Zhengyang Zhou, Ph.D.

Assistant Professor
Department of Biostatistics and Epidemiology
School of Public Health
University of North Texas Health Science Center
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Education

- Ph.D. in Biostatistics, August 2018
  Department of Statistical Science, Southern Methodist University, Dallas, TX
  Center for Human Genetics, University of Texas Southwestern Medical Center (UTSW), Dallas, TX
  Advisor: Dr. Chao Xing

- M.S. in Statistics, May 2017
  Department of Statistical Science, Southern Methodist University, Dallas, TX

- B.S. in Mathematics, July 2014
  School of Mathematics and Statistics, Beijing Institute of Technology, Beijing, China

Professional Experience

- Assistant Professor, August 2018 – present
  Department of Biostatistics and Epidemiology, School of Public Health
  University of North Texas Health Science Center (UNTHSC), Fort Worth, TX

- Graduate Research Assistant, May 2015 – July 2018
  Bioinformatics Lab, UTSW, Dallas, TX

- Graduate Teaching Assistant, August 2016 – December 2016
  Department of Clinical Science, UTSW, Dallas, TX

- Graduate Teaching Assistant, January 2015 – June 2015
  Department of Statistical Science, Southern Methodist University, Dallas, TX

Honors and Awards

- Early Career Preventionist Network Travel Award, Society for Prevention Research, 2022
- Junior Investigator Award, Research Society on Alcohol, 2021

- Graduate Student Travel Grant, Southern Methodist University, 2018
- Schueren Award, Department of Statistical Science, Southern Methodist University, 2015
- Second Place, SAS Analytics Shootout Competition, 2015
- Meritorious Winner Award, Mathematical Contest in Modeling, 2012
- First Prize, Contemporary Undergraduate Mathematical Contest in Modeling, Beijing, 2012
- First Prize, Contemporary Undergraduate Mathematical Contest in Modeling, Beijing, 2011

Professional Affiliations

- Research Society on Alcohol, 2022 – present
- American Society of Human Genetics, 2019 – present
- Society for Prevention Research, 2019 – present
- International Biometric Society, Eastern North American Region, 2017 – present
- American Statistical Association, 2015 – present

Academic Services

University of North Texas Health Science Center, Fort Worth, Texas

- Faculty Senator, 2022 – present
- Faculty Judge, Research Appreciation Day Student Poster Award, 2022, 2023
- Department Chair Search Committee, Department of Biostatistics and Epidemiology, 2021
- Faculty Search Committee, School of Public Health, 2020
- Master Admission Committee, School of Public Health, 2020 – present
- PhD/MS Admission Committee, School of Public Health, 2019 – present
- Scholarship and Awards Committee, School of Public Health, 2018 – 2020
- Faculty Search Committee, Department of Biostatistics and Epidemiology, 2019

Editorial/Reviewer Services

Reviewer editor

- Frontiers in Genetics (for Statistical Genetics and Methodology)

Ad hoc reviewer

- Alcohol and Alcoholism
- BMJ Open
- Electronic Journal of Statistics
- Frontiers in Endocrinology
- Frontiers in Epidemiology
- Frontiers in Microbiology
- Frontiers in Psychiatry
- Frontiers in Psychology
- JoVE-Journal of Visualized Experiments
- Molecular Neurodegeneration
- Research Synthesis Methods
- Science China Mathematics
- Scientific Reports
- SORT-Statistics and Operations Research Transactions

- Statistical Science
- Statistics in Medicine
- WIREs Computational Statistics
- Youth & Society

Other Services

- Session Chair, Eastern North American Region International Biometric Society, 2021
- Planning Committee, Texas Center for Health Disparities Annual Conference, 2019-2020

Grant Activities

Active Funding

- National Institute on Aging (R01 AG076675), X. Shi (PI), $2,183,761
  Title: Intermittent Hypoxia Training: A Novel Therapy for Mild Cognitive Impairment
  Role: Co-Investigator
  Start Date: 05/01/2022
  End Date: 04/30/2025

- National Institute of Environmental Health Sciences (R03 ES034138), C. Xing (PI), $94,753
  Title: Genome-wide Screen for Dynamic Gene-environment Interactions
  Role: Subaward PI
  Start Date: 09/01/2022
  End Date: 08/31/2024

- National Institute on Aging (U19 AG078109), S. O'Bryant (PI), $149,880,426
  Title: The Health & Aging Brain Study - Health Disparities (HABS-HD)
  Role: Co-Investigator
  Start Date: 09/30/2022
  End Date: 08/31/2027

- Texas Alzheimer's Research & Care Consortium, N. Phillips (PI), $522,439
  Title: Longitudinal Mitochondrial DNA and microRNA Profiling of Neuron-enriched Exosomes
  Associated with Cognitive Decline in Mexican Americans
  Role: Co-Investigator
  Start Date: 10/16/2021
  End Date: 10/15/2023

- National Institute on Aging (R01 AG070862), R. Barber (PI), 2021 – 2026, $3,454,116
  Title: Epigenetic Risk Factors for AD Age at Onset and Health Disparities: HABLE Epigenetics
  Study
  Role: Co-Investigator
  Start Date: 09/15/2021
  End Date: 05/31/2026

- National Institute on Alcohol Abuse and Alcoholism (R01 AA028246), A. Ray (PI), $3,125,232
  Title: Cross-tailoring Integrative Alcohol and Risky Sex Feedback for College Students: A Hybrid
  Type 1 Effectiveness-Implementation Trial

