneja, R. Racial and economic disparities in breast cancer survival between Black and White women across Georgia.

Rossheim, M.E., LoParco, C.R., Walker, A., Livingston, M.D., Olsson, S., McDonald, K.K., Yockey, R.A., **Luningham, J.**, Kong, A., & Henry, D. Delta-8 THC retail sales in an unregulated environment.

Papers in Preparation

Luningham, J. M., Poore, H. E., Gizer, I., Waldman, I. D. Genome-wide association study of higher-order psychopathology dimensions determined at the genomic level with massive cross-trait imputation reveals novel associations.

Luningham, J. M.*, Hendriks, A.*, Jacobucci, R., Hong, M., & Lubke, G. H. Predicting childhood aggression: Mining large datasets followed by confirmatory modeling.

*these authors contributed equally to the paper.

Waldman, I.W., King, C. D., Poore, H. E., Luningham, J. M., HiTOP Consortium Quantitative Methods Workgroup. Best practices for adjudicating among alternative structural models of psychopathology.

PRESENTATIONS

Walters, S. T., Mun, E.-Y., Tan, Z., **Luningham, J. M.**, Hébert, E., Oliver, J. A., & Businelle, M. S. (2022, June). *Feasibility and preliminary efficacy of a smartphone-Based just-in-time adaptive intervention for adults with alcohol misuse who are experiencing homelessness*. Poster presentation at the 45th annual scientific meeting of the Research Society on Alcoholism, Orlando, FL.

Tan, L., **Luningham, J. M.**, Zhou, Z., Huh, D., Tanner-Smith, E. E., Walters, S. T., & Larimer, M. E. (2022, June). *Statistical models used to assess effectiveness of brief alcohol interventions: A review*. Poster presentation at the 45th annual scientific meeting of the Research Society on Alcoholism, Orlando, FL.

Rossheim, M.E., LoParco, C.R., Walker, A., Livingston, M.D., Olsson, S., McDonald, K.K., Yockey, R.A., **Luningham, J.**, Kong, A., & Henry, D. (2022, March) *Delta-8 THC Retail Sales in Fort Worth, Texas*. Poster Presentation by Matthew Rossheim at the 2022 American Academy of Health Behavior (AAHB) Meeting in Key Largo, FL.

Bhattacharai, S., Saini, G., Rupji, M., **Luningham, J. M.**, Turaga, R. C., ..., & Aneja, R. (2021, December). *Racial Disparities in Breast Cancer Chiefly Reside in the Lesser-known Quadruple Negative Breast Cancer Subtype*. Submitted to the San Antonio Breast Cancer Symposium 2021, San Antonio, TX.

Wentz, B., **Luningham, J. M.**, Merrilees, C. E., Taylor, L. K., Goeke-Morey, M., Shirlow, P., Shannon, T., & Cummings, E. M. (2021, April). *Bidirectional Effects between Maternal Mental Health and Adolescent Adjustment*. Poster presentation for the Society for Research in Child Development Virtual Biennial Meeting.

Luningham, J. M., Poore, H., & Waldman, I. W. (2021, February). *Multivariate GWAS of Higher-order Psychopathology Dimensions*. Virtual presentation for the Genetic Epidemiology Journal Club, Department of Human Genetics, Emory University School of Medicine.

Luningham, J. M., Poore, H., & Waldman, I. W. (2020, November). *Investigating the Genetics of Psychopathology through Psychometrics and Computational Statistics*. Virtual presentation for Arizona State University's Quantitative Brown Bag Speaker Series.

