

CURRICULUM VITAE

Matthew Mattoni, M.A.

Department of Psychology and Neuroscience,
Temple University

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[Scholar](#) | [OSF](#)

EDUCATION

- 2022 – Present **Temple University**, Philadelphia, PA
Doctoral Student, Clinical Psychology
Concentration in Quantitative Methods
4.0 GPA
Advisor: Thomas Olino, Ph.D.
- 2020 – 2022 **Temple University**, Philadelphia, PA
M.A., Psychology
4.0 GPA
Advisor: Thomas Olino, Ph.D.
- 2015 – 2019 **University of North Carolina**, Chapel Hill, NC
B.S. Psychology (4.0) and Neuroscience (3.8); Chemistry Minor
Honors Laureate; Graduated with Distinction
Advisor: Flavio Fröhlich, Ph.D.

GOALS & INTERESTS

My goal as a clinical scientist is to use precision approaches to understand the biological and behavioral mechanisms of psychopathology and treatment *within individuals*. My research identifies individualized neural correlates of psychopathology and treatment outcomes, with a focus on functional connectivity, reward functioning and affective disorders in adolescents and adults. Associations between neural functioning and psychopathology are typically studied by either case-control approaches or by examining interindividual differences. However, if there is substantial neural heterogeneity, these variable-centered approaches may produce group-average results that represent few, if any, of the individuals. This is a critical limitation as ultimate goals of precision psychiatry and clinical neuroscience (e.g., accurate diagnostic and treatment prediction), require accurate individual-level inferences. Moreover, mechanistic understanding of psychopathology and treatment requires studying *within-person* processes. To address these goals, my work seeks to uncover brain-behavior associations that are precise to the individual using idiographic (precision imaging) and person-centered (e.g., subgrouping) methods. I aim to further this research by increasingly focusing on studying individuals over time, enabling mechanistic study of treatment and neural processes that affect this process.

GRANTS & FELLOWSHIPS

- 2023-2025 **NIMH F31-Diversity Fellowship**, F31MH134533
Role: PI
Amount: \$71,922
Between- and Within-Person Heterogeneity in Adolescent Resting State Networks:
Associations with Internalizing Psychopathology

2022	Weinstein & Civic Foundation Research Award, \$5,000
2021	National Science Foundation Graduate Research Fellowship Honorable Mention
2019	Gil Internship, University of North Carolina, \$2,000
2017-2018	American Psychological Association Undergraduate Research Award, \$3,000
2017-2018	Lindquist Undergraduate Research Grant, University of North Carolina, \$350

AWARDS & HONORS

2024	Department Commendation of Excellence , Temple University (Also 2022, 2023).
2023	3-Minute Thesis Finalist , American Psychological Association
2022	Early Graduate Student Research Award , American Psychological Association
2022	Flux Society Travel Award
2022	Outreach and Translation Funding Award , Temple University
2021	Philip J. Bersh Memorial Student Award , Temple University Best empirical student publication in past two years.
2021	Psychology Statistical Funding Award , Temple University
2019	Neuroscience Commencement Speaker , University of North Carolina
2018-2019	C-START Student Teaching , University of North Carolina Selected by Honors College to design and teach new undergraduate course.
2016	Psi Chi Induction , University of North Carolina
2016-2019	Honors Carolina Student , University of North Carolina
2015-2019	Dean's List , University of North Carolina

PEER-REVIEWED PUBLICATIONS (9, 5 first-authored)