Role: Co-Investigator
Start Date: 03/15/2021
End Date: 01/31/2026

- National Institute on Alcohol Abuse and Alcoholism (R34 AA026004), D. Litt (PI), $700,654
  Title: Refining and piloting a text messaging intervention to delay alcohol initiation and reduce alcohol use escalation among abstainer and lighter drinker college students
  Role: Co-Investigator
  Start Date: 09/01/2020
  End Date: 08/31/2023 (NCE)

- National Institute on Alcohol Abuse and Alcoholism (R01 AA025611), M. Lewis (PI), $2,658,912
  Title: A Longitudinal, Measurement Burst Study to Examine the Ecological Validity of the Prototype Willingness Model of Hazardous Adolescent and Young Adult Alcohol Use
  Role: Co-Investigator
  Start Date: 07/01/2019
  End Date: 07/31/2024 (NCE)

- National Institute on Alcohol Abuse and Alcoholism (2R01 AA019511-05A1), E.Y. Mun (PI), $4,553,839
  Title: Estimating Comparative Effectiveness of Alcohol Interventions for Young Adults
  Role: Co-Investigator
  Start Date: 12/01/2018
  End Date: 04/30/2024 (NCE)

Completed Funding

- National Institute on Minority Health and Health Disparities (U54 MD013376), H. Yu (PI), D. Dluzen (Project Lead), $1,200,457
  Title: The Relationship between Socioeconomic Status and Poverty and mRNA Expression in Immune Cells
  Role: Subaward PI
  Start Date: 06/01/2020
  End Date: 02/28/2023

- National Eye Institute (R01 EY026662), D. Inman (PI), $1,861,475
  Title: Metabolic Vulnerability as a Disease Target for Glaucoma
  Role: Co-Investigator
  Start Date: 01/01/2022
  End Date: 12/31/2022

- Texas Alzheimer's Research & Care Consortium, R. Barber (PI), $646,865
  Title: Epigenetic Risk Factors for Early Age at Onset of Alzheimer's & MCI among non-Caribbean Hispanics
  Role: Co-Investigator
  Start Date: 08/01/2018
  End Date: 08/31/2021

- National Institute on Minority Health and Health Disparities (3U54 MD006882-08S2), J. Vishwanatha (PI), N. Phillips (Project Lead), $233,976
  Title: Focus on Mexican Americans: Mitochondrial Underpinnings of Sex- and Ethnicity-based risk for Alzheimer's Disease
  Role: Co-Investigator
  Start Date: 06/01/2019
  End Date: 05/31/2021

- Women's Center of Tarrant County, E. Thompson (PI), $39,681
  Title: Play It Safe Evaluation
  Role: Biostatistician
  Start Date: 09/01/2020
  End Date: 08/31/2021

- National Institute on Alcohol Abuse and Alcoholism (R01 AA021379), M. Lewis (PI), $2,432,844
  Title: Informing Alcohol-Related Risk Intervention with the Prototype Willingness Model
  Role: Co-Investigator
  Start Date: 05/01/2019
  End Date: 06/30/2019

Publications

1. Litt, D. M., **Zhou, Z.**, Fairlie, A. M., King, K. M., Cross, A., Kannard, E., Geusens, F., & Lewis, M. A. (2023). Daily level examination indicates that positive affect, but not negative affect, is associated with alcohol and marijuana use among adolescents and young adults. *Psychology of Addictive Behaviors*. Advance online publication. https://doi.org/10.1037/adb0000949

2. Litt, D. M., **Zhou, Z.**, Fairlie, A. M., Waldron, K. A., Geusens, F., & Lewis, M. A. (2023). Experimental Test of Drinking and Abstaining Social Media Content on Adolescent and Young Adult Social Norms and Alcohol Use. *Journal of Studies on Alcohol and Drugs*, jsad-23.

3. Abraham Daniel, A., Silzer, T., Sun, J., **Zhou, Z.**, Hall, C., Phillips, N., & Barber, R. (2023). Hypermethylation at CREBBP Is Associated with Cognitive Impairment in a Mexican American Cohort. *Journal of Alzheimer's Disease*, (Preprint), 1-11.

4. Tan, Z., Tanner-Smith, E. E., Walters, S. T., Tan, L., Huh, D., **Zhou, Z.**, ... & Mun, E. Y. (2023). Do Brief Motivational Interventions increase motivation for change in drinking among college students? A 2-step meta-analysis of individual participant data. *Alcoholism: Clinical and Experimental Research*. DOI: https://doi.org/10.1111/acer.15126

5. Waldron, K. A., Lewis, M. A., Fairlie, A. M., Litt, D. M., **Zhou, Z.**, & Bryant, D. (2023). Daily-level associations between alcohol use cognitions and normative perceptions among adolescents: An intensive longitudinal study. *Addictive Behaviors*, 143, 107697.

6. Lewis, M. A., **Zhou, Z.**, Parks, K. A., Evans-Polce, R., Litt, D. M., Fairlie, A. M., ... & McCabe, S. E. (2023). Polysubstance use among young adults and differences in negative alcohol-related sexual experiences. *Addictive Behaviors*, 138, 107571.

