

Morgan A. Botdorf

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Education

- Aug. 2016 – Present **University of Maryland**, College Park, MD
Doctoral Candidate in Psychology, Cognitive and Neural Systems area
Advisor: Tracy Riggins, Ph.D.
- Dec. 2018 **University of Maryland**, College Park, MD
M.S. Psychology, Cognitive and Neural Systems
M.S. Thesis: “Development of the Episodic Memory Network in Early Childhood: Insights from Graph Theoretical Analysis”
- May 2013 **West Chester University of Pennsylvania**, West Chester, PA
Major: Psychology, B.A.; Minor: Spanish
Graduated summa cum laude

Research Experience

- July 2016 – Present **Graduate Research Assistant**
Neurocognitive Development Lab, University of Maryland, College Park
Principal Investigator: Dr. Tracy Riggins
- Aug. 2017 – Aug. 2020 **National Science Foundation Graduate Research Fellow**
Neurocognitive Development Lab, University of Maryland, College Park
Principal Investigator: Dr. Tracy Riggins
- June 2013 – June 2016 **Research Coordinator**
Neurocognition Lab, Temple University
Principal Investigators: Drs. Jason Chein and Laurence Steinberg
- Aug. 2012 - Jan. 2013 **Research Assistant**
Cognitive Psychology Lab, West Chester University
Principal Investigator: Dr. Geeta Shivde

Honors and Distinctions

- 2019 International Society for Developmental Psychobiology Travel Award
- 2017 - 2020 National Science Foundation, Graduate Research Fellowship Program
- 2016 Flagship Fellowship, University of Maryland
- 2016 Dean’s Research Fellowship, University of Maryland
- All semesters West Chester University Dean’s List
- 2013 West Chester University Department of Psychology Research Achievement Award
- 2013 West Chester University Department of Psychology Academic Achievement Award
- 2013 Psi Chi, International Honor Society in Psychology
- 2012 Sigma Delta Pi, National Hispanic Honor Society

Peer Reviewed Publications *denotes co-first authorship

- Canada, K.L., **Botdorf, M.**, & Riggins, T. (in press). Longitudinal development of hippocampal subregions from early- to mid-childhood. *Hippocampus*.
- Chad-Friedman, E., **Botdorf, M.**, Riggins, T., & Dougherty, L.R. (in press). Early childhood cumulative risk is associated with decreased global brain measures, cortical thickness, and cognitive functioning in school-age children. *Developmental Psychobiology*.
- Riggins, T., Canada, K., **Botdorf, M.** (2020) Empirical evidence supporting neural contributions to episodic memory development in early childhood: Implications for childhood amnesia. *Child Development Perspectives*, 14(1), 41-48.
- Botdorf, M.***, Blankenship, S.L.*, Riggins, T., & Dougherty, L.R. (2019) Lasting effects of stress physiology on the brain: Cortisol reactivity during preschool predicts hippocampal functional connectivity at school age. *Developmental Cognitive Neuroscience*, 40.
- Botdorf, M.**, Riggins, T., & Dougherty, L. R. (2019). Early positive parenting and maternal depression history predict children's relational binding ability at school-age. *Developmental Psychology*, 55 (11), 2417-2427.
- Stern, J. A., **Botdorf, M.**, Cassidy, J., & Riggins, T. (2019). Empathic responding and hippocampal volume in young children [Special issue]. *Developmental Psychology*, 55(9) 1908-1920.
- Sherman, L.E., Rosenbaum, G.M., Smith, A.R., **Botdorf, M.**, Fettich, K., Patrianakos, J.L., Strang, McCloskey, M, Steinberg, L., Chein, J.M. (2019). The Interactive Effects of Peers and Alcohol on Functional Brain Connectivity in Young Adults, *NeuroImage*, 197, 264-272.
- Botdorf, M.** & Riggins, T. (2018). When less is more: Thinner fronto-parietal cortices are associated with better forward digit span performance during early childhood. *Neuropsychologia*, 121, 11-18.
- Riggins, T., Geng, F., **Botdorf, M.**, Canada, K., Cox, L.M., Hancock, G. (2018). Protracted hippocampal development is associated with age-related improvements in memory during early childhood. *Neuroimage*.
- Smith, A.R., Rosenbaum, G.M., **Botdorf, M.**, Steinberg, L., & Chein, J. (2018) Peers influence adolescent reward processing, but not response inhibition. *Cognitive, Behavioral, and Affective Neuroscience*.
- Rosenbaum, G.M, **Botdorf, M.**, Patrianakos, J., Steinberg, L., & Chein, J. (2017). Working memory training in adolescents decreases laboratory risk taking in the presence of peers. *Journal of Cognitive Enhancement*.
- Botdorf, M.**, Rosenbaum, G.M., Patrianakos, J., Steinberg, L., & Chein, J. (2016). Adolescent risk-taking is predicted by individual differences in cognitive control over emotional, but not non-emotional, response conflict. *Cognition and Emotion*.

