

Brooke Sevchik

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EDUCATION

Duke University, Durham, NC, USA

Bachelor of Science, Neuroscience

May 2024

Bachelor of Arts, Spanish, Latin American & Latino/a Studies

GPA: 4.0/4.0, *summa cum laude*

Relevant Coursework: Functional Neuroanatomy, Inside the Disordered Brain, Contemporary Neuroscience Methods, Introduction to Cognitive Neuroscience, Cellular and Molecular Neurobiology, Introduction to Biostatistics, Introduction to Computer Science

Coursework in Madrid, Spain

Universidad Carlos III de Madrid

Spring 2023

Duke in Madrid

Spring 2023, Summer 2022

RESEARCH EXPERIENCE

University of Pennsylvania Perelman School of Medicine, Penn Lifespan Informatics & Neuroimaging Center

Data Analyst, August 2024 - Present

Advisors: Dr. Theodore Satterthwaite, Dr. J. Cobb Scott, Dr. S. Parker Singleton

- Leading open data release project on executive functioning in adolescents with ADHD/psychosis. Curating longitudinal dataset consisting of structural MRI, functional MRI, diffusion, and ASL images organized in BIDS format, as well as clinical and cognitive data for over 130 participants. Conducting task fMRI GLM analysis in Nilearn, implementing first-level subject models and second-level group models to visualize whole-brain contrast maps.
- Co-lead a meta-analytic initiative, SYPRES (SYNthesis of Psychedelic REsearch Studies; <https://sympres.io/>), utilizing living systematic reviews to analyze randomized clinical trials of psychedelics for psychopathology symptoms and create an interactive online dashboard (<https://www.metapsy.org/sympres/>) with results.
- Lead study coordinator for collection of 3T MRI data for myelin imaging study: Neuroimaging of Brain Structure and Function Across the Lifespan. Recruited and interacted with participants, obtained 40 MRI scans with MRI physicists and technologists. Coordinated study start-up administrative processes following University of Pennsylvania Center for Advanced Magnetic Resonance Imaging and Spectroscopy regulations, and completed Level 1 MRI training.
- Contribute to source code and documentation to help patch bugs and add new features for several open-source image processing softwares (CuBIDS, XCP-D, ASLPrep, BABS, QSIREcon) during monthly informatics hackathons.

Duke University, Egner Lab at the Center for Cognitive Neuroscience

Research Assistant, February 2021 - May 2024

Advisors: Dr. Tobias Egner, Dr. Raphael Geddert

- Spearheaded independent experiment to investigate effect of anxiety and threat on participants' learning of cognitive maps by conducting literature review, overseeing IRB approval, budgeting, programming experiment in Javascript, HTML, and CSS, collecting participant data, analyzing data in RStudio, and creating figures to present in posters and publications. Earned highest possible score for senior honors thesis on this work, consisting of written paper and oral defense.
- Recruited and interacted with participants on Amazon's Mechanical Turk; processed participant data utilizing statistical analyses in Python, RStudio and JASP. Created graphs and tables using RStudio to visually display results of experiments for use in scientific publications. Designed and programmed task variants with graduate students for experiments on cognitive control and task switching.
- Discussed the trajectory of research trials and investigated ideas for future experiments through lab discussions and literature reviews. Shadowed fMRI data acquisition protocols.

Duke University, Cogan Lab at the Duke Comprehensive Epilepsy Center*Research Assistant, August 2022 - May 2024*

Advisor: Dr. Gregory Cogan

- Implemented response coding protocol consisting of filtering, labeling, and processing original audio files from ECoG studies using MATLAB and Audacity. Instructed new lab member on response coding technique.
- Discussed experimental design and analyzed scientific papers on neurolinguistics. Presented current literature on speech production and language models to graduate students and professors.

Duke University, Duke Institute for Brain Sciences, Summer Neuroscience Program*Fellow, June 2023 - July 2023*

- Conducted full-time research in current labs, worked closely with faculty as part of an intensive paid research program.
- Developed soft skills in research communication, presentation efficacy, and scientific poster design during professional development seminar; elaborated and reflected on research conducted in written assignments.

Duke University, Center for Cognitive Neuroscience, Cognitive Neuroscience Research Internship (CNRI)*Intern, January 2021 - April 2021*

- Collaborated with a team of fellow interns selected for the competitive internship to plan final research project design on neuromarketing. Contributed to graduate student research projects through programming, creating stimulus sets, and discussing current scientific literature using skills learned in weekly Python and programming workshop.
- Analyzed neuroscience articles in journal club and presented current papers.