1. **Mattoni, M.**, Pegg, S., Kujawa, A., Klein, D.N., & Olino, T.M. (2024). Prospective Associations Between Early Adolescent Reward Functioning and Later Dimensions of Psychopathology. *Journal of Psychopathology and Clinical Science*. 10.1037/abn0000942
2. Olino, T. M., & **Mattoni, M.** (2023). Neural activation and connectivity in offspring of depressed mothers during monetary and social reward tasks. *Biological psychology*, 185, 108724. Advance online publication. <https://doi.org/10.1016/j.biopsycho.2023.108724>
3. **Mattoni, M.**, Hopman, H. J., Dademathews, A., Chan, S. S. M., & Olino, T. M. (2023). Specificity of Associations between Parental Psychopathology and Offspring Brain Structure. *Psychiatry Research: Neuroimaging*, 111684. doi: 10.1016/j.psychresns.2023.111684
4. **Mattoni, M.**, Smith, D. V., Olino, T. M. (2023). Characterizing Heterogeneity in Early Adolescent Reward Networks and Individualized Associations with Behavioral and Clinical Outcomes. *Network Neuroscience*. https://doi.org/10.1162/netn_a_00306
5. Case, J., Sullivan-Toole, H., **Mattoni, M.**, Jacobucci, R., Forbes, E., Olino, T. M. (2021). Evaluating the Item-Level Factor Structure of Anhedonia. *Journal of Affective Disorders*, 299, 5. <https://doi.org/10.1016/j.jad.2021.11.069>
6. **Mattoni, M.**, Wilson, S., & Olino, T. M. (2021). Identifying profiles of brain structure and associations with current and future psychopathology in youth. *Developmental Cognitive Neuroscience*, 51, 101013. <https://doi.org/10.1016/j.dcn.2021.101013>
7. Case, J. A. C., **Mattoni, M.**, & Olino, T. M. (2021). Examining the Neurobiology of Non-Suicidal Self-Injury in Children and Adolescents: The Role of Reward Responsivity. *Journal of Clinical*

Medicine, 10, 3561.

---Start of Graduate School---

8. Campbell, A.,* **Mattoni, M.**, Yefimov, M., Adapa, K., & Mazur, L. (2020). Improving Cognitive Workload in Radiation Therapists: A Pilot EEG Neurofeedback Study. *Frontiers in Psychology: Performance Science* 11. doi: 10.3389/fpsyg.2020.571739
9. **Mattoni, M.**,* Ahn, S., Frohlich, C., Frohlich, F. (2020) Exploring the Relationship between Geomagnetic Activity and Human Heart Rate Variability. *Eur J Appl Physiol* **120**, 1371–1381. <https://doi.org/10.1007/s00421-020-04369-7>

MANUSCRIPTS UNDER REVIEW

1. **Mattoni, M.**, Sullivan-Toole, H., Olino, T. M. (In Review). Neural and Clinical Predictors of Adolescent Development of Pleasure Sensitivity and Cognitive Control. Preregistration: <https://osf.io/aqs8m>

SELECTED MANUSCRIPTS IN PREPARATION

1. **Mattoni, M.**, McMakin, D.L., Sequeira, S., Ryan, N.D., Ladouceur, C.D., Kendall, P.C., Forbes, E.E., Dahl, R.E., Silk, J.S., Siegle, G.J., Olino, T.M. (In Prep). Prediction of Child Anxiety Treatment Response to Psychotherapy with Functional Connectivity During Positive Mood.
2. **Mattoni, M.**, Chat, I.K., Brown, L., Kautz, M. (In Prep). Pretreatment Anhedonia as a Predictor for Exposure-Based Anxiety Treatment Outcomes

REGISTERED REPORTS

1. **Mattoni, M.**, Feczko, E., Smith, D.V., Chein, J., Olino, T.M. (Phase 1 Registered Report IPA). Individual Similarity to Group-Level Functional Connectivity Networks and Impacts on Behavioral Prediction. (Dissertation). PCI RR: https://osf.io/4w8hb?view_only=64b20df7958d4dd6b1eecf6a208b92b0

