

Vanessa Cao, B.S.

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EDUCATION

- 2020—Present **The University of Rochester**, Rochester, NY
Ph.D. Student, Developmental Psychology | Developmental Psychopathology
Quantitative Methods Certificate
Expected: May 2025
- 2015—2018 **The Pennsylvania State University**, University Park
Bachelor of Science, Biology (Neuroscience)
Minor: Psychology
GPA: 3.85/4.00, Cum Laude

PUBLICATIONS

- Cao, V. T.**, Davies, P. T., & Sturge-Apple, M. L. (under review) Disentangling the Relationship Between Callous-Unemotional Traits and Unsupportive Parenting Through a Developmental Lens.
- Waschbusch, D.A., **Cao, V.T.**, Shroff, D.S., & Willoughby, M. (In preparation) Reward and Punishment Sensitivity in Children with ADHD: Validating the Contingency Response Rating Scale.
- Davies, P.T., Pearson, J.K., **Cao, V.T.**, & Sturge-Apple, M.L. (Accepted) Family-Level Antecedents of Children's Patterns of Reactivity to Interparental Conflict: Testing the Reformulation of Emotional Security Theory. *Developmental Psychology*. <https://doi.org/10.1037/dev0001497>
- Davies, P.T., **Cao, V.T.**, Patel, M.D., & Sturge-Apple, M.L. (Accepted with minor revision) Why Does Children's Temperamental Exuberance Increase their Vulnerability to Externalizing Symptoms: A Process-Oriented Approach. *Development and Psychopathology*.
- Waxmonsky, J.G., Kujawa, A., Pegg, S., Babinski, D., Baweja, R., **Cao, V.T.**, Shroff, D., & Waschbusch, D.A. (2022). The Impact of Irritability and Callous Unemotional Traits on Reward Positivity in Youth with ADHD and Conduct Problems. *Research on Child and Adolescent Psychopathology*, 1-14. <https://doi.org/10.1007/s10802-022-00901-9>
- Babinski, D. E., Shroff, D. M., **Cao, V. T.**, & Waschbusch, D. A. (2021). Sex-Specific Norms for Diagnosing Attention-Deficit/Hyperactivity Disorder in Childhood: A Receiver Operating Characteristic (ROC) Analysis. *Evidence-Based Practice in Child and Adolescent Mental Health*, 6(2), 290-301. <https://doi.org/10.1080/23794925.2021.1875343>

POSTER PRESENTATIONS

- Cao, V.T.**, Patel, M.D., Davies, P.T., & Sturge-Apple, M.L. (under review) Why Does Children's Temperamental Exuberance Increase their Vulnerability to Externalizing Symptoms?: A Process-Oriented Approach. Poster to be at the Biennial Meeting of the Society for Research in Child Development. Salt Lake City, Utah (Mar. 23-25, 2023).
- Cao, V.T.**, Davies, P.T., & Sturge-Apple, M.L. (under review) Temperamental Antecedents of Callous-Unemotional Traits and Externalizing Problems. Poster to be at the Biennial Meeting of the Society for Research in Child Development. Salt Lake City, Utah (Mar. 23-25, 2023).