7. Lewis, M. A., **Zhou, Z.**, Litt, D. M., Kannard, E., & Lowery, A. (2023). Age and Fear of Missing Out as Moderators of the Association between Peak Drinks and Alcohol-Induced Blackouts among Adolescents and Young Adults. *Substance Use & Misuse*, 58(6), 739-745.

8. Ray, A., Mun, E. Y., Lewis, M., Litt, D., Stapleton, J., Tan, L., Buller, D., **Zhou, Z.**, Bush, H., & Himelhoch, S. (2023). Cross-Tailoring Integrative Alcohol and Risky Sexual Behavior Feedback for College Students: Protocol for a Hybrid Type 1 Effectiveness-Implementation Trial. *JMIR Research Protocols*, 12(1), e43986.

9. Manning, S. E., Dluzen, D. F., Ku, H., Xing, C., & **Zhou, Z.** (2023). A Nonparametric Alternative to the Cochran-Armitage Trend Test in Genetic Case-control Association Studies: the Jonckheere-Terpstra trend test. *Plos One*. 18(2), e0280809.
    (Student paper)

10. LoParco, C. R., Rossheim, M. E., Walters, S. T., **Zhou, Z.**, Olsson, S., & Sussman, S. Y. (2023). Delta-8 tetrahydrocannabinol: a scoping review and commentary. *Addiction*, 118(6), 1011-1028.

11. Huh, D., Baldwin, S., **Zhou, Z.**, Park, J., & Mun, E. Y. (2023). Which is Better for Individual Participant Data Meta-Analysis of Zero-inflated Count Outcomes, One-Step or Two-Step Analysis? A Simulation Study. *Multivariate Behavioral Research*. 1-16.

12. **Zhou, Z.**, Ku, H. C., Manning, S. E., Zhang, M., & Xing, C. (2023). A Varying Coefficient Model to Jointly Test Genetic and Gene–Environment Interaction Effects. *Behavior Genetics*, 1-9.

13. Lewis, M., **Zhou, Z.**, Fairlie, A., Litt, D., Kannard, E., Walker, T., Resendiz, R., …, & Lee, C (2022). Occasion-level Investigation of Playing Drinking Games: Associations with Cognitions, Situational factors, Alcohol Use, and Negative Consequences among Adolescents and Young Adults. *Addictive Behaviors*, 137, 107497.

14. Tan, L., Friedman, Z., **Zhou, Z.**, Huh, D., White, H. R., & Mun, E. Y. (2022). Does abstaining from alcohol in high school moderate intervention effects for college students? Implications for tiered intervention strategies. *Frontiers in Psychology*, 13:993517.

15. Mun, E.-Y., **Zhou, Z.**, Huh, D., Tan, L., Li, D., Tanner-Smith, E. E., Walters, S. T., & Larimer, M. E. (2022). Brief alcohol interventions are effective through six months: Findings from marginalized zero-inflated Poisson and negative binomial models in a two-step IPD meta-analysis. *Prevention Science*, 1-14.

16. Loparco, C. R., Lowery, A., **Zhou, Z.**, Leon, M., Galvin, A., Lewis, M. A. and Litt, D. M. (2022). Age as a Moderator of the Association Between Anticipated Regret and the Posting and Deleting of Alcohol-Related Content on Social Networking Sites Among Adolescents and Young Adults. *Health Behavior Research*, 5(2), 3.

17. LoParco, C., **Zhou, Z.**, Litt, D. M. and Lewis, M. A. (2022). Do Impulsivity and Biological Sex Moderate Associations Between Alcohol-related Sexual Willingness and Behavior Among Young Adults? *Health Behavior Research*, 5(2), 7.

18. Zhao, J., Ding, Y., Kline, G. P., **Zhou, Z.**, Mallet, R. T., & Shi, X. (2022). Hypoxic breathing produces more intense hypoxemia in elderly women than in elderly men. *Frontiers in Physiology*, 13, 989635.

19. Pritschmann, R. K., Gebru, N. M., Litt, D. M., **Zhou, Z.**, & Lewis, M. A. (2022). Are Drinking Cognitions Associated with Marijuana and Concurrent Alcohol and Marijuana Use among Adolescents and Young Adults? *Cannabis*, 5(1), 59-74.

20. Reid, D.M., Barber, R.C., Thorpe, R.J., Sun, J., **Zhou, Z.**, Phillips, N. (2022). Mitochondrial DNA oxidative mutations are elevated in Mexican American women potentially implicating Alzheimer's disease. *npj Aging*, 8(1), 1-12.

21. Cushen, S. C., Ricci, C. A., Bradshaw, J. L., Silzer, T., Blessing, A., Sun, J., **Zhou, Z.**, ... & Goulopoulou, S. (2022). Reduced maternal circulating cell-free mitochondrial DNA is associated with the development of preeclampsia. *Journal of the American Heart Association*, 11(2), e021726.

22. **Zhou, Z.**, Li, D., & Zhang, S. (2022). Sample size calculation for cluster randomized trials with zero-inflated count outcomes. *Statistics in Medicine*, 41(12), 2191-2204..

23. Mun, E. Y., Li, X., Lineberry, S., Tan, Z., Huh, D., Walters, S. T., **Zhou, Z.**, ... & Project INTEGRATE Team. (2022). Do brief alcohol interventions reduce driving after drinking among college students? A two-step meta-analysis of individual participant data. *Alcohol and Alcoholism*, 57(1), 125-135.

