

Bianca Braun

Curriculum Vitae

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EDUCATION

Harvard University May 2023

B.A., *magna cum laude*, GPA 3.98, Psychology, *summa cum laude*, GPA 4.0.

Thesis:

The Role of Physical Activity on the Association between Stress and Internalizing Psychopathology in Adolescents. Advisor: Katie A. McLaughlin

Independent Research Projects:

The Mediating Role of Self-Regulation on the Association between Physical Activity and School Readiness in Typically Developing Children and Children with Attention-Deficit Hyperactivity Disorder. Advisors: Katie A. McLaughlin, Anthony S. Dick

Association of Neurite Density in Dopaminergic Brain Regions with Weight Gain in Young Children with Attention-Deficit Hyperactivity Disorder and Typically Developing Children. Advisors: Katie A. McLaughlin, Dr. Anthony S. Dick.

SUNY Westchester Community College, Honors May 2023

A.A., *honors degree*, Liberal Arts Social Sciences. GPA 4.0.

Bischöfliche Liebfrauenschule Eschweiler May 2017

German Abitur. AP Concentration in English and Geography. GPA 3.7.

HONORS AND AWARDS (not listed in Funding)

Latin Honors, *magna cum laude*, Harvard University. May 2023

Latin Honors, *summa cum laude*, Department of Psychology, Harvard University. May 2023

Elizabeth D'Estree Award for Positive Leadership, Currier House, Harvard University. May 2023

Westchester Community College Class of 2021 Salutatorian. May 2023

Chancellor's Award for Student Excellence, State University of New York. May 2021

International Hallmark Most Distinguished Chapter Officer,
Phi Theta Kappa Honors Society. May 2021

2021 All New York Academic Team, New York Community College Association
of Presidents, Coca-Cola Scholars Foundation, Phi Theta Kappa Honors Society. May 2021

FUNDING

Total External Funding Awarded: \$186,405 (+ \$150,000 pending)

Jack Kent Cooke Graduate Scholarship (<i>pending approval</i>), \$150,000.	Jan 2025
Harvard Office of Undergraduate Research and Fellowships Conference Funding, \$1,000.	May 2023
Harvard College Financial Aid Commencement Expense Funding, \$2,500.	May 2023
Harvard University Department of Psychology Undergraduate Thesis Poster Grant, \$75.	Apr 2023
Harvard Financial Aid Emergency Expense Funding, \$630.	Mar 2023
American Psychoanalytic Association 2023 National Meeting Externship Funding, \$200.	Nov 2022
Jack Kent Cooke Foundation Conference and Travel Stipend, \$1,800.	Oct 2022
Harvard College Summer Research Program Funding, \$4,500.	May 2022
Jack Kent Cooke Foundation Conference and Travel Stipend, \$400.	Apr 2022
American Psychoanalytic Association 2022 National Meeting Externship Funding, \$800.	Apr 2022
Jack Kent Cooke Foundation Internship Stipend, \$6,000.	Mar 2022
WCC Undergraduate Transfer Scholarship to Pace University (<i>declined</i>), \$25,000.	May 2021
Jack Kent Cooke Undergraduate Transfer Scholarship, \$110,000.	May 2021
WCC Class of 2021 Salutatorian Scholarship, \$1,000.	Apr 2021
WCC Commit to Change Leadership Development Program Seed Funding, \$3,000.	Apr 2020
WCC Cambridge University Summer Honors Programme Press Scholarship, \$2,500.	Dec 2020
WCC Honors College Full Scholarship, \$27,000.	Apr 2019

PUBLICATIONS

Peer Reviewed Articles (*indicates co-first author)

Bayat, M.*, **Braun, B.***, Curzon, M., Hernandez, M., Graziano, P., & Dick, A. S. (in preparation).

Association of neurite density in limbic brain regions with weight gain in young children with attention-deficit hyperactivity disorder and typically developing children.