CONFERENCE POSTER PRESENTATIONS

1. Adogli, Z.V., **Mattoni, M.**, Chat, I.K., Patterway, F., Smith, Logan., Alloy, L.B. (2024). Aberrant functional connectivity between the salience network and emotion-reward-related brain regions in youth experiencing early life stress. (Accepted to ABCT 2024).
2. Kautz, M.M., **Mattoni, M.**, Chat, I., Brown, L.A. (2024). Longitudinal patterns of anhedonia severity predict suicidal ideation treatment outcomes during exposure-based therapy for PTSD. Convention for the International Society for Traumatic Stress Studies, Boston, MA, Sept, 25-28, 2024.
3. **Mattoni, M.**, Sullivan-Toole, H., Olino, T. M. (2023). Longitudinal Development of Adolescent Reward Responsiveness and Inhibitory Control: Neural and Clinical Moderators. Flux Society, Santa Rosa, CA, USA. Sept. 6-9, 2023.
4. **Mattoni, M.**, Smith, D. V., Olino, T. (2022). Heterogeneity in Early Adolescent Reward Networks and Associations with Behavioral Outcomes. Flux Society, Paris, France.
5. Roberts, H., **Mattoni, M.**, & Olino, T. (2022). Depression in High-Risk Offspring: The Mediating Role of Sleep Disturbances. Society for Research in Psychopathology, Philadelphia, PA, United States.
6. **Mattoni, M.**, Hopman, H., Dademathews, A., Olino, T. (2021). "Specificity of youth risk from a parental history of psychopathology in the ABCD study." Flux Society, Virtual.
7. Hill-Bowen, L., Flannery, S., Basavaraj, A., **Mattoni, M.**, Hartmann, S., Laird, A., Trucco, E., Sutherland, M. (2021). "Temperamental typologies in the ABCD study: Implications for psychopathology risk factors." Flux Society, Virtual.
8. Case, J., **Mattoni, M.**, Olino, T. (2021). "Examining the Neurobiology of Non-Suicidal Self-Injury in Children and Adolescents: The Role of Reward Responsivity." International Society for the Study of Self-Injury, Virtual.

9. **Mattoni, M.**, Wilson, S., Olino, T. (2021) "Latent Profiles of Cortical and Subcortical Volumes are Associated with Youth Clinical Symptoms." Society of Biological Psychiatry, Virtual.
10. **Mattoni, M.**, Yefimov, M., Glier, S., Campbell, A., Belger, A. (2019). "Exploring the Relationship between HRV, Cortisol, and Cognitive Discrimination Ability in Adolescents Following an Acute Stressor." Gil Internship Showcase, UNC-CH.

INVITE TALKS AND ORAL PRESENTATIONS

1. **Mattoni, M.** (Aug. 2023). "Neural Heterogeneity and Individual-Level Inferences." 3-Minute Thesis Competition Finalist at the American Psychological Association conference. Washington, D.C.
2. **Mattoni, M.** (Apr. 2023). "Characterizing Heterogeneity in Early Adolescent Reward Networks." Symposium presentation at the Society of Biological Psychiatry conference. San Diego, CA.
3. **Mattoni, M.** (Oct. 2022). "Individualized Reward Network Patterns of Adolescent Substance Use Risk." Invited presentation for reception of Weinstein Award at Temple University, Philadelphia, PA.
4. **Mattoni, M.** (Oct. 2022). "Specificity of brain volume alterations in children with various parental histories of psychopathology." Clinical Research Day Presentation. Temple University, Philadelphia, PA.
5. **Mattoni, M.** (Sept. 2022). "Heterogeneity in Early Adolescent Reward Networks and Associations with Behavioral Outcomes." Flash Talk at Flux Society, Paris, France.
6. **Mattoni, M.** (Feb. 2022). "Profiles of Brain Structure and Associations with Psychopathology in Youth." Invited presentation for reception of Bersh Award at Temple University, Philadelphia, PA.

SCIENCE COMMUNICATION, MEDIA, AND OUTREACH

Organized Outreach Events

1. Flux Outreach Meeting (2024): Navigating the Teen Mind: Insights into Adolescent Mental Health. Committee planner and moderator. Virtual.
2. Graduate School Information Session (2022). Invited panelist to discuss graduate school expectations with psychology and neuroscience undergraduate students. Temple University, Philadelphia, PA.