Manuscripts submitted for publication

- Botdorf, M.**, Geng, F., & Riggins, T. (in revision) Memory development in early childhood: Insights from an interactive specialization framework. Manuscript submitted for publication.
- Geng, F., **Botdorf, M.**, & Riggins, T. (in revision) How behavior shapes the brain and the brain shapes behavior: Insights from memory development. Manuscript submitted for publication.

Hubachek, S., **Botdorf, M.**, Riggins, T., Leung, H., Klein, D., Dougherty, L.R. (in revision). Hippocampal Subregion Volume in High-Risk Offspring Predicts Increases in Depressive Symptoms Across the Transition to Adolescence. Manuscript submitted for publication.

Conference Presentations

Botdorf, M., Dougherty, L.R., Riggins, T. *Do 'typical' variations in stressful life events and stress physiology impact hippocampal functional connectivity in young children?* Oral presentation to be presented at the annual meeting of the International Society for Developmental Psychobiology.

Botdorf, M., Dougherty, L.R., & Riggins, T. (September 2020). *Examining associations between stressful life events and hippocampal subfield volumes using the ABCD cohort.* Poster to be presented at the Conference of the Flux Society.

Chad-Friedman, E., **Botdorf, M.**, Riggins, T., Dougherty, L.R. (May 2020). Parental hostility predicts reduced cortical thickness and surface area in boys but not girls. Poster presented at the 32nd Association for Psychological Science Annual Convention, Chicago, IL.

Duncan, R., Preilipper, S., **Botdorf, M.**, & Riggins, T. (April 2020). *Associations between autobiographical memory and brain development in children.* Poster presented at the University of Maryland Psychology Undergraduate Research Fair, College Park, MD.

Hubachek, S., **Botdorf, M.**, Chad-Friedman, E., Klein, D., Dougherty, L. (November, 2019). *Hippocampal subregion volume in preadolescence: Associations with maternal depression history and later youth depressive symptoms in early adolescence.* Poster session presented at the meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.

Botdorf, M., Chad-Friedman E., Dougherty, L.R., & Riggins, T. (October, 2019). *Typical variations in stress impact hippocampal volume in young children.* Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Chicago, IL.

Allard, T., Lokhandwala, S., **Botdorf, M.**, Ewell, A., Weinberg, B., Spencer, R., & Riggins, T. (October, 2019). *Relations between sleep, memory consolidation, and hippocampal development in early childhood.* Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Chicago, IL.

Canada, K., **Botdorf, M.**, Riggins, T. (October 2019). *Developmental trajectories of temporal memory and hippocampal subregions.* Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Chicago, IL.

Botdorf, M., Geng, F., & Riggins, T. (October, 2019). *Network analysis of memory and attention networks in the brain.* Oral presentation at the annual meeting of the Society for Neuroscience, Chicago, IL.

Riggins, T., Weinberg, B., Ewell, A., Allard, T., Lokhandwala, S., Botdorf, M., & Spencer, R. M. C. (2019, October). *Sleep-dependent memory consolidation and hippocampal development in preschoolers.* Paper presented at the meeting of the Cognitive Development Society, Louisville, KY.

