Megan Spurney

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EDUCATION

CORNELL UNIVERSITY, ITHACA, NY August 2017 – May 2021

Bachelor of Arts in Psychology

- GPA: 3.85/4.00, Distinction in all Subjects
- Completed coursework: Psychopathology, Neuroscience, Computer Science, Statistics, Research Methods, and Social Psychology

HONORS

- 2022 National Institutes of Health Postbaccalaureate Poster Day "Outstanding Poster Award" Winner
- 2022 National Institute of Mental Health Office of Fellowship Training "Trainee Travel Award" Winner
- Cornell University Dean's List Fall 2017, Fall 2018, Fall 2019, Fall 2020

RESEARCH EXPERIENCE

NATIONAL INSTITUTE OF MENTAL HEALTH, BETHESDA, MD

LABORATORY OF BRAIN AND COGNITION – SECTION ON FUNCTIONAL IMAGING METHODS

Post-baccalaureate IRTA Research Fellow under Director Dr. Peter Bandettini, PhD August 2021 – Present

- Conduct analyses on resting-state functional magnetic resonance imaging (fMRI) data using AFNI, nipype, and FreeSurfer to evaluate whole-brain configurations during rest and discover relationships between functional connectivity and patterns of ongoing thought to further development of clinical biomarkers.
- Utilize Jupyter notebooks and a plethora of Python packages including pandas, numpy, and nilearn to aid data analyses and interpretations and to create visualizations.
- Operate 3T fMRI scanners to acquire data.
- Synthesize results and findings into multiple presentations at national and international conferences as well as furthering publication writing skills.

CORNELL UNIVERSITY, ITHACA, NY

DEPARTMENT OF PSYCHOLOGY – LABORATORY OF NEUROBIOLOGY OF LEARNING AND MEMORY

Research Assistant under Director Dr. David Smith, PhD August 2018 – May 2021

- Performed small animal studies including maze training and olfactory tasks to analyze how manipulations of brain circuitry impacted task performance and processes of learning and memory.
- Observed techniques including optogenetic cellular manipulation and intracellular neuronal membrane potential measurements.
- Attended and presented at weekly lab meetings and journal clubs.

CORNELL UNIVERSITY, ITHACA, NY

DEPARTMENT OF PSYCHOLOGY – PERSONALITY, ATTACHMENT, AND CONTROL LABORATORY

Research Assistant under Director Dr. Vivian Zayas, PhD August 2017 – August 2018

- Managed full research participant experience in study analyzing delay of gratification in adults.
- Applied best practice for documentation when recording data and managing source documentation. - Provided data summaries and literature reviews for lab meetings.

CLINICAL EXPERIENCE

THE FOUNDATION OF CONTEMPORARY MENTAL HEALTH, WASHINGTON, DC

PARTNERS IN DRUG ABUSE REHABILITATION COUNSELING

Clinical Intern under Director Dr. Howard Hoffman, MD, DLFAPA June 2020 – August 2020

- Observed counseling sessions with substance abuse patients in the methadone maintenance program.
- Completed data entry tasks, including drug test results.
- Shadowed nursing activities within the clinic, extensively learning about substance abuse disorders.

CHILDREN'S NATIONAL HOSPITAL, WASHINGTON, DC

CENTER FOR TRANSLATIONAL RESEARCH – DIABETES RESEARCH TEAM

Research Assistant under Director Dr. Randi Streisand, PhD May 2019 – August 2019

- Analyzed data acquired by the Diabetes Research Team studying socioeconomic factors related to pediatric diabetes outcomes using SPSS.
- Observed pediatric diabetes and developmental clinics.
- Completed extensive literature searches for research projects using PubMed and Google Scholar, contributing to posters and publications.

WORK EXPERIENCE

RIVER FALLS COMMUNITY CENTER

Assistant Swim Coach May – August, 2018 – 2019

- Directly responsible for teaching swim team members ages 4 through 14 years old for competitive meets.
- Mentored children to develop swimming skills, improve self-confidence, and develop strong worth ethic and teamwork strategies.

PUBLICATIONS

Teves, J., Gonzalez-Castillo, J., Holness, M., **Spurney, M.A.**, Bandettini, P.A., Handwerker, D.A. (2023) The art and science of using quality control to understand and improve fMRI data. *Frontiers in Neuroscience*, 17. https://doi.org/10.3389/fnins.2023.1100544

PRESENTATIONS

Spurney, M.A., Faskowitz, J., Gonzalez-Castillo, J., Handwerker, D.A., Bandettini, P.A. (2023, July) *Edge-time series summary metrics: predictive value for demographics and cognitive traits*. Organization for Human Brain Mapping, Montreal, Canada

Spurney, M.A., Faskowitz, J., Gonzalez-Castillo, J., Handwerker, D.A., Bandettini, P.A. (2023, April) *Building brain-behavior predictions from multiple measures of fMRI connectivity dynamics.* Postbaccalaureate Poster Days, National Institutes of Health, Bethesda, MD.

Spurney, M.A., Gonzalez-Castillo, J., Lam, K.C., Handwerker, D.A., Teves, J., Pereira, F., Bandettini, P.A. (2022, November) *How conscious in-scanner thoughts modulate functional connectivity during resting-state fMRI.* Society for Neuroscience, San Diego, CA.

Spurney, M.A., Gonzalez-Castillo, J., Lam, K.C., Handwerker, D.A., Teves, J., Pereira, F., Bandettini, P.A. (2022, September) *Functional Connectivity Modulated by Conscious Thoughts During Resting-State fMRI Scans.* NIMH Training Day, National Institute of Mental Health, Bethesda, MD.

Gonzalez-Castillo, J., **Spurney, M.A.,** Lam, K.C., Handwerker, D.A., Teves, J., Pereira, F., Bandettini, P.A. (2022, June) *How conscious thoughts during "resting-state" affect functional connectivity estimates*. Organization for Human Brain Mapping, Glasgow, Scotland

Spurney, M.A., Gonzalez-Castillo, J., Lam, K.C., Handwerker, D.A., Teves, J., Pereira, F., Bandettini, P.A. (2022, April) *Content and Form of Conscious Thoughts Modulate Functional Connectivity.* Postbaccalaureate Poster Days, National Institutes of Health, Bethesda, MD

Spurney, M.A., Hamberger, S., Sinistierra, M., Tully, C., Streisand, R. (2020, April) *Examining the Relationship Between Child Race, Income and Caregiver Psychosocial Functioning in Families of Young Children with Diabetes*. Children's National Research Institute Education and Innovation Week, Washington, DC

SKILLS AND INTERESTS

- Proficient in Python, Bash shell, R, and Java computer programming languages.
- Completed NeuroMatch Academy Computational Neuroscience Course (July 2022).
- Completed Empathy, Assistance, and Referral Service Peer Counseling Training (November 2020).