2022 –

Sensitive Periods Podcast, Flux Society

Co-Founder and Co-Host of Sensitive Periods podcast for Flux Society (<https://sensitiveperiods.buzzsprout.com>). Includes over 15 episodes across 3 seasons, with over 1,600 listeners across 40 countries.

2022 – 2023

PCSAS Newsletter Writer, Psychological Clinical Science Accreditation System

1. **Mattoni, M.** (2023). "Financial Challenges and Alternatives to the Clinical Internship System." *Psychological Clinical Science Accreditation Journal Newsletter*, 12th edition.
2. **Mattoni, M.** (2023). "Increasing Public Engagement Among Clinical Psychologists" *Psychological Clinical Science Accreditation Journal Newsletter*, 9th edition.
3. **Mattoni, M.** (2022). "HiTOP and Clinical Psychology Training: A Conversation with Dr. Aidan Wright." *Psychological Clinical Science Accreditation Journal Newsletter*, 8th edition.
4. **Mattoni, M.** (2022). "Beyond the Curriculum: On Beginning Graduate School in a Pandemic." *Psychological Clinical Science Accreditation Journal Newsletter*, 7th edition.

2022 –

FABBS Science Writer, Federation of Associations in Behavioral and Brain Sciences

1. **Mattoni, M.**, Gee, D. (2024). "Researcher Unravels Brain Circuitry Development to Improve Childhood Mental Health." *FABBS News Science Spotlight*.
2. **Mattoni, M.**, Ginty, A. (2023). "Researcher Provides a New Perspective on Stress Response and Health." *FABBS News Science Spotlight*.

3. **Mattoni, M.**, Merrit, V. (2023). “Researcher Examines the Risks and Consequences of Mild Concussions in Veterans and Athletes.” *FABBS News Science Spotlight*.
4. **Mattoni, M.** (2023). “Boosting Baby’s Brain.” *FABBS Research to Policy*.
5. **Mattoni, M.**, Bergelson, E. (2023). “Researcher Gains Insights on Early Language Development.” *FABBS News Scientist Spotlight*.
6. **Mattoni, M.**, Johns, B. (2022). “Researcher Uses Machine Learning to Understand Cognitive Processes of Language.” *FABBS News Scientist Spotlight*.
7. **Mattoni, M.**, Van Bergen, E. (2022). “Researcher Studies Child Learning through New Lens of an Old Debate.” *FABBS News Scientist Spotlight*.
8. **Mattoni, M.**, Thomas, A. (2022). “Researcher Studies Black Fatherhood and Mental Health to Improve Youth Developmental Outcomes.” *FABBS News Science Spotlight*.
9. **Mattoni, M.** (2022). “Understanding the Effects of Food Insecurity on Child Cognitive Outcomes and Well-Being.” *FABBS Research to Policy*.

LED WORKSHOPS

1. **Mattoni, M.** (June 2023). Group Iterative Multiple Model Estimation (GIMME) Workshop for Intensive Time Series Data. Coding Outreach Group, Temple University, Philadelphia, PA.

RESEARCH EXPERIENCE

2020 – Present **Graduate Researcher**, Temple University

Advisor: Dr. Thomas Olino; [CADEPP Lab](#)

Principal Investigator: Led F31-funded project investigating neural heterogeneity in resting state functioning connectivity in the ABCD dataset. Led several fMRI studies on adolescent psychopathology using existing lab datasets.

Research Assistant: Administered KSADS and SCID diagnostic interviews. Created lab fMRI preprocessing pipeline using fmriprep, MRIQC, SPM, and CONN. Led open science and science communication efforts in lab. Collaborated on other studies analyzing secondary datasets.