Botdorf, M., Chad-Friedman E., Dougherty, L.R., & Riggins, T. (August, 2019). *Relations between typical variations in stress and hippocampal volume in young children.* Poster presented at the Conference of the Flux Society, New York City.

- Canada, K., **Botdorf, M.**, & Riggins, T. (August, 2019). *Longitudinal development of hippocampal subregions during early-childhood*. Poster presented at the Conference of the Flux Society, New York City.
- Botdorf, M.**, Geng, F., & Riggins, T. (June, 2019). *Graph theoretical analysis of age-related differences in the episodic memory network in children*. Poster presented at the Organization for Human Brain Mapping Conference, Rome, Italy.
- Botdorf, M.**, Geng, F., & Riggins, T. (April, 2019). *Graph theoretical analysis of memory and attention networks in the brain*. Oral presentation at the Maryland Neuroimaging Retreat, Baltimore, MD.
- Patel, S., Karayianis, K., **Botdorf, M.**, & Riggins, T. (April, 2019). *Associations between episodic memory and cortical thickness in young children*. Poster presented at the University of Maryland Undergraduate Research Day, College Park, MD.
- Botdorf, M.**, Geng, F., & Riggins, T. (March, 2019). *Age-related changes in the brain's memory network: Specialization of the hippocampus revealed by graph theoretical analysis*. Poster presented at the Society for Research in Child Development, Baltimore, MD.
- Botdorf, M.**, Blankenship, S. L., Dougherty, L. R., & Riggins, T. (March, 2019). *The impacts of parenting and maternal depression on children's episodic memory ability: A longitudinal investigation*. Poster presented at the Society for Research in Child Development, Baltimore, MD.
- Botdorf, M.**, Geng, F., & Riggins, T. (August, 2018). *A graph theoretical analysis of the episodic memory network during early childhood*. Poster presented at the Flux Congress, Berlin, Germany.
- Chad-Friedman, E., **Botdorf, M.**, Riggins, T., & Dougherty, L.R. (2018). *Early Life Stress Predicts Reduced Brain Volume and Poorer Cognitive Functioning in School Age Children*. Poster presented at the Association for Behavioral and Cognitive Therapies Conference.
- Botdorf, M.** & Riggins, T. (April, 2018). *When less is more: Thinner fronto-parietal cortices are associated with better working memory performance during early childhood*. Poster presented at the International Learning and Memory Conference, Huntington Beach, CA.
- Sherman, L., Rosenbaum, G., Smith, A.R., **Botdorf, M.**, Fettich, K., Patrianakos, J., Strang, N., Steinberg, L., & Chein, J. (March, 2017). *The interactive effects of peers and alcohol on decision making and functional brain connectivity in late adolescence*. Paper symposium presented at the Biennial Meeting of the Society for Research on Adolescence, Minneapolis, MN.
- Botdorf, M.** & Riggins, T. (September, 2017). *Relations between working memory and cortical thickness in anterior cingulate cortex and dorsolateral prefrontal cortex in early childhood*. Poster presented at the Flux Congress, Portland, OR.
- Botdorf, M.**, Blankenship, S., Dougherty, L., & Riggins, T. (September, 2017). *Positive, but not negative, parenting behavior in early childhood predicts both hippocampal volume and episodic memory ability in middle childhood*. Poster presented at the Flux Congress, Portland, OR.
- Sherman, L.E., Rosenbaum, G.M., Smith, A.R., **Botdorf, M.**, Fettich, K., Patrianakos, J., Strang, N., Steinberg, L., & Chein, J. (September, 2017). *Interactive effects of alcohol consumption and peer presence on connectivity between the nucleus accumbens and the response inhibition network*. Poster presented at the Flux Congress, Portland, OR.