PUBLICATIONS**First-author**

Brooke L. Sevchik*, Parker Singleton*, Analiese Lahey, Pim Cuijpers, Mathias Harrer, Megan T. Jones, Sandeep M. Nayak, Eric C. Strain, Simon N. Vandekar, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “A living systematic review, meta-analysis, and open data resource of trials of MDMA-assisted therapy for PTSD”, [medRxiv](#) (2026). doi: 10.64898/2026.03.27.26349536 *co-first authors (*under review at Neuropsychopharmacology*)

Brooke L. Sevchik, Golia Shafiei, Kristin Murtha, Sophia Linguiti, Lia Brodrick, Juliette B.H. Brook, Matt Cieslak, Elizabeth Flook, Kahini Mehta, Steven L. Meisler, Kosha Ruparel, Sage Rush, Taylor Salo, S. Parker Singleton, Tien T. Tong, Mrugank Salunke, Dani S. Bassett, Monica E. Calkins, Mark A. Elliott, Raquel E. Gur, Ruben C. Gur, Tyler M. Moore, J. Cobb Scott, Russell T. Shinohara, M. Dylan Tisdall, Daniel H. Wolf, David R. Roalf & Theodore D. Satterthwaite, “A longitudinal brain resource to study brain development and transdiagnostic variation in executive function”, [bioRxiv](#) (2025). doi: 10.1101/2025.11.10.687633 (*under review at Scientific Data*)

S. Parker Singleton*, **Brooke L. Sevchik***, Analiese Lahey, Pim Cuijpers, Mathias Harrer, Megan T. Jones, Sandeep M. Nayak, Eric C. Strain, Simon N. Vandekar, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “A living systematic review, meta-analysis, and open-data resource of randomized controlled trials of psilocybin for symptoms of depression”, [Nature Mental Health](#) (2026). doi: 10.1038/s44220-026-00630-8

Brooke Sevchik, Raphael Geddert, and Tobias Egner, “Influence of Threat and Anxiety on Cognitive Map Learning”, [PsyArXiv](#) (2024). doi:10.31234/osf.io/u3cx7

Co-author

Juliette B.H. Brook, Isabella C. Stallworthy, Golia Shafiei, Joëlle Bagautdinova, S. Parker Singleton, **Brooke L. Sevchik**, Giovanni A. Salum, Michael P. Milham, Theodore D. Satterthwaite, Tyler M. Moore, “Development of an Abbreviated Form of the Extended Strengths and Weaknesses Assessment of Normal Behavior for Disruptive Mood Dysregulation Disorder (E-SWAN DMDD), (2026). (*pending submission to Assessment*)

Taylor Salo, S. Parker Singleton, Corey Horien, Matthew Cieslak, Elizabeth A. Flook, Sage Rush, **Brooke L. Sevchik**, Tien T. Tong, Manuel Taso, M. Dylan Tisdall, David R. Roalf, Theodore D. Satterthwaite, “A single-echo/multi-echo BOLD fMRI test-retest dataset”, (2026). (*submitted to Data in Brief*)

Steven L. Meisler, Matthew Cieslak, Joëlle Bagautdinova, Timothy J. Hendrickson, Tanya Pandhi, Andrew A. Chen, Noah Hillman, Hamsanandini Radhakrishnan, Taylor Salo, Eric Feczko, Kimberly B. Weldon, Rae McCollum, Begim Fayzullobekova, Lucille A. Moore, Erik Lee, Lucinda Sisk, Christos Davatzikos, Hao Huang, Bárbara Avelar-Pereira, Sendy Caffarra, Kelly Chang, Philip A. Cook, Elizabeth A. Flook, Teresa Gomez, Mareike Grotheer, McKenzie P. Hagen, Zeeshan M. Huque, Iliana I. Karipidis, Arielle S. Keller, John Kruper, Audrey C. Luo, Briana Macedo, Kahini Mehta, Jamie L. Mitchell, Adam R. Pines, Laura Pritschet, Amelie Rauland, Ethan A. Roy, **Brooke L. Sevchik**, Golia Shafiei, S. Parker Singleton, Hannah Stone, Kevin Y. Sun, Valerie J. Sydnor, Tien T. Tong, Maya Yablonski, Jason D. Yeatman, Ariel Rokem, Russell T. Shinohara, Damien A. Fair, Theodore D. Satterthwaite, “Highly replicable multisite patterns of adolescent white matter maturation”, bioRxiv (2026). doi: 10.64898/2026.04.18.719321 (*submitted to Nature Neuroscience*)