2019 – 2020 **EEG Data Analyst**, University of North Carolina

Advisors: Dr. Alana Campbell, Dr. Lukasz Mazur; Psychiatry & Radiology

Conducted time-frequency and computational microstate analysis for a neurofeedback study with EEGLAB in MATLAB and assisted with manuscript preparation.

2019 **Gil Intern**, University of North Carolina

Advisors: Dr. Aysenil Belger & Dr. Alana Campbell; [NIRL Lab](#)

Worked on a multi-site imaging study on adolescents’ response to social stress. Assisted with EEG and fMRI scanning, administered Trier & Montreal stress task administration, and analyzed heart rate variability and behavioral data of stress response.

2016-2018 **Undergraduate RA**, University of North Carolina

Advisors: Dr. Flavio Frohlich; [Frohlich Lab](#)

Led recruitment and tACS and EEG administration for ongoing lab study. Designed, funded, and led independent project investigating longitudinal relationship between geomagnetic activity and HRV in adult participants.

CLINICAL EXPERIENCE

2024-2025 **Sleep Clinic**, Corporal Michael J. Crescenz VA Medical Center, Philadelphia, PA.

Clinical Practicum | Supervisors: Dr. Philip Gehrman, Dr. Erin O'Brien

Provided CBT for Insomnia for veterans with insomnia and imagery rehearsal for veterans with chronic nightmares. Substantial experience with comorbid PTSD and physical disabilities. Participated in weekly supervision.

2024 – 2025 **Center for Treatment and Study of Anxiety (CTSA)**, University of Pennsylvania

Study Therapist | Supervisors: Dr. Jeremy Tyler, Dr. Andrew Guzick

Study therapist for pilot study of Beating OCD by Learning Digitally (BOLD), an app-guided ExRP treatment. Provided biweekly supplemental therapy for as they progress through self-guided protocol. Assisted with design, troubleshooting, procedures. Weekly supervision.

2023 – 2024 **Center for Treatment and Study of Anxiety (CTSA)**, University of Pennsylvania

Clinical Practicum | Supervisors: Dr. Elizabeth Turk-Karan, Dr. Nora Brier, Dr. Lily Brown

Provided exposure-based CBT to anxiety-related disorders. Completed intensive workshops for Exposure and Response Prevention (ExRP) for OCD treatment and Prolonged Exposure (PE) for PTSD treatment. Certified in ExRP treatment. Conducted DIAMOND diagnostic interviews, phone screens, and various assessments. Group and individual supervision weekly. Initiated clinic treatment prediction research project.

2021 – 2023 **Psychological Services Center**, Temple University

Clinical Practicum | Supervisors: Dr. Robert Fauber, Dr. Jay Efran, Dr. Margaret Sayers

Provided person-centered, acceptance-based, and CBT-based individual therapy for adults with depression, anxiety, obsessive-compulsive disorder, and other psychological and personality disorders. Participated in weekly group and individual supervision on case conceptualization, treatment planning, and recorded therapy observations.

2020 – 2021 **Psychological Services Center**, Temple University

Clinic Staff | Supervisor: Dr. Robert Fauber

Worked as clinic staff for 20 hours/week with primary responsibilities of being the direct point of contact between inquiring, current, and past clients, coordinating clinic activities and scheduling, and conducting intakes for incoming clients.

