

Elijah C. Baughan

Curriculum Vitae

Phone: (336)-314-3981

Email: elibaughan@gmail.com

[Google Scholar Profile](#)

Education

April 2023 BS, Psychology
Brigham Young University

Publications

Miller, C.H., Hedges, D.W., Brown, B., Olsen, J., **Baughan, E.C.**, Development of the scrupulosity inventory: A factor analysis and construct validity study, *Journal of Behavior Therapy and Experimental Psychiatry* (2024)

Friedrich, M.U., **Baughan, E.C.**, Kletenik, I., Younger, E., Zhao, C.W., Howard, C., Ferguson, M.A., Chen, A., Zeller, D., Piervincenzi, C., Tommasin, S., Pantano P., Blanke, O., Prasad S., Nielsen, J.A., Fox, M.D. (under review) Lesions causing Alice in Wonderland Syndrome map to a common brain network linking body and size perception.

Polhill, S., Smith, S., **Baughan, E.C.**, Bunnell, K., Bunker B., Garcia-Prada D., Ferguson, M.A., Smith, G.S., Smith, B.M., Hansen, K.L., Wang, K.T., Allen, G.E., Nielsen, J.A. (under review). Self-Compassion Mediates the Relationship between Perfectionism and Scrupulosity among Young Adult Members of the Church of Jesus Christ of Latter-day Saints.

Research Conferences

Poster Presentations

Turner, J., Suvarna, A., Chen, V., **Baughan, E.C.**, Bunnell, K., Howard, C., Schaper, F., Ferguson, M., & Nielsen, J. (2024). LesionBank.org: An Open Source Platform for Brain Lesion Case Reports. *American Academy of Neurology*. (Denver, CO)

Flitton, A., **Baughan, E.C.**, Schaper, F., Ferguson, M., & Nielsen, J. (2024). Expanding the Lesion Network Mapping of Delusions. *American Academy of Neurology*. (Denver, CO)

Helquist, K., **Baughan, E.C.**, Pouwer, L., Benzley, O., Kay, D., Klosinski, T., Schaper, F., Ferguson, M., & Nielsen, J. (2024). Causal Brain Network Implicated in Insomnia Symptoms. *American Academy of Neurology* (Denver, CO)

- Marcucci, M., **Baughan, E.C.**, Benzley, O., Helquist, K., Schaper, F., Ferguson, M., & Nielsen, J. (2024). Brain Networks Implicated in Cerebral Achromatopsia. *American Academy of Neurology* (Denver, CO)
- Baughan, E.C.**, Bunnell, K., Ferguson, M.A., Smith, G.S., Smith, B.M., Allen, G.K., & Nielsen, J.A. (2023). An fMRI Investigation of Brain Circuitry Involved in Emotional Processing and Scrupulosity. *Society of Biological Psychiatry* (San Diego, CA)
- Gable, M., **Baughan, E.C.**, Bunnell, K., Ferguson, M.A., Smith, G.S., Smith, B.M., Allen, G.K., & Nielsen, J.A. (2023). Brain Morphometry and Scrupulosity. *Society of Biological Psychiatry* (San Diego, CA)
- Burt, G., **Baughan, E.C.**, & Peterson, M. (2023). Identification of Scrupulosity-Specific Brain Network Abnormalities. *Society of Biological Psychiatry* (San Diego, CA)
- Bunnell, K., **Baughan, E.C.**, Ferguson, M.A., Smith, G.S., Smith, B.M., Allen, G.K., & Nielsen, J.A. (2023). A Reliability Study of the Religious Distress Task—An fMRI Task for Scrupulosity. *Society of Biological Psychiatry* (San Diego, CA)
- Helquist, K., **Baughan, E.C.**, Klosinski, T., Schaper, F., Ferguson, M.A., & Nielsen, J.A. (2023). Brain Circuit Causing Acquired Primary Insomnia: A Lesion Network Mapping Analysis. *Society of Biological Psychiatry* (San Diego, CA)
- Gable, M., **Baughan, E.C.**, Bunnell, K., Nielsen, J.A. (2022). Parental Religious Strictness and Scrupulosity. *Mary Lou Fulton Conference* (Provo, UT)
- Witney, S., Ferguson, M.A., Schaper, F., Bunnell, K., **Baughan, E.C.**, Nielsen, J.A. (2022). REM Sleep Behavior Disorder: A Lesion Network Mapping Approach. *Mary Lou Fulton Conference* (Provo, UT)
- Helquist, K.C., **Baughan, E.C.**, Klosinski, T., Schaper, F., Ferguson, M.A., Nielsen, J.A. (2022). Brain Circuit Causing Acquired Primary Insomnia: A Lesion Network Mapping Analysis. *Neuroscience Snowbird Symposium* (Snowbird, Utah)
- Baughan, E.C.**, Bunnell, K., Polhill, S., Smith, S.H., Prada, D.G., Allen, G.E., Nielsen, J.A. (2022). Thought-Action Fusion Does Not Moderate the Relationship Between Intolerance of Uncertainty and Scrupulosity in a Nonclinical LDS Sample. *American Psychological Association* (Minneapolis, MN)
- Polhill, S., Smith, S.H., **Baughan, E.C.**, Bunnell, K., Bunker, B., Hansen, K.L., Wang, K.T., Allen, G.E., Nielsen, J.A. (2022). Examining Self-Compassion as a Mediator Between Perfectionism and Scrupulosity Among Latter-day Saint Populations. *American Psychological Association* (Minneapolis, MN)

Baughan, E.C., Prada, D.G., Johnson, H., Hokanson, A.H., Thompson, A.M., Burt, G.T., & Nielsen, J.A. (2021). fMRI Investigation of Scrupulosity in LDS Individuals – A Pilot Study. *Mary Lou Fulton Conference* (Provo, UT)

Landis, N., Ahern, B., Killpack, M., Denning, J., Miller, C.H., **Baughan, E.C.**, & Hedges, D.W. (2017). Cortical Activation in Obsessive Compulsive Disorder: A Meta-Analysis. *Mary Lou Fulton Conference* (Provo, UT).