24. **Zhou, Z.**, Xie, M., Huh, D. and Mun, E.-Y. (2021). A Bias Correction Method in Meta-analysis of Randomized Clinical Trials with no Adjustments for Zero-inflated Outcomes. *Statistics in Medicine*, 40(26), 5894-5909.

25. Huh, D., Li, X., **Zhou, Z.**, Walters, S., Baldwin, S., Tan, Z., Larimer, M. and Mun, E.-Y. (2021). A Structural Equation Modeling Approach to Meta-analytic Mediation Analysis Using Individual Participant Data: Testing Protective Behavioral Strategies as a Mediator of Brief Motivational Intervention Effects on Alcohol-Related Problems. *Prevention Science*, 1-13.

26. LoParco, C. R., **Zhou, Z.**, Fairlie, A. M., Litt, D. M., Lee, C. M., and Lewis, M. A. (2021). Testing Daily-level Drinking and Negative Consequences as Predictors of Next-day Drinking Cognitions. *Addictive behaviors*, 122, 107042. Advance online publication. https://doi.org/10.1016/j.addbeh.2021.107042.

27. Thompson, E. L., **Zhou, Z.**, Garg, A., Rohr, D., Ajoku, B., and Spence, E. E. (2021). Evaluation of a School-Based Child Physical and Sexual Abuse Prevention Program. *Health education & behavior*, 1090198120988252. Advance online publication. https://doi.org/10.1177/1090198120988252.

28. Mun, E.-Y., Li, X., Lineberry S., Tan, Z., Huh, D., Walters, S., **Zhou, Z.** and Larimer, M. (2020). Do Brief Motivational Interventions Reduce Driving after Drinking Among College Students? A Two-step Meta-analysis of Individual Participant Data. *Alcohol and Alcoholism*, doi: 10.1093/alcalc/agaa146

29. Wu, G[#]., Liu, L.[#], **Zhou, Z.**[#], Liu, J., Wang, B., Ruan, J., Yang, Q., Zhang, C., Wang, D., Kang, L., Wang, S., Hui, R., Zou, Y., Xing, C., Song, L. and Wang, J. (2020). East Asian-Specific Common Variant in TNNI3 Predisposes to Hypertrophic Cardiomyopathy. *Circulation*, 142(21), 2086-2089. ([#]: Co-first authorship)

30. Uche, U. I., Suzuki, S., Fulda, K. G. and **Zhou, Z.** (2020). Environment-Wide Association Study on Childhood Obesity in the US. *Environmental Research*, 191, 110109.

31. Garg, A., El-Shanti, H., Xing, C., **Zhou, Z.**, Abujbara, M., Rashed, K., Khateeb, M., Ajlouni, K. and Agarwal, A. (2020). A novel syndrome with short stature, mandibular hypoplasia and osteoporosis may be associated with a PRRT3 variant. *Journal of the Endocrine Society*, 4(8), bvaa088.

32. Kim, S., Huh, D., **Zhou, Z.** and Mun, E.-Y. (2020). A Comparison of Bayesian to Maximum Likelihood Estimation for Latent Growth Models in the Presence of a Binary Outcome. *International Journal of Behavioral Development*, 44(5), 447-457.

33. Pathak, G., **Zhou, Z.**, Silzer, T., Barber, R. and Phillips, N. (2020). Two-stage Bayesian GWAS of 9,576 individuals identifies SNP-regions that are targeted by miRNAs inversely expressed in Alzheimer's and cancer. *Alzheimer's & Dementia*, 16(1), 162-177.

34. Patni, N., Hatab, S., Xing, C., **Zhou, Z.**, Quittner, C., and Garg, A. (2019). A novel autosomal recessive lipodystrophy syndrome due to homozygous LMNA variant. *Journal of Medical Genetics*, 57(6), 422-426.

35. Pathak, G., Silzer, T., Sun, J., **Zhou, Z.**, Daniel, A., Johnson, L., O'Bryant, S., Phillips, N. and Barber, R. (2019). Genome-wide methylation of mild cognitive impairment in Mexican Americans highlights genes involved in synaptic transport, Alzheimer's disease-precursor phenotypes, and metabolic morbidities. *Journal of Alzheimer's Disease*, 72(3), 733-749.

36. Chen, Z., Cai, J., Chen, Y., Wei, J., Li, H., Lu, Y., **Zhou, Z.** and Chen, X. (2019). A meta-analysis of the association between the presence of Helicobacter pylori and periodontal diseases. *Medicine*, 98(22).

37. Ma, Y., Li, W., Shotorbani, P., Huang, L., Chaudhari, S., Wu, P., Wang, L., Dubansky, B., Ryou, M., **Zhou, Z.** and Ma, R. (2019), Comparison of diabetic nephropathy between male and female eNOS$^{-/-}$ *db/db* mice. *American Journal of Physiology-Renal Physiology*, 316(5), F889-F897.

38. Huh, D., Mun, E.-Y., Walters, S., **Zhou, Z.** and Atkins, D. (2019). A Tutorial on Individual Participant Data Meta-Analysis using Bayesian Multilevel Modeling to Estimate Alcohol Intervention Effects across Heterogeneous Studies. *Additive Behaviors*, 94, 162-170.