TEACHING EXPERIENCE

2023 **Guest Lecturer**, Temple University

NSCI0817: Brain Matters

2023 **Teaching Assistant**, Temple University

NSCI0817: Brain Matters

2022 **Teaching Assistant**, Temple University

PSY2101: Foundations of Cognitive Psychology

2021 **Teaching Assistant**, Temple University

PSY1003: Statistics for Psychology

2019 **Main Instructor**, University of North Carolina

SPCL400: Neuroscience: Methodologies and Implications

Advisor: Dr. Marsha Penner

LEADERSHIP ROLES AND PROFESSIONAL SERVICE

2024 **Student Awards Committee**, Temple University

2023– 2026	Communications Committee , Flux Society
2023-2024	Public Outreach Committee , Flux Society
2023	Student Awards Committee Head , Temple University
2023	Quantitative Mentor , Quant Family Collective
2022	Diversity Planning Committee and First-Gen Affinity Group , Flux Society
2022 – Present	Science Writer , Federation of Associations in Behavioral and Brain Sciences (FABBS)
2021 – 2023	Trainee Committee , Flux Society
2021 – 2023	Student Representative , Psychological Clinical Science Accreditation System
2018	Neural Connections Student Outreach , University of North Carolina
2016 – 2019	Carolina Neuroscience Club President and Treasurer , University of North Carolina

EDITORIAL AND REVIEWING EXPERIENCE

Ad Hoc Reviewer:

Neuroimage: Clinical

Service for Undergraduate Journals:

2020 – Present	Graduate Reviewer , Grey Matters Undergraduate Neuroscience Journal Temple University
2016 – 2019	Chapter Founder and Associate Editor , IMPULSE Undergraduate Neuroscience Journal University of North Carolina

MENTORSHIP

2020 – Present	Graduate Student Undergraduate Mentor , Temple University Work directly with undergraduate research mentee in the lab to promote research growth and professional development, as well as aid graduate applications.
2021 – Present	Graduate School Application Mentor , Project SHORT Mentor disadvantaged and underrepresented students to demystify the clinical psychology graduate application process to promote equity in admissions.

ACADEMIC VALUES

Diversity and Inclusivity: Inequalities and injustices based on various identities and sociodemographic backgrounds permeate academia. I have faced them as a first-generation low-income student but only to a modest extent, as I also hold several privileged identities. I recognize many students face much greater and unjust challenges and burdens. I am devoted to increasing diversity and inclusivity in academia, as exemplified by my history of service, outreach, and mentorship.

Open Science: Open science is necessary to improve the replicability and assess rigor of psychological research. It is also a valuable tool for sharing resources, particularly with trainees and disadvantaged scientists. I was trained by the ReproNim team in a 16-week course on using open science advancements such as preregistrations, version control, and containerization. When appropriate, I endeavor to use preregistration, open-code, and open-data in my research projects. I am also completing my dissertation as a registered report.

Science Communication: Psychology is a unique science in that it is both relevant and interesting to nearly every person. Increasing communication of psychology research can increase representativeness and diversity, educate the public of important findings (e.g., behavioral health,

parenting, substance use), and promote science-based policy changes. I am devoted to improving my ability to communicate science with different audiences to achieve these goals.

WORKSHOPS AND TRAINING COURSES

- 2023 **Prolonged Exposure PTSD Workshop**, University of Pennsylvania.
Center for Treatment and Study Anxiety. 5 days, virtual.
- 2023 **Exposure and Response Therapy OCD Workshop**, University of Pennsylvania.
Center for Treatment and Study Anxiety. 5 days, virtual. *Certified ExRP Therapist*.
- 2023 **Mixture Modeling Workshop**, CenterStat.
Drs. Dan Bauer and Doug Steinley. 5 days, virtual.
- 2021 **GIMME Workshop**, Pitt Summer Methods.
Dr. Kathleen Gates. 5 days, virtual.
- 2020 – 2021 **ABCD ReproNim Course**, ABCD investigators and ReproNim.
Reproducible analysis of ABCD data, 16-weeks, virtual.

SELECTED CODING SKILLS

Proficient in scripting data analysis and visualization. Specific skills include:

R: R Markdown; lme4/lmer; ggplot2; Tidyverse; glmnet; gimme; lavaan

MATLAB: SPM; CONN; BrainNet

Mplus: Mixture modeling

Bash: HPC use

PROFESSIONAL AFFILIATIONS

- 2023 – Present Society of Biology Psychiatry
- 2021 – Present Flux Society
- 2021 – Present American Psychological Association
- 2016 – Present Psi Chi International Honor Society