- Yang, J., **Luningham, J. M.**, Chen, J., Tang, S., De Jager, J., Bennett, D., & Buchman, A. (2020, October). *Novel Bayesian Genome-Wide TWAS method to leverage both cis- and trans-eQTL information through summary statistics*. Poster Presentation at American Society of Human Genetics Virtual Meeting 2020. Recipient of “**Reviewer’s Choice**” award (top 10% of all poster abstracts). Meeting held virtually.
- Luningham, J. M.** & Lubke, G. H. (2020, June)*. *Integrative data analysis using multivariate measurement models with passive versus explicit between-study effects*. Paper accepted as part of symposium *Multiplex Modeling: Leveraging Multivariate Data from Multiple Sources at Multiple Levels*. Paper presentation at Modern Modeling Methods Conference, Storrs, CT.
- *Symposium accepted, but conference cancelled due to Covid-19 Pandemic.
- Luningham, J. M.**, Chen, J., Tang, S., & Yang, J. (2020, May). *Balancing exploratory feature selection, computational limitations, and biological knowledge in computational genetics: The data science “venn diagram” in action*. Paper Presentation at Annual Meeting of the International Society for Data Science and Analytics. Meeting held virtually due to Covid-19 Pandemic.
- Luningham, J. M.** (2020, May). *Imputing missing data with machine learning algorithms: A word of caution*. “Lightning” Presentation at Annual Meeting of the International Society for Data Science and Analytics. Meeting held virtually due to Covid-19 Pandemic.
- Luningham, J. M.**, Poore, H., Yang, J., & Waldman, I. D. (2019, February). *Evaluating the genetic architecture of psychopathology using Genomic Structural Equation Modeling*. Presentation at the Quantitative Methods brown bag series at Georgia Institute of Technology, Atlanta, GA.
- Luningham, J. M.** (2019, January). *The variability of humans*. Invited presentation at the *Data Science Immersion*, a series of talks and workshops for the MS in Data Science program hosted by Notre Dame; Dallas, TX.
- Lubke, G. H., Hendriks, A., **Luningham, J. M.**, Jacobucci, R., & Hong, M. (2018, October). *Mining behavioral data in practice: Finding potentially interacting predictors of childhood aggression in the ACTION Consortium*. Paper presentation at the 2018 Society for Multivariate Experimental Psychology Annual Meeting, Albuquerque, NM.
- Waldman, I. D., **Luningham, J. M.**, & Poore, H. E. (2018, September). *Testing structural models of psychopathology at the genomic level*. Paper presentation for the HiTOP Genetics Workgroup at the 2018 annual meeting of the Society for Research on Psychopathology, Indianapolis, IN.
- Luningham, J. M.**, Lubke, G. H., & The ACTION Consortium (2018, June). *Genetic and environmental contributions to overt aggression harmonized across multiple studies, nations, and raters in the ACTION Consortium*. Paper presentation at the 48th annual meeting of the Behavior Genetics Association, Cambridge, MA.
- Lubke, G. H., **Luningham, J. M.**, & The ACTION Consortium (2018, June). *Phenotype Harmonization: Balancing between psychometric ideals and empirical data reality in the ACTION Consortium*. Paper presentation at the 48th annual meeting of the Behavior Genetics Association, Cambridge, MA.
- Luningham, J.M.** & Lubke, G. H. (2017, October). *Extending CART-based multiple imputation with gradient boosting machines*. Poster presentation at the 2017 Society of Multivariate

Experimental Psychology Annual Meeting, Minneapolis, MN.

Luningham, J. M. & Lubke, G. H. (2017, July). *Comparing parametric and non-parametric data integration methods*. Paper presentation at the International Meeting of the Psychometric Society, Zürich, Switzerland.

Luningham, J. M., McArtor, D. B., Bartels, M., Boomsma, D. I., & Lubke, G. H. (2017, June). *Data integration for improved psychometric phenotypes in gene association tests*. Paper presentation at the 47th annual meeting of the Behavior Genetics Association, Oslo, Norway.

Lubke, G. H., **Luningham, J. M.**, & Boomsma, D. I. (2017, June). *Phenotype harmonization: Challenges and achievements within a large international consortium*. Paper presentation at the 47th annual meeting of the Behavior Genetics Association, Oslo, Norway.

Finnicum, C. T., Doornweerd, S., Dolan, C. V., **Luningham, J. M.**, Beck, J. J., Willemsen, G., Ehli, E. A., Boomsma, D. I., Ijzerman, R. G., Davies, G. E., & de Geus, E. (2017, March). *Gut microbiota of individuals at BMI extremes and monozygotic twins discordant for BMI*. Poster for the Behavior Genetics Association workshop, Boulder, CO.

Luningham, J. M. (2016, November). *Integrative data analysis for genome-wide association studies*. Invited presentation at the University of Amsterdam Psychological Methods Colloquium, Amsterdam, The Netherlands.

Luningham, J. M. (2016, October). *Integrative data analysis for GWAS with multiple cohorts*. Poster presented at Early Career Scientist workshop on Aggression, Nijmegen, The Netherlands.