39. Zhang, D., **Zhou, Z.**, Abu-Hijleh, M., Batra, K., Xing, C. and Garcia, C. K. (2019). Homozygous Rare *PARN* Missense Mutation in Familial Pulmonary Fibrosis. *American Journal of Respiratory and Critical Care Medicine*, 199(6), 797-799.

40. **Zhou, Z.**, Ku, H. C., Xing, G. and Xing, C. (2018). Decomposing Pearson's χ^2 Test: A Linear Regression and its Departure from Linearity. *Annals of Human Genetics*, 82(5), 318-324.

41. Hu, J., Rong, Z., Gong, X., **Zhou, Z.**, Sharma, V., Xing, C., Watts, J., Corey, D. and Mootha, V. V. (2018). Oligonucleotides Targeting *TCF4* Triplet Repeat Expansion Inhibit RNA Foci and Mis-splicing in Fuchs' Dystrophy. *Human Molecular Genetics*, 27(6), 1015-1026.

42. Saade, J. S., Xing, C., Gong, X., **Zhou, Z.** and Mootha, V. V. (2018), Instability of *TCF4* Triplet Repeat Expansion in Fuchs' Endothelial Corneal Dystrophy with Parent-Child Transmission. *Investigative Ophthalmology & Visual Science*, 59(10), 4065-4070.

43. **Zhou, Z.**, Ku, H. C., Huang, Z., Xing, G. and Xing, C. (2017). Differentiating the Cochran-Armitage Trend Test and Pearson's χ^2 Test: Location and Dispersion. *Annals of Human Genetics*, 81(5), 184-189.

44. Mootha, V. V., Hansen, B., Rong, Z., Mammen, P. P., **Zhou, Z.**, Xing, C. and Gong, X. (2017). Fuchs' Endothelial Corneal Dystrophy and RNA Foci in Patients with Myotonic Dystrophy. *Investigative Ophthalmology & Visual Science*, 58(11), 4579-4585.

Submitted for Publication

- **Zhou, Z.**, Li, D., Huh, D., Xie, M. & Mun, E.-Y. A Simulation Study of the Performance of Statistical Models for Count Outcomes with Excessive Zeros.

- Nolan, E., Mendoza, E., Phillips, N., Barber, R., & **Zhou, Z.** A mendelian randomization analysis of obesity on the development of Alzheimer's disease.
  (student paper)

- Lewis, M., **Zhou, Z.**, Fairlie, A., Litt, D., Geusens, F., Parks, K., & McCabe, S. Examining Within-Person Associations Between Alcohol and Marijuana Use and Hooking Up among Adolescents and Young Adults.

- Reid, D. M., Barber, R. C., Jones, H. P., Thorpe, R. J., Sun, J., **Zhou, Z.**, & Phillips, N. R. Integrative Blood-Based Characterization of Oxidative Mitochondrial DNA Damage Variants Implicates Mexican Americans' Metabolic Risk for Developing Alzheimer's Disease.

- Housini, M., **Zhou, Z.**, Gutierrez, J., Rao, S., Jomaa, R., Subasinghe, K., Reid, D., Silzer, T., Phillips, N., O'Bryant, S., & Barber, R. Frequencies of the Top Alzheimer's Disease Risk-Conferring Alleles Differ Among Mexican- and Non-Hispanic White-Americans in the Health & Aging Brain Study - Health Disparities Cohort.

- Cross, A., **Zhou, Z.**, Fairlie, A., Litt, D., Graupensperger, S., Lee, C., Kannard, E., & A. Lewis, M. Daily-Level Examination of Familiarity with Location/people in Association with Protective Behavioral Strategy Use Among Adolescents and Young Adults.

- Mun, E.-Y., Tan, L., Luningham, J., Huh, D., **Zhou, Z.**, Tanner-Smith, E., & Baldwin, S. The Selection of Statistical Models for Reporting Count Outcomes and Intervention Effects in Brief Alcohol Intervention Trials: A Review and Recommendations.

- Abdali, K., Chen, X., Ross, S., Davis, S., **Zhou, Z.**, & Shi, X. Mechanisms Maintaining Cerebral Perfusion are Impaired during Systemic Hypotension in Elderly Adults.

Invited Presentations

- **Zhou, Z.**, Li, D., and Zhang, S. (2021, July). *Sample Size Calculation for Cluster Randomized Trials with Zero-inflated Count Outcomes*. Centre for Medical Image Computing, University College London, England, Virtual session.

- Lewis, M. A., Litt, D. M., and **Zhou, Z.** (2020, October). Adolescent and young adult mental health, substance use, and sexual behavior: Project PATH. Invited speakers, Mental Health Connection of Tarrant County, Fort Worth, TX.

Presentations

- Mendoza, E.P., Nolan, E., Phillips, N., Barber, R., & **Zhou, Z.** (2023, November). *Association between everyday perceived discrimination and cognitive function as mediated by depression in diverse populations: A HABS-HD Study*. Abstract submitted to American Public Health Association Annual Meeting. Atlanta, GA.
  (Student paper)

- **Zhou, Z.**, Li, D., Huh, D., Xie, M., Chen, Y., & Mun, E.-Y. (2023, August). *A generalized estimating equations approach to variance estimation for a family of count distributions: A unifying method*. Presented at Joint Statistical Meeting, Ontario, Canada.