Juliette B.H. Brook, Taylor Salo, Audrey C. Luo, Joëlle Bagautdinova, Sage Rush, Aaron F. Alexander-Bloch, Erica B. Baller, Monica E. Calkins, Matt Cieslak, Elena C. Cooper, John Detre, Mark A. Elliot, Damien A. Fair, Phoebe Freedman, Philip R. Gehrman, Ruben C. Gur, Raquel E. Gur, Arno Klein, Nina Laney, Timothy O. Laumann, Kahini Mehta, Kathleen Merikangas, Michael P. Milham, Jonathan A. Mitchell, Tyler M. Moore, Steven M. Nelson, Kosha Ruparel, **Brooke L. Sevchik**, Sheila Shanmugan, Haochang Shou, Manuel Taso, Lauren K. White, Daniel H. Wolf, M. Dylan Tisdall, David R. Roalf, Theodore D. Satterthwaite. “An open, fully-processed data resource for studying mood and sleep variability in the developing brain”, Aperture Neuro (2026). doi:10.52294/001c.151820

S. Parker Singleton, **Brooke L. Sevchik**, Simon N. Vandekar, Eric C. Strain, Sandeep M. Nayak, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “An initiative for living evidence synthesis in clinical psychedelic research”, Nature Mental Health **3**, 3-5 (2025). doi:10.1038/s44220-024-00373-4

CONFERENCE PRESENTATIONS

Kevin Sun, William Snyder, Tien T. Tong, Marc Jaskir, **Brooke L. Sevchik**, Corey Horien, Benjamin Jung, Steven L. Meisler, Matthew Cieslak, Smrithi Prem, Eren Kafadar, Margaret Gardner, Justine Y. Hansen, Elizabeth Levitis, Katherine Cyr, Jakob Seidlitz, Joëlle Bagautdinova, Kosha Ruparel, Hongming Li, Yong Fan, Arielle S. Keller, Armin Raznahan, Ruben C. Gur, David R. Roalf, J. Eric Schmitt, Donna M. McDonald-McGinn, Raquel E. Gur, Theodore D. Satterthwaite, Aaron Alexander-Bloch, “Areal Scaling of Personalized Functional Networks and 22q11.2 Deletion Syndrome”. Organization for Human Brain Mapping Annual Meeting. Gradients Workshop, Burgundy, France, Summer 2026

Steven L. Meisler, Matthew Cieslak, Timothy J. Hendrickson, Tanya Pandhi, Hamsanandini Radhakrishnan, Taylor Salo, Eric Feczko, Kimberly B. Weldon, rae McCollum, Begim Fayzullobekova, Lucille A. Moore, Erik Lee, Andrew A. Chen, Noah Hillman, Lucinda Sisk, Bárbara Avelar-Pereira, Joëlle Bagautdinova, Sendy Caffarra, Kelly Chang, Philip A. Cook, Elizabeth A. Flook, Teresa Gomez, Mareike Grotheer, McKenzie P. Hagen, Zeeshan M. Huque, Iliana I. Karipidis, Arielle S. Keller, John A. Kruper, Audrey C. Luo, Briana Macedo, Kahini Mehta, Jamie L. Mitchell, Adam R. Pines, Laura Pritschet, Amelie Rauland, Ethan A. Roy, **Brooke L. Sevchik**, Golia Shafiei, S. Parker Singleton, Hannah Stone, Kevin Sun, Valerie K. Sydnor, Tien T. Tong, Maya Yablonski, Jason D. Yeatman, Ariel Rokem, Russell T. Shinohara, Damien A. Fair, & Theodore D. Satterthwaite, “Sensitivity of Diffusion MRI to Development and Image Quality: Insights from the ABCD Study”. Organization for Human Brain Mapping Annual Meeting, Bordeaux, France, Summer 2026 (*poster abstract under review, submission date: December 2025*).

Brooke L. Sevchik*, Taylor Salo*, Steven L. Meisler*, Matthew Cieslak, Juliette B.H. Brook, Bart Larsen, Shraddha Pandey, Lucinda Sisk, Valerie J. Sydnor, Manual Taso, M. Dylan Tisdall, & Theodore D. Satterthwaite, “An Open Test-Retest Dataset of Myelin-Mapping Methods”. Society of Biological Psychiatry Annual Meeting, New York, NY, Spring 2026 *co-first authors (*presented poster*)