- Cao, V.T.**, Davies, P.T., & Sturge-Apple, M.L. Disentangling the Relationship Between Callous-Unemotional Traits and Unsupportive Parenting Through a Developmental Lens. Poster presented at the Biennial Meeting of the Society for the Scientific Study of Psychopathy. Cypress, Greece (Remote Due to COVID) (May 18-22, 2022).
- Shroff, D.M., **Cao, V.T.**, Waschbusch, D.A., Babinski, D.E. Sex-Specific Norms for Diagnosing ADHD: A Receiver Operating Characteristic (ROC) Analysis. Poster presented at the 53rd Annual Meeting of the ABCT. Atlanta, GA. (Nov. 21-24, 2019).
- Horst M.A., Vernon T., **Cao V.**, Morgan M., Rogers A., Bradburn E.H., Rogers F.B. An Analysis of Pediatric Social Vulnerability in the Pennsylvania Trauma Systems. 49th Annual Meeting Western Trauma Association (2019). (Abstract and Poster).
- Vernon, T.M., Bradburn, E.H, Cook, A.D., Jammula, S., **Cao, V.**, Rogers, F.B., Trauma Patients Admitted to Non-surgical Services—A Marker For Poor Outcome. 77th Annual Meeting of the American Association for the Surgery of Trauma and Clinical Congress of Acute Care Surgery (Sept. 26-29, 2018).
- Vernon T., Horst M.A., **Cao V.**, Morgan M., Rogers A., Bradburn E.H., Rogers F.B. An Analysis of Pediatric Social Vulnerability and Insurance Status in the Pennsylvania Trauma Systems. 23rd Annual Challenges in Critical Care (2018). Hershey, PA (Abstract and Poster).
- Horst M.A., Vernon T., **Cao V.**, Morgan M., Rogers A., Bradburn E.H., Rogers F.B. An Analysis of Pediatric Undertriage and Social Vulnerability in the Pennsylvania Trauma Systems. 23rd Annual Challenges in Critical Care (2018). Hershey, PA. (Abstract and Poster).

MENTORING ACTIVITIES

- 2022** **Undergraduate Honors Thesis | University of Rochester**
Mentee: Marissa Hendricks | Role: Graduate Student Supervisor
- 2022** **Discover Grant for Undergraduate Research | University of Rochester**
\$5,000 Discover Grant
Mentee: Ethan Kanh | Role: Supervisor

RESEARCH EXPERIENCE

- 2020—Present** **University of Rochester, Department of Psychology**
Rochester Center for Research on Children and Families | Graduate Research Assistant
Dr. Patrick Davies

*Studies of high interest are marked with an **

- 2020—Present** *Constructive Interparental Conflict Resolution (Project THRIVE)
National Institute of Child Health and Human Development
P.I. Dr. Patrick Davies | Project Role: Graduate Research Assistant
Study Summary: This work aims to better understand how witnessing constructive interparental conflict may play a role in child development.

- 2018—2020** **Penn State College of Medicine, Psychiatry**
Attention and Behavior Clinic Research Group | Research Coordinator

Dr. Daniel Waschbusch, Dr. Dara Babinski, Dr. James Waxmonsky

Investigative Studies

- 2020 *The Examination of Underlying Neural Mechanisms in Girls With and Without ADHD
National Institute of Mental Health
P.I. Dr. Dara Babinski | Project Role: Project Coordinator
Study Summary: This work aims to understand the neural underpinnings of social processing in girls.
- 2019—2020 *The Examination of Underlying Mechanisms of Borderline Personality Features in female, adolescent ADHD Populations
Children's Miracle Network
P.I. Dr. Dara Babinski | Project Role: Project Coordinator
Study Summary: This work aims to understand the link between ADHD and BPD and identify risks for BPD to inform future intervention efforts.
- 2019—2020 Examining the Role of Reward Responsiveness in the Behavioral Treatment of Pediatric ADHD
Penn State College of Medicine, Department of Psychiatry
P.I. Dr. James Waxmonsky | Project Role: Project Coordinator
Study Summary: This work aims to capture how the 2019 Summer Treatment Program affects child responsiveness to reward through EEG capture of ERPs and LPPs.
- 2019—2020 *Examining Executive Functioning Deficits, Affective Deficits, and Social Functioning to Understand Disruptive Behaviors and Callous-unemotional Traits
\$39,301 Children's Miracle Network
P.I. Dr. Daniel Waschbusch | Project Role: Project Coordinator
Study Summary: This work aims to understand the impact of Attention-Deficit Hyperactivity Disorder, conduct problems, and callous-unemotional traits on different behaviors and cognitive skills in children ages 6 to 13 years.
- 2018—2020 *Monetary Reward Processing and Emotion Regulation in Adolescence: An fMRI pilot Study
Penn State College of Medicine, Department of Psychiatry
P.I. Dr. Dara Babinski | Project Role: Project Coordinator
Study Summary: This work utilizes EEG and fMRI techniques to identify patterns of brain activation underlying monetary reward processing and emotion regulation in adolescents, as well as the correspondence between parent and adolescent neural activation.