- Housini, M., **Zhou, Z.**, Kind A., Reid D., Daniel, A., Silzer, T., O'Bryant, S., Phillips, N., Barber, R., & Pathak, G. (2023, July). *Interaction between DNA methylation and neighborhood disadvantage may impact risk for cognitive decline among Mexican Americans enrolled in the Health and Aging Brain Study – Health Disparities (HABS-HD) Cohort*. Presented at Alzheimer's Association International Conference. Amsterdam, Netherlands.

- Housini, M., **Zhou, Z.**, Reid D., Daniel, A., Silzer, T., O'Bryant, S., Phillips, N., Barber, R., & Pathak, G. (2023, July). *Epigenome-Wide-Association-Scan Reveals Epigenetic Profile Changes Using Neurofilament Light as a Neurodegeneration Proxy Biomarker in Mexican Americans*. Presented at Alzheimer's Association International Conference. Amsterdam, Netherlands.

- Daniel, A., Silzer, T., Sun, J., **Zhou, Z.**, Hall, C., Phillips, N., & Barber, R. (2023, July). *Role of methylation in risk for cognitive impairment in Mexican Americans*. Presented at Alzheimer's Association International Conference. Amsterdam, Netherlands.

- Meeker, K., Ances, B., Petersen, M., Barber, R., Yaffe, K., **Zhou, Z.**, Llibre-Guerra, J., Zhang, F., Hall, J., Kind, A., Lee, J., Vardarajan, B., Cohen, A., Mielke, M., Mapstone, M., Babulal, G., O'Bryant, S. (2023, July). *Effects of structural and social determinants of health on ethno-racial differences in ATN plasma biomarkers of Alzheimer's disease: A HABS-HD study*. Presented at Alzheimer's Association International Conference. Amsterdam, Netherlands.

- Litt, D., **Zhou, Z.**, Fairlie, A. M., Graupensperger, S., Cross, A., Lee, C. M. and Lewis, M.A. (2023, June). *A Daily-level Examination of Willingness to Engage in Alcohol-related Risk Behaviors and Associations with Specific Outcomes Among Adolescents and Young Adults*. Presented at the 46th annual scientific meeting of the Research Society on Alcoholism. Bellevue, WA.

- Cross, A., **Zhou, Z.**, Fairlie, A. M. Litt, D. M., Graupensperger, S., & Lewis, M. A. (2023, June). *Daily-level Examination of Familiarity with Location/people in Association with Protective Behavioral Strategy Use Among Adolescents and Young Adults*. Presented at the 46th annual scientific meeting of the Research Society on Alcoholism. Bellevue, WA.

- AE Ray, DM Litt, MA Lewis, JL Stapleton, L Tan, N Williams, K Dunn, EY Mun, **Z Zhou**, & D Buller (2023, June). *Cross-tailoring Integrative Alcohol and Risky Sex Feedback for College Students: The Development of Project FRESH*. Presented at the 46th annual scientific meeting of the Research Society on Alcoholism. Bellevue, WA.

- JL Stapleton, EY Mun, MA Lewis, AE Ray, K Dunn, N Williams, DM Litt, L, D Buller, & **Z Zhou**. (2023, June). *Increasing Uptake of Evidence-based Brief Interventions for College Student Alcohol Use and Related Behaviors: Perspectives from Campus Stakeholders*. Presented at the 46th annual scientific meeting of the Research Society on Alcoholism. Bellevue, WA.

- Huh, D., **Zhou, Z.**, & Mun, E. Y. (2023, May). *Using Simulation Studies to Guide IPD Analysis and Synthesis Decisions: Project INTEGRATE*. Presented at the 31st Annual Meeting of the Society for Prevention Research. Washington, DC.

- Tan, Z., Tan, L., Huh, D., Larimer, M., **Zhou, Z.**, Walters, S., & Mun, E. Y. (2023, May). *Do Brief Alcohol Interventions Increase Motivation for Change in Drinking Among College Students? a Meta-Analysis of Individual Participant Data*. Presented at 31st the Annual Meeting of the Society for Prevention Research. Washington, DC.

- Litt, D. M., **Zhou, Z.**, A.M. Fairlie, K. A. Waldron, & M.A. Lewis (2023, June). *An Experimental Test Of Abstaining And Drinking Social Media Displays On Adolescent And Young Adult Norms And Behavior*. In M. Strowger (Chair), Novel approaches to examining the effects of both mass media and social media on alcohol use among adolescents and young adults. Symposia presented at the annual meeting of the Research Society on Alcohol. Bellevue, WA.

- Litt, D. M., **Zhou, Z.**, Fairlie, A. M., Graupensperger, S., Cross, A., Lee, C. M., & Lewis, M.A. (2023, June). *A daily level examination of willingness to engage in alcohol-related risk behaviors in association with risk behaviors among adolescents and young adults*. Presented at the Annual Meeting of the Research Society on Alcohol. Bellevue, WA.

- Zhang, F., Petersen, M., Johnson, L., Hall, J., **Zhou, Z.**, Phillips, N., Barber, R., & O'Bryant, S. (2023, March). *Harnessing Machine Learning to Enhance Genome-Wide Association Studies in Alzheimer's disease for the Health and Aging Brain Study-Health Disparities (HABS-HD)*. Presented at MidSouth Computational Biology and Bioinformatics Society 2023 annual meeting. Dallas, TX.