TEACHING EXPERIENCE

University Teaching

University of North Texas Health Science Center

BIOS 5300: Principles of Biostatistics Spring, Summer, Fall 2022
BIOS 5320: Biostatistical Research & Consulting Spring 2022

University of Notre Dame

Behavioral Data Science (graduate level) Fall 2018, '19, '20
Behavioral Medicine (undergraduate level), *Teaching Assistant* Spring 2016
Quantitative Methods II (graduate level), *Teaching Assistant/Lab Instructor* Spring 2015
Quantitative Methods I (graduate level), *Teaching Assistant/Lab Instructor* Fall 2014

Workshops

APA Advanced Training Institute, Arizona State University June 2017
Workshop on Big Data: Exploratory Data Mining in Behavioral Research
Lecture topic: Bagging, Random Forests, & Boosting

RESEARCH SUPPORT

Ongoing Support

NIH Community Engagement Alliance (CEAL) PI: Vishwanatha, JK 04/2022 - 04/2023
Texas CEAL Consortium - Administrative Core
Role: Co-I, Evaluation

NIH-NIAA R01AA019511-06 PI: Mun, Eun-Young 01/2022 - 04/2023
Estimating Comparative Effectiveness of Alcohol Interventions for Young Adults
Role: Co-I

Pending Support

NIH R01 PA-20-185 PI: Waldman 04/2022 - 03/2026
Resolving Phenotypic and Ancestral Heterogeneity to Better Understand the Genetic and Biological Pathways Underlying Conduct Disorder
Multi-cohort project to discover genetic mechanisms associated with Conduct Disorder in children and adolescents with diverse ancestries. Role: Co-I

Completed Support

NIH-NIAA R34AA024584 PI: Walters, Scott 10/2021 - 05/2022
Development and Testing of a Just-in-Time Adaptive Smart Phone Intervention to Reduce Drinking among Homeless Adults
Role: Co-I

NIH-NCI R01CA239120-02 PI: Aneja, Ritu 10/2020 - 09/2021
Administrative Supplement to Stimulate or Strengthen Global Cancer Health Disparities Research
Supplemental funding to explore impact of Covid-19 on breast cancer patient outcomes in Nigerian women. Role: Co-I

FP7-602768 PI: Boomsma, Dorrett 08/2016 - 08/2018
ACTION: Aggression in Children: Unraveling gene-environment interplay to inform Treatment and Intervention strategies.

Awarded by European Union Seventh Framework Program. ACTION was an international collaboration among several large studies investigating genetic underpinnings of childhood aggression. Role: Graduate Student Researcher (Funded two years of study).

AWARDS

SMEP Graduate Student Travel Award, October 2017
Peer-reviewed travel award for presenting at the 2017 Annual Society of Multivariate Experimental Psychology Graduate Student Preconference. Amount: \$1500

IMPS Student Travel Award, July 2017
Peer-reviewed travel award presented at the 2017 International Meeting of the Psychometric Society. Amount: \$1000

Notebaert Professional Development Award, June 2017
Award given by the Institute for Scholarship in the Liberal Arts at University of Notre Dame. Support for presenting at the 2017 meeting of the Behavior Genetics Association. Amount: \$1878

Conference Presentation Grant, June 2017
Travel award given by the Graduate Student Union at University of Notre Dame. Support for presenting at the 2017 meeting of the Behavior Genetics Association. Amount: \$400

Graduate Student Research Award, August 2016
Research support given by the Institute for Scholarship in the Liberal Arts at University of Notre Dame. Support for a semester at VU Amsterdam for collaborative research. Amount: \$2500

Graduate Teaching Award, May 2016

Awarded by the Psychology Department at University of Notre Dame for teaching assistantship in Quantitative Methods II.

APA Science Directorate Travel Award, May 2014

Travel award given by the APA. Support for attending the Advanced Training Institutes on Exploratory Data Mining and Structural Equation Modeling in Longitudinal Research. Amount: \$500

SERVICE & OTHER ACTIVITIES

UNTHSC Service

Early Career Development Council, Member, 2021-2022, Organized Spring quarterly meeting on P & T, assisted planning for other ECDC meetings.

SPH Interprofessional Education Committee, Member, 2021-2022, Facilitated IPE activities with students, aided design and planning of IPE activities, graded student IPE submissions.

Professional Service

Ad-hoc Grant Reviewer, UKRI Medical Research Council, Neurosciences & Mental Health section

Ad-hoc Reviewer, Neuropsychopharmacology

Ad-hoc Reviewer, Statistical Methods in Medical Research

Ad-hoc Reviewer, Journal of the Royal Statistical Society, Series A

Ad-hoc Reviewer, Annals of Epidemiology

Ad-hoc Reviewer, Journal of Statistics Education

Ad-hoc Reviewer, Psychological Assessment

Ad-hoc Reviewer, Behavior Genetics

Ad-hoc Reviewer, Current Research in Psychiatry

Member, Hierarchical Taxonomy of Psychochopathology Consortium (HiTOP), Quantitative Methods workgroup (2020 -)

Associate Member, American Statistical Association (2020 -)

Associate Member, Behavior Genetics Association (2016-2018)

Member, Psychometric Society (2016-2018)