Treatment Studies

- 2019—2020 *Reward and Punishment Sensitivity and Treatment Response in Children with Disruptive Behavior Disorders and Callous-Unemotional Traits
\$39,301 Children's Miracle Network
P.I. Dr. Daniel Waschbusch | Project Role: Project Coordinator
Study Summary: This work aims to examine the effectiveness of parent management training for children with conduct problems and callous-unemotional traits in children 5 to 12 years of age.

2018—2020 *The Role of Parental Emotion Regulation in Parent-Child Conflicts
 \$59,993 Tobacco CURE Project, PA Department of Health
 P.I. Dr. James Waxmonsky | Project Role: Project Coordinator
Study Summary: This work aims to address negative parenting through therapy in order to combat child misbehavior in the home. Throughout this study EEG data is collected from both parents and children, as well as a recorded interaction.

2018—2020 Neurophysiological Markers of Pediatric Irritability and its Response to Intervention
 \$39,848 Children's Miracle Network Research
 P.I. Dr. Raman Baweja | Project Role: Project Coordinator
Study Summary: This work aims to predict both ADHD and irritability in children ages 5 to 12 years old through EEG ERP and LPP data and how both of these realms may be better managed with stimulant medication.

Pharmaceutical Trials

2019—2020 A Phase 3, Randomized, Double-Blind, Placebo-Controlled, Parallel Group, Adult Laboratory Classroom Study to Evaluate the Safety and Efficacy of PRC-063 Compared to Placebo in Adults with ADHD
 Purdue Pharma
 P.I. Dr. Dara Babinski | Project Role: Project Coordinator
Study Summary: This work aims to continue testing the effectiveness of a new, extended-release, stimulant medication in adults with ADHD.

2018—2020 Open-Label Extension Study to Evaluate the Long Term Safety and Efficacy of SPN-812 ER for the Treatment of Pediatric Patients with Attention Deficit/Hyperactivity Disorder (ADHD).
 Supernus Pharmaceuticals
 P.I. Dr. James Waxmonsky | Project Role: Project Coordinator
Study Summary: This open-label investigational trial is a continuation study for participants who participated in the original blinded study.

2018—2019 Evaluation of SPN-812 ER 400 and 600 mg Efficacy and Safety in Adolescents with ADHD - A Double-Blind, Placebo Controlled, Pivotal Trial
 Supernus Pharmaceuticals
 P.I. Dr. James Waxmonsky | Project Role: Project Coordinator
Study Summary: This investigational trial seeks determine the safety and efficacy of a non-stimulant drug in children ages 6 to 17 years with ADHD.

Other Studies

2018—Present Maternal Depression and Reward Responsiveness
 \$40,000 Children's Miracle Network
 P.I. Dr. Dahlia Mujurkee, Dr. Dara Babinski | Project Role: Research Support
Study Summary: This work examines maternal reward responsiveness, measured across neurophysiological, behavioral, and self-report measures as a marker of depression in mothers of adolescents.