- Daniel, A., Silzer, T., Hall, C., Sun, J., **Zhou, Z.**, Phillips, N., & Barber, R. (2022, July). *DNA Methylation in Risk For Cognitive Impairment And Type 2 Diabetes in a Mexican American Cohort*. Presented at Alzheimer's Association International Conference. San Diego, CA.

- Mun, E.-Y., **Zhou, Z.**, Huh, D., Tan, L., Li, D., Tanner-Smith, E. E., Walters, S. T., & Larimer, M. E. (2022, June). *Brief alcohol interventions are effective through six months: Findings from marginalized zero-inflated Poisson and negative binomial models in a two-step IPD meta-analysis*. Presented at the 45th annual scientific meeting of the Research Society on Alcoholism. Orlando, FL.

- Huh, D., Baldwin, S., **Zhou, Z.**, Park, J., & Mun, E.-Y. (2022, June). *A comparison of four meta-analysis approaches using individual participant data to evaluate intervention effects on alcohol use outcomes*. Presented 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*. Presented at the 45th annual scientific meeting of the Research Society on Alcoholism. Orlando, FL.

- Lewis, M., **Zhou, Z.**, Fairlie, A., Litt, D., Kannard, E., Walker, T., Resendiz, R., …, & Lee, C. (2022, June). *Playing drinking games as a daily-level predictor of alcohol use and negative consequences among adolescents and young adults*. Presented at the 45th annual scientific meeting of the Research Society on Alcoholism. Orlando, FL.

- Huh, D., Baldwin, S. A., Park, J., **Zhou, Z.**, & Mun, E.-Y. (2022, May). *Comparing the performance of meta-analysis approaches using individual participant data to evaluate intervention effects on alcohol use outcomes*. Presented at the 30th Annual Meeting of the Society for Prevention Research. Seattle, WA.

- **Zhou, Z.**, Xie, M., Huh, D., & Mun, E.-Y. (2022, May). *Statistical model performance of outcomes with excessive zeros and overdispersion in prevention research: a simulation study*. Presented at the 30th Annual Meeting of the Society for Prevention Research. Seattle, WA.

- Daniel, A., Silzer, T., Hall, C., Sun, J., **Zhou, Z.**, Phillips, N., & Barber, R. (2022, May). *DNA Methylation in Risk For Cognitive Impairment And Type 2 Diabetes in a Mexican American Cohort*. Presented at the Texas Alzheimer's Research and Care Consortium 2022 Scientific Symposium. Austin, TX.

- Manning, S. E., Xing, C., Ku, H. and **Zhou, Z.** (2021, October). *A non-parametric alternative to the Cochran-Armitage trend test in genetic case-control association studies: The two-sided Jonckheere's test*. Presented at American Public Health Association Annual Meeting. Denver, CO.
  (Student paper; Recommended to participant in the Delta Omega section)

- Reid, D., Barber, R., Thorpe, R., Sun, J., **Zhou, Z.**, & Phillips, N. (2021, October). *Sequence-based assessment of mitochondrial DNA oxidative damage in cognitive impairment: Shedding light on health disparities in Mexican Americans*. Presented at American Society of Human Genetics 2021 Virtual Meeting. Virtual Session.

- **Zhou, Z.**, Xie, M., Huh, D., and Mun E.-Y. (2021, June). *A bias correction method in meta-analysis for zero-inflated outcomes: Application to evaluating comparative effectiveness of brief alcohol interventions*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- Huh, D., Li, X., **Zhou, Z.**, Walters, S. T., Baldwin, S. A., Tan, Z., Larimer, M. E., and Mun, E.-Y. (2021, June). *Testing protective behavioral strategies as a mediator of brief alcohol intervention effects: A one-stage structural equation modeling approach to meta-analytic mediation analysis*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- Mun, E.-Y., Li, X., Lineberry, S., Tan, X., Huh, D., Walters, S. T., **Zhou, Z.**, & Larimer, M. E. (2021, June). *Do brief alcohol interventions reduce driving after drinking among college students? A two-step meta-analysis of individual participant data*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- Lewis, M. A., **Zhou, Z.**, Parks, K. A., Evans-Polce, R., Litt, D. M., Fairlie, A., M., LoParco, C.., R., & McCabe, S. E. (2021, June). *Examining the role of polysubstance use in experience negative alcohol-related sexual consequences among underage young adults*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- LoParco, C., **Zhou, Z.**, Litt, D. M., & Lewis, M. A. (2021, June). *Biological sex as a moderator fo the associations between positive/negative affect and simultaneous and concurrent alcohol and marijuana a use*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- Lowery, A. D., **Zhou, Z.**, Astorga, A., Litt, D. M., & Lewis, M. A. (2021, June). *Examining Fear of Missing Out (FOMO) as a moderator of the association between peak drinks and alcohol-induced blacking out*. Presented at the 44th annual scientific meeting of the Research Society on Alcoholism. Virtual Session.

- Manning, S. E., Xing, C., Ku, H. and **Zhou, Z.** (2021, March). *A non-parametric alternative to the Cochran-Armitage trend test in genetic case-control association studies: The two-sided Jonckheere's test*. The annual Research Appreciation Day (RAD), University of North Texas Health Science Center, Fort Worth, TX.
  (Student paper; Won Third Place Award in the School of Public Health section)

- **Zhou, Z.**, Li, D. and Zhang, S. (2021, March). *Sample Size Calculation for Cluster Randomized Trials with Zero-inflated Count Outcomes*. Presented at Eastern North American Region International Biometric Society, Virtual Session.