Oral Presentations

Baughan, E.C., Nielsen, J.A. (2022). Poor Self-Compassion is a Predictor of Scrupulosity. *Utah Conference of Undergraduate Research* (St. George, UT)

Training & Skills

Skills

Level 3 MRI Operator

- Trained to run MRI Machine at BYU's MRI Research Facility
- Ran ~100 scanning sessions on human participants
- Ensured safety for all participants and research assistants

Lesion Network Mapping Analysis

- Able to perform lesion network mapping analyses with self-made pipeline written in a combination of Bash and MATLAB scripts

Functional MRI Analysis

- Can process and analyze both task-based and resting state fMRI data using a variety of software's (fMRIPrep, FSL, AFNI, & SPM)

Structural MRI Analysis

- Can process and analyze structural MRI data using FreeSurfer

Statistical Analysis

- Proficient with R in data clean up, analysis, and graphing

Stimulus Presentation Software

- Created stimulus for task-based fMRI scanning sessions (proficient with PsychoPy & E-Prime)

Graduate-Level Coursework

Neuroimaging Analysis 1

- Taught how to process and analyze structural images
- Experience coding in Bash
- Experience utilizing FreeSurfer

Neuroimaging Analysis 2

- Taught how to process and analyze DWI images
- Experience coding in Bash

Seminar in Mathematical Psychology

- Taught how to perform and interpret multivariate analyses (i.e., PCA, MANOVA)

Research Experience

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| 2024 | Peer Review for Journal of Mental Health & Clinical Psychology |
| 2023 | Peer Review for Journal of Mental Health, Religion & Culture |
| 2021 – 2023 | Research Assistant under Jared A. Nielsen & Michael A. Ferguson <ul style="list-style-type: none">- Scripted a Lesion Network Mapping Pipeline at BYU- Created a Lesion Network Mapping training course in Canvas- Mentored students in literature review and lesion tracings- Analyzed lesion tracings for all RA's lesion projects- Helped create lesionbank.org |
| 2019 – 2023 | Research Assistant under Jared A. Nielsen <ul style="list-style-type: none">- Initiated research project on scrupulosity- Wrote multiple IRB applications- Created fMRI task- Trained and managed research assistants- Created fMRI task- Scanned subjects (~100 hours)- Analyzed data using FreeSurfer, FSL, & AFNI |
| 2020 | Research Assistant under Chris H. Miller, Dawson W. Hedges, & Bruce L. Brown <ul style="list-style-type: none">- Worked closely with Dr. Brown on statistical analysis- Helped interpret Factor Analysis results- Wrote and reviewed manuscript sections |
| 2016 – 2017 | Research Assistant under Dawson H. Hedges (Epidemiology Lab) <ul style="list-style-type: none">- Aggregated and collected data from papers for meta-analyses (cognitive effects of Helicobacter pylori infection) |

- 2016 Research Assistant under Mikle South (Autism Lab)
- Performed office work organizing data and past study participant's contact information for future research projects

Grants & Scholarships

- 2021 Fleming Fellow Scholarship
- \$1,250 awarded for academic funds
- 2020 BYU MRI Facility Seed Grant
- \$20,000 awarded to fund scanning of fMRI scrupulosity project
- 2020 BYU Psychology Experiential Learning Fund
- \$6,000 awarded for research projects
- 2020 Samuel Injae Shin Neuroscience Scholarship
- \$1,000 awarded for academic funds

Clinical Experience

- 2024 Medical Scribe for Utah Cancer Specialist
- Completed charts for Oncologist in clinic
- 2023 Shadowing Student (Intermountain Healthcare)
- Shadowed anesthesiologist and internal medicine doctor
- 2021 – 2023 Shadowing Student (Utah State Hospital)
- Shadowed head psychiatrist and treatment team interact with, discuss, and care for patients
- 2021 – 2023 Volunteer (Utah State Hospital)
- Talk, play games, and attend events with patients under the supervision of unit's recreational therapist
- 2021 Psychiatric Technician (Utah State Hospital)
- Worked mostly in geriatric unit, assisted patients with day to day living (bathroom, bathing, eating, etc.) and carried out safety protocols

Memberships

- 2023 Society for Biological Psychiatry
- 2022 American Psychological Association

Service

2017 – 2019 Served a two-year mission for The Church of Jesus Christ of Latter-day Saints

Reference

Physician Mentors

Kent D. Roundy, MD
Psychiatrist, Medical Administrator
Director of Medical Student Education
Utah State Hospital
1300 E Center St
Provo, UT 84606
Phone: 801-344-4400

Research Mentors

Jared A. Nielsen, PhD
Assistant Professor, Psychology
Brigham Young University
1070 KMBL
Provo, UT 84602
Phone: 801-422-5294
Email: jarednielsen@byu.edu

Michael A. Ferguson, PhD
Assistant Professor, Neurology
Harvard Medical School
Brigham and Women's Hospital
60 Fenwood Rd
Boston, MA 02115
Phone: 617-525-3524
Email: mferguson7@bwh.harvard.edu

Dawson Hedges, MD
Professor, Psychology
Brigham Young University
1072 KMBL
Provo, UT 84602
Phone: 801-422-6357
Email: dawson_hedges@byu.edu