Kevin Sun, Tien T. Tong, Marc Jaskir, **Brooke L. Sevchik**, Corey Horien, Steven L. Meisler, Matthew Cieslak, Hongming Li, Yong Fan, Smrithi Prem, Jakob Seidlitz, Benjamin Jung, Joëlle Bagautdinova, Kosha Ruparel, Arielle S. Keller, Armin Raznahan, Ruben C. Gur, David R. Roalf, J. Eric Schmitt, Donna M. McDonald-McGinn, Raquel E. Gur, Theodore D. Satterthwaite, Aaron Alexander-Bloch, “Areal Scaling of Personalized Functional Networks in Normative Brain Development and 22q11.2 Deletion Syndrome”. Society of Biological Psychiatry Annual Meeting, New York, NY, Spring 2026

Brooke L. Sevchik, Golia Shafiei, Kristin Murtha, Juliette B.H. Brook, Lia Brodrick, Kahini Mehta, Sage Rush, Matt Cieslak, Steven L. Meisler, Taylor Salo, S. Parker Singleton, Tien T. Tong, Mrugank Salunke, Dani S. Bassett, Monica E. Calkins, Mark A. Elliott, Raquel E. Gur, Ruben C. Gur, Tyler M. Moore, Kosha Ruparel, Russell T. Shinohara, M. Dylan Tisdall, Daniel H. Wolf, David R. Roalf, Theodore D. Satterthwaite, “Transdiagnostic Executive Function: An Open, Fully-Processed, Longitudinal Data Resource”. Flux Congress, Dublin, IE, Fall 2025 (*presented poster*).

Juliette B.H. Brook, Taylor Salo, Audrey C. Luo, Joelle Bagautdinova, Sage Rush, Aaron F. Alexander-Block, Erica B. Baller, Monica E. Calkins, Matt Cieslak, Elena C. Cooper, John A. Detre, Mark A. Elliott, Damien A. Fair, Phoebe Freedman, Philip R. Gehrman, Ruben C. Gur, Raquel E. Gur, Arno Klein, Nina Laney, Timothy O. Laumann, Kahini Mehta, Kathleen Merikangas, Michael P. Milham, Jonathan A. Mitchell, Tyler M. Moore, Steven M. Nelson, Kosha Ruparel, **Brooke L. Sevchik**, Sheila Shanmugan, Haochang Shou, Manuel Taso, Lauren K. White, Daniel H. Wolf, M. Dylan Tisdall, David R. Roalf, Theodore D. Satterthwaite, “An open, fully-processed data resource for studying mood and sleep variability in the developing brain”. Flux Congress, Dublin, IE, Fall 2025.

S. Parker Singleton, **Brooke L. Sevchik**, Simon N. Vandeckar, Eric C. Strain, Sandeep M. Nayak, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “A living systematic review, meta-analysis, and open data resource of trials of psilocybin treatment for symptoms of depression”. Gordon Research Conference: Neurobiology of Psychedelics, Smithfield, RI, 2025.

Brooke L. Sevchik, S. Parker Singleton, Simon N. Vandeckar, Eric C. Strain, Sandeep M. Nayak, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “SYPRES: SYNthesis of Psychedelic REsearch Studies”. Society of Biological Psychiatry Annual Meeting, Toronto, CA, Spring 2025. (*presented poster*).

Brooke L. Sevchik, S. Parker Singleton, Simon N. Vandeckar, Eric C. Strain, Sandeep M. Nayak, Robert H. Dworkin, J. Cobb Scott & Theodore D. Satterthwaite, “Living Evidence Synthesis of Psilocybin for Depression”. Dwight L. Evans, M.D., Penn Psychiatry Research Day, Translational Research: Bench to Bedside & Back Again. Philadelphia, PA, USA, Spring 2025. (*presented poster*).

Brooke Sevchik, Raphael Geddert, and Tobias Egner. “Influence of Threat and Anxiety on Cognitive Map Learning”. Cognitive Neuroscience Society Annual Meeting, Toronto, CA, Spring 2024. (*presented poster*).

Brooke Sevchik, Raphael Geddert, and Tobias Egner. “Influence of Threat and Anxiety on Cognitive Map Learning”. Undergraduate Neuroscience Graduation with Distinction Poster Session. Durham, NC, Spring 2024. (*presented poster*).

Brooke Sevchik, Raphael Geddert, and Tobias Egner, “Influence of Threat and Anxiety on Cognitive Map Learning”. Duke University Summer Research Showcase. Durham, NC, Summer 2023. (*presented poster*).

INVITED TALKS

Brooke Sevchik, “SYPRES: Synthesis of Psychedelic Research Studies”. Penn Department of Psychiatry Research Rounds. Philadelphia, PA, March 2026.