- Manning, S. E., Xing, C., Ku, H. and **Zhou, Z.** (2020, March). *A non-parametric alternative to the Cochran-Armitage trend test in genetic case-control association studies: The two-sided Jonckheere's test*. The annual Research Appreciation Day (RAD), University of North Texas Health Science Center, Fort Worth, TX. (Student paper; Conference canceled due to COVID-19)

- **Zhou, Z.**, Xie, M., Trikalinos, T. and Mun, E.-Y. (2019, July). *Bias correction and sensitivity analysis for meta-analysis of studies with zero-inflated outcomes*. Presented at Joint Statistical Meeting, Denver, CO.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2019, July). *The Additive Model in Genetic Association Studies*. Presented at Joint Statistical Meeting, Denver, CO.

- Mun, E.-Y. and **Zhou, Z.** (2019, May). *Methods toolbox for meta-analysis of individual participant data: Examples from Project INTEGRATE*. Presented at the 27th Annual Meeting of the Society for Prevention Research, San Francisco, CA.

- Mun, E.-Y., Li, X., **Zhou, Z.** and Walters, S. T. (2019, March). *Project INTEGRATE: A Comprehensive and systematic meta-analysis study of brief alcohol interventions for young adults*. Presented at the UNTHSC Research Appreciation Day (Faculty), Fort Worth, TX.

- Tan, Z., Li, X., **Zhou, Z.**, Suzuki, S., Walters, S. T. and Mun, E.-Y. (2018, November). Longitudinal links between social support, substance use problems, and depression among adults in supportive housing programs. Presented at the Annual Meeting of the American Public Health Association, San Diego, CA.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2018, July). *Testing Nonlinear Gene-Environment Interaction Through Varying Coefficient and Linear Mixed Models*. Presented at Joint Statistical Meeting, Vancouver, Canada.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2018, March). *Testing Nonlinear Gene-Environment Interaction Through Varying Coefficient and Linear Mixed Models*. Presented at Eastern North American Region International Biometric Society, Atlanta, GA.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2017, October). *Testing Nonlinear Gene-Environment Interaction Through Varying Coefficient and Linear Mixed Models*. Quantitative Biomedical Research Center, University of Texas Southwestern Medical Center, Dallas, TX.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2017, August). *A Procedure to Control for Population Structure in Genome-Wide Association Studies with Rare Variants*. Presented at Joint Statistical Meetings, Baltimore, MD.

- **Zhou, Z.**, Ku, H. C. and Xing, C. (2017, July). *A Procedure to Control for Population Structure in Genome-Wide Association Studies with Rare Variants*, Biostatistics Work in Progress, University of Texas Southwestern Medical Center, Dallas, TX.

- **Zhou, Z.** (2016, March). *An Introduction to Genome-Wide Association Study*, Department of Statistical Science, Southern Methodist University, Dallas, TX.

Software Package

- **Zhou, Z.**, Li, D., Huh, D., and Mun, E.-Y. (2022). mcount: Marginalized Count Regression Models. R package version 1.0.0. https://cran.r-project.org/web/packages/mcount/index.html

- **Zhou, Z.**, Manning, S., Xing, C., and Ku, H. (2021). GEVACO: Joint Test of Gene and GxE Interactions via Varying Coefficients. R package version 1.0.1. https://CRAN.R-project.org/package=GEVACO

Teaching Experience

- Lecturer, BIOS 5316: Categorical Data Analysis, UNTHSC, 2020, 2021, 2022, 2023
- Lecturer, BIOS 6391: Statistical Genetics, UNTHSC, 2020
- Lecturer, BIOS 6326: Methods of Clinical Trials, UNTHSC, 2019
- Lecturer, EPID 6391: Advanced SAS and R, UNTHSC, 2019, 2020, 2021

Mentoring Experience

Primary Advisor

- PhD Student: Edna Patricia Mendoza, UNTHSC, 2023 – present
- MS Student: Emma Nolan, UNTHSC, 2021 – 2023
    - Joined PhD in Epidemiology program of Vanderbilt University after graduation
    - Won Kenneth Cooper - Excellence in Research Award, School of Public Health, UNTHSC, 2023
    - Won the First Place, 3-Minute Thesis (3MT) Competition, UNTHSC, 2023
- MS Student: Sydney Manning, UNTHSC, 2019 – 2021
    - Won Kenneth Cooper - Excellence in Research Award, School of Public Health, UNTHSC, 2021

Committee Member

- Dissertation Committee Member, PhD Student: Mohammad Housini, UNTHSC, 2021 – present
- Dissertation Committee Member, PhD Student: Cassidy LoParco, UNTHSC, 2021 – 2022
- Dissertation Committee Member, PhD Student: Micaela Colmenarez, UNTHSC, 2020 – 2022
- Dissertation Committee Member, PhD Student: Zhengqi Tan, UNTHSC, 2021 – 2022
- Dissertation Committee Member, PhD Student: Ann Abraham Daniel, UNTHSC, 2019 – 2023
- Dissertation Committee Member, PhD Student: Uloma Igara Uche, UNTHSC, 2019 – 2020
- Dissertation Committee Member, PhD Student: Bing Song, UNTHSC, 2019 – 2020
- Dissertation Committee Member, PhD Student: Gita Pathak, UNTHSC, 2018 – 2019