Braun, B., Hillman, C. H., & Raine, L. B. (in preparation). *Differential associations of cardiorespiratory fitness and body tissue types with mental health in preadolescent children.*

Braun, B., McClannahan, K. S., & Peelle, J. E. (in preparation). *Personality as a moderating factor on the relationship between hearing handicap and mental health.*

Jason, K., **Braun, B.**, Raine, L. B., & Hillman, C. H. (in preparation). *Future directions of aerobic exercise and high-intensity interval training for anxiety and depression symptoms in in-patient populations: A systematic review.*

University Publications

Braun, B. (2022, Fall). Non-meditative mindfulness in practice. *The Harvard Brain*, 3(2), an undergraduate academic journal with international readership. Student peer reviewed.

Braun, B. (2022, Spring). Physical exercise intervention in children with ADHD: Hit or miss? *The Harvard Brain*, 3(1). Student peer reviewed.

Braun, B. (Spring 2020 – Fall 2022). Neurological, structural and psychological bases of speech disorders in children. *Verdandi*, 16. Faculty peer reviewed journal of the Honors Program and College at Westchester Community College.

PRESENTATIONS

Poster Presentations (*indicates co-first author)

Braun, B. & Raine, L. B. (submitted). *Fitness and body composition moderate the association between perceived stress and affect and mood in young adults*. 72nd Annual Meeting of the American College of Sports Medicine, Atlanta, Georgia.

Bayat, M.*, **Braun, B.***, Curzon, M., Hernandez, M., Graziano, P., & Dick, A. S. (2024, September). *Association of neurite density in limbic brain regions with weight gain in young children with attention-deficit hyperactivity disorder and typically developing children*. Flux Society Congress, Baltimore, MD.

Braun, B., Raine, L. B., Cline, T. L., & Hillman, C. H. (2024, May). *The differential relationships of fitness and body composition with mental health in preadolescent children*. 71st Annual Meeting of the American College of Sports Medicine, Boston, MA.

McGee, N., **Braun, B.**, Sodemann, R. L., & Raine, L. B. (2024, April). Exploring the relationship between body image, BMI, and fitness in young adults. *Research, Innovation, Scholarship, Entrepreneurship (RISE) Exposition*, Northeastern University, Boston, MA.

Braun, B., Bayat, M., & Dick, A. S. (2023, May). Neurite density predicts weight gain in children. *Psychology Undergraduate Research Conference*, University of California, Los Angeles.

Oral Presentations and Symposia

Braun, B. (2021, June). *Neurological, Structural and Psychological Bases of Speech Disorders in Children* [Online]. The Beacon Conference, SUNY Westchester Community College, Valhalla, NY.

Braun, B. (2021, March). *Psychological Benefits of Exercise* [Online]. Healthy Living Series at the Honors College of SUNY Westchester Community College, Valhalla, NY.

Invited Non-Conference Talks

Braun, B. (2024, April). *PTK Honors Society Induction Ceremony* [Keynote address]. SUNY Westchester Community College, Valhalla, NY.

Braun, B. (2023, November). *From WCC to Harvard – An Alumni Perspective* [Keynote address]. SUNY Westchester Community College Fall Open House, Valhalla, NY.

RELEVANT RESEARCH EXPERIENCE

Interdisciplinary Health, Body Composition, and Neuroscience Laboratory Jul 2023 – Present
Research Coordinator

Advisor: Lauren B. Raine, Center for Cognitive and Brain Health, Northeastern University

Lead Research Coordinator on the following projects:

1. Body Composition and Cognition Study in young adults (18-30 years)

Examining relationships between cognition, cardiorespiratory fitness, body composition, and mental health among other variables in college students.

2. Body Composition in Babies Study in infants and mothers (3-36 months)

Investigating the associations between early-life cognitive development and longitudinal changes in sleep patterns, behavior, and body composition in infants and toddlers, alongside maternal changes in body composition and mood.