2018 Penn Medicine Lancaster General Hospital, Trauma Surgery | Research Assistant
 Dr. Frederick Rogers

- 2018 Trauma Patients Admitted to Non-Surgical Services: A Marker for Poor Outcome
Lancaster General Hospital, Department of Acute and Trauma Surgery
 P.I. Dr. Eric Bradburn | Project Role: Research Intern
Study Summary: This work aimed to investigate how trauma patient surgical outcomes are affected based on whether or not they are admitted to a recognized trauma center.
- 2018 American Trauma Society, Pennsylvania Division (ATSPA) Safety Grant Award
\$1,400 State Mini-Grant
 P.I. Dr. Eric Bradburn | Project Role: Research Intern
Study Summary: This grant was awarded to provide funding to train and supply rural and Amish populations with the skills and supplies necessary to deliver trauma care prior to the arrival of medical services.
- 2017—2020 Penn State, The Relationships and Stress Lab | Research Assistant (2017-2020) & Lab Manager (2017-2018)**
Dr. Amy Marshall
- 2019 *Family Violence: The Role of Trauma
\$1,835,954 National Institute of Health, NICHD
 P.I. Dr. Amy Marshall | Project Role: Research Assistant
Study Summary: This work aims to bridge the gap between trauma exposure and family violence perpetration in the context of diverse forms of perceived threat.
- 2018 *Mechanisms of Firearm-Related Family Violence: Children, Intimate Relationships, and Conflictual Life Events (CIRCLE) Study II
\$4,915 Penn State Justice Center for Research
 P.I. Dr. Amy Marshall | Project Role: Lab Manager
Study Summary: This work is a continuation of the CIRCLE study, examining behavior observed in inter-parental and parent-to-child aggression while also assessing the effects of the presence of firearms in the household.
- 2018 *Emotion Regulation and Co-regulation in Couples with Posttraumatic Stress Disorder
\$155,093 National Institute of Health
 P.I. Dr. Steffany Fredman | Project Role: Lab Manager
Study Summary: This work investigates how PTSD affects emotion regulation in couples through the examination of patterns in voice frequencies during specific interactions.
- 2017—2018 *Predicting Severity of IPA in Men with PTSD through Romantic Relationships
Penn State University Park, Department of Clinical Psychology
 P.I. Amy Marshall | Project Role: Research Assistant
Study Summary: This work examined how interpersonal aggression may be able to be predicted through behaviors observed through couple interactions.
- 2015—2016 Penn State, Freshman Research Initiative | Research Student**
Dr. Kim Nelson, Dr. Glenna Malcolm, Dr. Charles Anderson

- 2016 Heat and Drought Tolerance of Transgenic Plants in the Wheat Family
Penn State University Park, Department of Biology
 P.I. Dr. Charles Anderson | Project Role: Research Student
Study Summary: This work investigated various DNA mutations in the Wheat family that would survive extreme weather circumstances with an aim to target hunger crises in areas with poor growing conditions.
- 2016 Environmental and Toxic Stressors on *Arabidopsis Thaliana*
Penn State University Park, Department of Biology
 P.I. Dr. Charles Anderson | Project Role: Research Student
Study Summary: This work investigated transgenic mutations within *Arabidopsis Thaliana* that would be able to survive extreme conditions such as extremely acidic or basic environments.
- 2011—2017 **Penn State, Valentine Center for Turfgrass Science | Laboratory Assistant**
Dr. Wakkar Uddin
- Utilized chlorophyll meter and nutrient assessments to evaluate turfgrass health
 - Inputted daily experimental data electronically for further statistical analysis
 - Retrieve turfgrass samples from experimental plots weekly for biomass quality and root quality analysis

HONORS & AWARDS

- 2022 **Blitz Talk Award | Society for Scientific Study of Psychopathy**
 Awarded to students with exceptional blitz talk presentations at the biennial conference.
- 2018 **Graduated Cum Laude | The Pennsylvania State University**
Top 12% of all 2018 Eberly College of Science Graduates
- 2016—Present **Psi Chi, Psychology National Honor Society**
 The Pennsylvania State University Chapter
- 2015—2018 **Dean's List Academic Honors | The Pennsylvania State University**
Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018
- 2015—2018 **University Trustee Scholarship | The Pennsylvania State University**
Awarded 2015—2016, 2016—2017, 2017—2018
- 2015 **4-year Provost Award | The Pennsylvania State University**

CLINICAL EXPERIENCE

- 2019—2020 ***Annual Summer Treatment Program (STP) for Children with ADHD and related disorders**
\$72,000 Children's Miracle Network
Penn State College of Medicine Department of Psychiatry
 Program Director: Dr. Daniel Waschbusch | Project Role: Assistant Coordinator

Program Summary: The STP is designed to implement behavioral training through a point system in a summer camp setting for children exhibiting externalizing behaviors.

