

Vanessa Cao, B.S.

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EDUCATION

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- 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

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- Colton, K.C., **Cao, V.T.**, & Davies, P.T. (in preparation). Impact of Parental Conflict and Emotional Abuse on Children and Families.
- Davies, P.T. & **Cao, V.T.** (Invited chapter; Submitted). Family Conflict and Conflict Management Developmental Implications for Children. In N. C. Overall, J. A. Simpson, & J. A. Lavner (Eds.), *Research Handbook of Couple and Family Relationships*. Cheltenham Glos, UK: Edward Elgar Publishing.
- Davies, P.T., **Cao, V.T.**, Sturge-Apple, M.L., Cicchetti, D. (under review). Advancing Differential Susceptibility Research: Development and Validation of the Temperamental Sensitivity Q-Scale.
- Waschbusch, D.A., **Cao, V.T.**, Shroff, D.S., & Willoughby, M. (under review). Reward and Punishment Sensitivity in Children with ADHD: Validating the Contingency Response Rating Scale.
- Cao, V. T.**, Davies, P. T., & Sturge-Apple, M. L. (in press). Disentangling the Relationship Between Callous-Unemotional Traits and Unsupportive Parenting Through a Developmental Lens. *Development and Psychopathology*. <https://doi.org/10.1017/S0954579423000263>
- Davies, P.T., Pearson, J.K., **Cao, V.T.**, & Sturge-Apple, M.L. (2023). 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. (in press). Why Does Children's Temperamental Exuberance Increase their Vulnerability to Externalizing Symptoms: A Process-Oriented Approach. *Development and Psychopathology*. <https://doi.org/10.1017/S0954579422001304>
- 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*, 50, 1027-1040. <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

*Denotes mentored student

Hendricks, M.V.*, Davies, P.T., & **Cao, V.T.** Cortisol Reactivity and Affective Attention Bias: The Intricacies of Social Problem-Solving in School-Aged Children. Poster presented at University of Rochester Undergraduate Research Exposition. Rochester, NY (Apr. 14, 2023).

Kanh, E.*, **Cao, V.T.**, & Davies, P.T. Assessing the Success of Observer Rated Ethological Profiles Using a Traditional Child Temperament Task. Poster presented at University of Rochester Undergraduate Research Exposition. Rochester, NY (Apr. 14, 2023).

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

Cao, V.T., Davies, P.T., & Sturge-Apple, M.L. Temperamental Antecedents of Callous-Unemotional Traits and Externalizing Problems. Poster presented at Biennial Meeting of the Society for Research in Child Development. Salt Lake City, UT (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).

HONORS & AWARDS

- 2023** Graduate Student Travel Award | Society of Research in Child Development
- 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

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.

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—2023 Graduate Teaching Assistant, Department of Psychology
 SP 2021 PSYC 262, Human Motivation
Dr. Christopher Neimiec

FA 2020, FA 2021, PSYC 289, Developmental Child Psychopathology
 FA 2023 *Dr. Jennifer Aube*

2018—2020 Research Advisor, Illinois Science and Technology Coalition (Remote)

2016—2018 Teaching Assistant, Department of Biology
 FA 2017, FA 2018 BIOL 230W Lab, Molecular and Cellular Biology
Dr. Jennelle Malcos, Dr. Matthew Endres

SP. 2017, SP2018 BIOL 120A, Plants, People, and Places
Dr. Glenna Malcolm

2016 Research Supervisor, Freshman Research Initiative, Department of Biology
Dr. Kim Nelson, Dr. Glenna Malcolm

INVITED TALKS & LECTURES

SU 2023 University of Rochester | PSYC 282 | Psychopathology
 Instructor: Rachel Rivera, M.A.
 Guest Lecture | Topic: Externalizing Disorders: CU Trait and Empathy Development

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
Disentangling the relationship between parenting and callous-unemotional traits through a developmental lens
- 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

- 2023—Present** **Colloquium Committee | Student Representative**
Department of Psychology | University of Rochester
- 2023—Present** **Blocks in Bloom | Parsells Block Liaison**
City of Rochester
- 2023—Present** **490 Farmers | Volunteer**
City of Rochester
- 2022—Present** **Beechwood Community Gardens | Volunteer**
City of Rochester
- 2022—Present** **The City Roots Community Land Trust and Connected Communities | Volunteer**
City of Rochester
- 2022—Present** **Developmental Program | Student Representative**
Department of Psychology | University of Rochester
- 2020—2021** **Diversity, Equity, and Inclusion (DEI) Committee | Student Liaison**
Department of Psychology | University of Rochester
- 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

REVIEWING ACTIVITIES

Ad Hoc Reviewing

Clinical Child and Family Psychology Review (Co-reviewer | Dr. Patrick Davies)

Other

2023 SRCD Biennial Meeting Program
Graduate Student Reviewer | Developmental Psychopathology Panel

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

2023	Time Series Analysis for Intensive Longitudinal Data, Pitt Methods <i>Dr. Kathleen Gates, University of North Carolina</i>
2020, 2021	Intro to Structural Equation Modeling, Curran-Bauer Analytics (Web) <i>Dr. Patrick Curran & Dr. Dan Bauer, University of North Carolina</i>
2020	D-PICS Training Seminar, Penn State College of Medicine <i>Dr. Jessica Mattingly, Penn State Health</i>
2020	Structural Equation Modeling Short Course, University of Maryland <i>Dr. Gregory Hancock, University of Maryland</i>
2019	EEG and fMRI Processing Retreat, Vanderbilt University <i>Dr. Autumn Kujawa, Vanderbilt University</i>
2019	R for Social Scientists Workshop, Carnegie Mellon University <i>Dr. Jeffrey Girard, Carnegie Mellon</i>
2018	Clinical Research Skills Workshop, Penn State College of Medicine <i>Terry Novchich, RN, BSN, CCRC, Penn State College of Medicine</i>
2018	EEG Collection and Processing Retreat, Penn State College of Medicine <i>Dr. Autumn Kujawa, Vanderbilt University</i>

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	Mindware	Mplus
SPSS	TriNetX	Qualtrics

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