3. A Feasibility Study of High-Intensity Interval Training for Adolescents and Young Adults Hospitalized for Mental Health Evaluation (10-18 years)

Evaluating pre- and post-exercise intervention changes in anxiety, depression, emotion regulation, stress, and other mental health constructs among youth emergency department patients.

- Coordinate and execute the recruitment, scheduling, and data collection for studies involving both young adults and a vulnerable postpartum population, including women and infants.
- Program cognitive experiments in E-Prime and REDCap and conduct assessments using computers or the Bayley Scales of Infant and Toddler Development to evaluate developmental progress.
- Administer and operate specialized equipment, including BodPod and PeaPod body composition assessments and VO2 max treadmill testing, ensuring accuracy and consistency.
- Independently formulate research hypotheses, perform advanced statistical analyses using R, and present findings at professional conferences and through peer-reviewed publications.

Speech, Hearing, and Cognition Laboratory

Jul 2023 – Present

Research Coordinator

Advisor: Jonathan E. Peelle, Center for Cognitive and Brain Health, Northeastern University

- Drive the design and execution of both online and in-person research studies utilizing advanced software platforms such as REDCap, Gorilla, and PsychoPy.
- Manage the end-to-end process of IRB applications, ensuring rigorous adherence to ethical standards in human subjects' research.
- Lead the recruitment, consent, and coordination of study participants, overseeing scheduling and data collection with precision.
- Administer pure tone audiometry tests
- Collaborate with faculty to initiate independent multidisciplinary research at the intersection of mental, hearing, and cardiorespiratory health.

Stress and Development Laboratory

Feb 2022 – May 2023

Research Assistant

Advisor: Katie A. McLaughlin, Harvard University

- Recruited adolescent participants from the local community.
- Assisted with various MRI scans as a yellow badge holder, while working towards green badge certification, and performed quality control on participant imaging data.
- Conducted honors thesis project on the associations between stress, physical activity, and internalizing symptoms using an intensive longitudinal approach, developing a custom analysis pipeline in R.

Developmental Cognitive Neuroscience Laboratory

May – Aug 2022

Research Intern

Advisor: Anthony S. Dick, Florida International University

- Conducted independent research examining the relationships between nutrition, diet-induced weight gain, and dopaminergic neurite density in children with and without ADHD, using diffusion-weighted imaging (DWI) and restriction spectrum imaging (RSI). Identified key associations contributing to preventive literature on pediatric obesity.

McNally Laboratory

Feb 2022 – May 2023

Research Assistant

Advisor: Richard J. McNally, Harvard University

- Collaborated with lab members to refine research methods and address data collection obstacles.

Radcliffe Institute for Advanced Study

Oct 2021 – May 2022

Student Research Assistant

Advisors: Demetri F. Papolos, Martin Teicher, Harvard University

- Analyzed data used for conference discussing addition of new diagnostic criteria to DSM.
- Moderated discussions and executed accurate verbatim transcription.

LEADERSHIP EXPERIENCE AND SERVICE

Move2Thrive Project Advisor

Feb 2024 – Present

Suny Westchester Community College

- Mentored students in promoting healthy habits and holistic wellness, integrating physical activity, exercise, and nutrition to empower peers with knowledge and resources for disease prevention and overall well-being.

Cooke Outreach Representative

Aug 2021 – Present

Jack Kent Cooke Foundation

- Present Foundation's scholarship opportunities to community college students and provide application guidance.

Honors College Alumni Advisor

May 2021 – Present

Suny Westchester Community College

- Mentor current cohort of students on transfer process, specifically to Ivy League institutions.
- Encourage and motivate students to think big and to pursue social impact.

Physical Activity Student Advisory Committee Member

Nov 2022 – May 2023

Harvard Center For Wellness and Health Promotion

- Contributed to development and implementation of physical activity promotion app on campus.
- Provided recommendations for soliciting student input, collecting data, marketing, and deployment of the app in Fall 2023.