TEACHING

2020—2021 SP 2021	Graduate Teaching Assistant, Department of Psychology PSYC 262, Human Motivation <i>Dr. Christopher Neimiec</i>
FA 2020, FA 2021	PSYC 289, Developmental Child Psychopathology <i>Dr. Jennifer Aube</i>
2018—2020	Research Advisor, Illinois Science and Technology Coalition (Remote)
2016—2018 FA 2017, FA 2018	Teaching Assistant, Department of Biology BIOL 230W Lab, Molecular and Cellular Biology <i>Dr. Jennelle Malcos, Dr. Matthew Endres</i>
SP. 2017, SP2018	BIOL 120A, Plants, People, and Places <i>Dr. Glenna Malcolm</i>
2016	Research Supervisor, Freshman Research Initiative, Department of Biology <i>Dr. Kim Nelson, Dr. Glenna Malcolm</i>

INVITED TALKS & LECTURES

FA 2022	University of Rochester PSYC 289 Developmental Psychopathology Instructor: Dr. Jennifer Aube Guest Lecture Topic: Disruptive Behaviors and Conduct Problems
SP 2022	Society for the Scientific Study of Psychopathy Biennial Conference Invited Blitz Talk <i>Disentangling the relationship between parenting and callous-unemotional traits through a developmental lens</i>
SP 2022	St. John Fisher College PSYC 231 Developmental Psychology Instructor: Lucia Parry, M.A. Guest Lecture Topic: Middle Childhood Emotional and Social Development
FA 2021	University of Rochester PSYC 289 Developmental Psychopathology Instructor: Dr. Jennifer Aube Guest Lecture Topic: CD, ODD, and ADHD

SERVICE

2022—Present	Developmental Program Student Representative <i>Department of Psychology University of Rochester</i>
2020—2021	Diversity, Equity, and Inclusion (DEI) Committee Student Liaison <i>Department of Psychology University of Rochester</i>
2020—Present	Next Gen Psych Scholars Program Graduate Student Mentor

Department of Psychology | University of Minnesota

2018—2020

Mentor Match Engine | Research Mentor

Department of Education | Illinois Science and Technology Coalition

LEADERSHIP

2016—2018 **Psi Chi, International Honor Society in Psychology**

2017—2018 President, Psi Chi Penn State Chapter

2017 Secretary, Psi Chi Penn State Chapter

2015—2018 **ServeState: Students for Philanthropy**

2017—2018 President

2016—2017 Service Coordinator

2015—2016 Assistant Philanthropy Chair

MEDIA APPEARANCES

2016 **Members of Penn State's service organization ServeState speak on their passion for volunteering**

https://www.collegian.psu.edu/news/campus/article_57c340dc-b845-11e6-81a7-4b612eccc930.html

TECHNICAL TRAININGS

2020, 2021 **Intro to Structural Equation Modeling, Curran-Bauer Analytics (Web)**
Dr. Patrick Curran & Dr. Dan Bauer, University of North Carolina

2020 **D-PICS Training Seminar, Penn State College of Medicine**
Dr. Jessica Mattingly, Penn State Health

2020 **Structural Equation Modeling Short Course, University of Maryland**
Dr. Gregory Hancock, University of Maryland

2019 **EEG and fMRI Processing Retreat, Vanderbilt University**
Dr. Autumn Kujawa, Vanderbilt University

2019 **R for Social Scientists Workshop, Carnegie Mellon University**
Dr. Jeffrey Girard, Carnegie Mellon

2018 **Clinical Research Skills Workshop, Penn State College of Medicine**
Terry Novchich, RN, BSN, CCRC, Penn State College of Medicine

2018 **EEG Collection and Processing Retreat, Penn State College of Medicine**
Dr. Autumn Kujawa, Vanderbilt University

SOFTWARE & PROGRAMS PROFICIENCIES

Audacity	BrainVision	CareConnect/Cerner
CATS IRB	EPIC	E-Prime
Electrocardiography	Electroencephalography	i2b2
PCR	Presentation	R
RedCap	NMR/IR Spectroscopy	Matlab/SPM

Microsoft Office
TriNetX

Mindware
Qualtrics

SPSS

CLINICAL ASSESSMENT SKILLS

2019 Administration of the Wide Range Achievement Test (WRAT)
2019 Administration of the Wechsler Intelligence Scale for Children (WISC)
2018 Administration of the Wechsler Abbreviated Scale of Intelligence (WASI)
2018 Diagnostic Interview Schedule for Children (C-DISC)
2018 Administration of the Development and Well-Being Assessment (DAWBA)
2018 Columbia—Suicide Severity Rating Scale Certification (C-SSRS)
2018 B-Con Certified