ADDITIONAL CONFERENCE ATTENDANCES AND SOCIETY MEMBERSHIPS

Cognitive Neuroscience Society Annual Meeting, Boston, MA, USA, Spring 2025.

Flux Congress, Baltimore, MD, USA, Fall 2024.

LEADERSHIP EXPERIENCE

Philip R. Costanzo Teaching Fellowship*Teaching Fellow, Academic Year 2023 - 2024*

Created lesson plans, discussed techniques to improve learning among students, collaborated with teaching team to create study resources, and taught two Psychology 101 discussion sections each week. Advised and mentored students on semester-long research projects in class and during office hours. Graded student projects and essays. Engaged in training on teaching ethics, strategies, and psychology instruction and received feedback during weekly teaching seminar.

Duke University, Neurocare Mental Health Advocacy Organization*Student Outreach Chair, Treasurer, September 2021 - January 2023*

Organized, facilitated, and recruited speakers for panels on women and mental health and imposter syndrome. Led meetings to plan and implement outreach events to promote mental health on campus and worked with administration to address student concerns.

Duke University, Global Education Student Committee*Vice President of Marketing, Study Away Ambassador, February 2023 - May 2024*

Promoted study abroad and shared personal experiences with prospective students, created marketing materials for events, trained student representatives on talking points, and coordinated with Global Education Office to distribute promotional materials.

Duke University, Residence Hall Community Council*Vice President, September 2020 - April 2021*

Advocated for student interests and facilitated communication among leadership and first-year students. Served as a representative of Southgate and Gilbert-Addoms Residence Halls on Duke University East Campus Council to plan, organize, and run social events for residents.

COMMUNITY SERVICE**Bleeding Disorders Foundation of North Carolina***Volunteer, January 2020 - Present*

Translate informational documents and flyers from English to Spanish and proofread documents.

Broadened nonprofit's rebranding efforts. Facilitated communication in Spanish about Zoom events during the pandemic.

El Futuro Mental Health Clinic, Durham, NC*Volunteer, February 2022 - April 2022*

Spearheaded design of, planned, and contributed to construction of a bilingual sensory garden on the mental health center's property.

HONORS AND GRANTS

Richard L. Predmore Award in Spanish, Duke University Department of Romance Studies	Spring 2024
Duke Undergraduate Research Support Conference Grant	Spring 2024
Phi Beta Kappa, Duke University Beta Chapter	Spring 2023
Psychology & Neuroscience Small Grant, Duke University Department of Psychology & Neuroscience	September 2022
Mac Anderson Foreign Language Scholarship, Duke University Global Education Office	Summer 2022
Dean's List with Distinction, Duke University	Fall 2021, Fall 2022, Spring 2022, Spring 2024
National Merit Scholarship Finalist	2019

MENTORSHIP**Tour Guide, Duke University (April 2021 - July 2023)**

Trinity Ambassador, Duke University, Department of Romance Studies (June 2022 - May 2024)

TECHNICAL SKILLS AND INTERESTS

Programming skills: R, Python, Bash command-line programming, Javascript, HTML, CSS, JASP, Atom, collaborative coding through Git/GitHub (@B-Sevchik), high performance computing clusters

Neuroimaging tools: BIDS/BIDS Apps (fMRIPrep, sMRIPrep, QSIprep, QSIREcon, MRIQC, ASLPrep, XCP-D), Nilearn, CuBIDS, FreeSurfer, AFNI, pydeface, DSISudio, DIPY

Additional training: Meta-Analysis in R Workshop, Physalia Courses.

Computer skills: Notion, Covidence meta-analysis software, Adobe Illustrator, Adobe Indesign, Powerpoint/Microsoft Word/Excel, Google Slides/Google Docs/Google Sheets, Canva, Gimp image manipulation, LaTeX

Research skills: Completion of CITI program courses on human research ethics, experience with Duke's SONA undergraduate experiment system and Amazon's Mechanical Turk (MTurk), experience in IRB submission and amendment process, knowledge in handling PHI, trained in rating MRI images for quality assessment

Academic interests: Executive functioning and cognitive control, neuroimaging, impact of adolescent development on cognition and emergence of psychopathology, translational research to improve psychiatric symptoms, women's brain health and impact of hormones on cognition and psychiatric health

LANGUAGES

Spanish: Advanced proficiency in reading and writing, Intermediate High level score for speaking on the American Council on the Teaching of Foreign Languages OPIc; Coursework on Spanish culture and experience living abroad in Madrid during Summer 2022 and Spring 2023