Undergraduate Planning Committee Member Oct 2021 – May 2023

Harvard University Department of Psychology

- Counseled first year students and sophomores about psychology concentration and thesis process.

Executive Committee Event Coordinator Jul 2022 – May 2023

Changing Health Attitudes and Actions to Recreate Girls (CHAARG) Chapter at Harvard University

- Promoted diversity of physical exercise by organizing versatile workouts from Latin dance to boxing.
- Clarified positive impact of exercise on mental health.

Phi Theta Kappa Honors Society Chapter President Jul 2020 – May 2021

Alpha Iota Omicron Chapter at SUNY Westchester Community College

- Led our chapter to fulfill PTK's four hallmarks of Leadership, Service, Scholarship, and Fellowship for which the chapter was recognized as one of the Top 100 Chapters internationally in 2021 amongst other awards.

Orientation Leader Summer 2020

SUNY Westchester Community College

- Facilitated small group activities and advised new students on involvement opportunities at the college.

SPECIALIZED TRAINING & CERTIFICATIONS

Mandated Reporter Training: Recognizing and Reporting Child Abuse, Neglect and Exploitation. MA Middlesex Children's Advocacy Center. Mar 2024

CPR and AED basic Life Support Training. American Heart Association. Oct 2023

Yellow MR Safety Training Badge. Harvard University Center for Brain Science. Feb 2022

Social & Behavioral Research: Human Subjects Research. CITI Program. Jul 2023

Prevention and Identification of Brain Injuries, including Abusive Head Trauma. Jan 2021
Early Childhood Education and Training. NY State Office of Children and Family Services.

Mandated Reporter Training in Child Abuse and Neglect/ Maltreatment Identification. Dec 2020
Early Childhood Education and Training. NY State Office of Children and Family Services.

Foundations in Health and Safety e-Learning. Dec 2020
Early Childhood Education and Training. NY State Office of Children and Family Services.

An In-Depth Look at Diverse Learners (3 credits). Mar 2019
Continuing Education Certificate in Child Development. Long Island University Post.

Physical, Cognitive and Psychosocial Development (3 credits). Dec 2018
Continuing Education Certificate in Child Development. Long Island University Post.

RELEVANT EXPERIENCE WORKING WITH CHILDREN

Bilingual Childcare Provider and Private Tutor May 2020 – May 2023

- Taught German to children aged 3 to 12 and developed games which combined learning with fun.

- Provided academic support to 3rd to 8th graders across all subjects.

Honors Society Liaison to Children's Center

Fall 2019 -Fall 2020

SUNY Westchester Community College

- Developed and mediated relationship between Philosophia Honors Society and Children's Center on campus through collaborative events such as pumpkin painting and Christmas card crafting.

Au Pair/ Live-in Caregiver

Sep 2017 – May 2021

Cultural Care Au Pair

- Provided four years of residential care for three children (ages 6 to 14) of a single mother, including two years during the COVID-19 pandemic, while balancing rigorous honors coursework and earning an associate's degree.
- Assisted with homework and created engaging educational and recreational activities to promote a positive learning environment.

STATISTICAL & PROGRAMMING SKILLS

Analytical Skills

Proficiency: Conditional Process Modeling (e.g., mediation, moderation, moderated mediation, etc.), Polynomial Regression, and Traditional Ordinary Least Squares Statistics (e.g., GLM).

Familiarity: Mixed Effects Models (e.g., time-series data examining lagged and contemporaneous relationships, etc.).

Statistical Suites

Proficiency: R, SPSS.

Experimental Software

Proficiency: Gorilla (Python GUI), REDCap.

Familiarity: PsychoPy (Python GUI), E-Prime, Rayyan (systematic review management).

ADDITIONAL SKILLS & INTERESTS

Languages: Fluent German, Intermediate French, and Conversational Spanish.

Interests: Fitness, Weightlifting, Nutrition, Extreme Hiking, Nature Travel.

REFERENCES

Lauren B. Raine, PhD, MPH

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Interdisciplinary Health, Body
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