- Stern, J., **Botdorf, M.**, Cassidy, J., Riggins, T. (2017). *Associations between attachment security and hippocampal and amygdala volumes in early childhood*. Poster presented at the International Attachment Conference, London, UK.
- Botdorf, M.**, Stern, J.A., Cassidy, J., Riggins, T. (April, 2017). *Associations between attachment security and hippocampal and amygdalar volumes in early childhood*. Poster presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.
- Rosenbaum G.M., **Botdorf, M.**, Smith, A.R., Fettich K., Patrianakos, J., Strang, N., Steinberg, L., & Chein, J. (September, 2016). *The behavioral and neural influences of alcohol and social context on risky choices*. Poster presented at the Flux Congress, St. Louis, MI.
- Rosenbaum, G., **Botdorf, M.**, Patrianakos, J., Wilmer, H., & Chein, J. (April, 2016). *Working memory training increases engagement of frontal regions in adolescents*. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Botdorf, M.**, Rosenbaum, G., & Chein, J. (November, 2015). *Multiple items in working memory flexibly guide attention in a visual search task*. Poster presented at the Annual Meeting of the Psychonomic Society, Chicago, IL.
- Botdorf, M.**, Rosenbaum, G., Patrianakos, J., Steinberg, L., & Chein, J. (March, 2015). *Gender differences in adolescent cognitive control in the face of emotional, but not non-emotional stimuli*. Poster presented at the Society for Research in Child Development Biennial Meeting, Philadelphia, PA.
- Rosenbaum, G., **Botdorf, M.**, Steinberg, L., & Chein, J. (March, 2015). *Working memory training in adolescents decreases laboratory risk-taking in the presence of peers*. Poster presented at the Society for Research in Child Development Biennial Meeting, Philadelphia, PA.
- Rosenbaum, G., Smith, A.R., **Botdorf, M.**, Steinberg, L., & Chein, J. (September, 2014). *Adolescent cognitive control unaffected by presence of peers*. Presented at the Flux Congress, Los Angeles, CA.
- Rosenbaum, G., **Botdorf, M.**, & Chein, J. (April, 2014). *Working memory training improves performance on an emotional go-nogo task in adolescents*. Poster presented at the Research, Policy, and Practice Conference, Philadelphia, PA.
- Botdorf, M.**, Rosenbaum, G., & Chein, J. (March, 2014). *Working memory training improves performance on an emotional go-nogo task in adolescents*. Poster presented at the Eastern Psychological Association Conference, Boston, MA.

Teaching Experience

- 2020 Co-Instructor, Developmental Psychology, University of Maryland, 150 students
- 2019 Guest Lecture, Memory Development, Developmental Psychology, University of Maryland
- 2019 Guest Lecture, Memory Development, Developmental Psychology, University of Maryland
- 2018 Guest Lecture, Intelligence and Academic Achievement, Developmental Psychology, University of Maryland

Journal Review

Ad hoc journal review: Cognitive Development; Journal of Experimental Psychology; Brain Structure & Function; Reviews in the Neurosciences

Relevant Training

Feb. 2020 Introduction to Meta-Analysis, University of Maryland, College Park
Feb. 2019 Modern Longitudinal Data Analysis, University of Maryland, College Park
June 2018 Polysomnography Workshop, University of Maryland
Jan. 2018 Structural Equation Modeling Workshop, University of Maryland, College Park
Fall 2017 Exploratory Latent and Composite Variable Methods class, University of Maryland
Oct. 2017 NIH AFNI Bootcamp, Bethesda, MD
Jan. 2017 R Programming for Behavioral Sciences Course
Fall 2016 Introduction to fMRI Data Analysis Course, University of Maryland, College Park
Oct. 2015 Principles of fMRI, Coursera.org
Apr. 2015 Preprocessing Workshop Using AFNI, Temple University, Philadelphia, PA
Aug. 2014 Neurometrika: fMRI Design and Analysis Using SPM and FSL, Philadelphia, PA
July 2013 AFNI Training, Temple University, Philadelphia, PA

Applicable Skills

Neuroimaging methods: MRI, fMRI, EEG, Familiarity with polysomnography
Neuroimaging software: AFNI; Freesurfer; SPM; Familiarity with FSL & ANTs
Statistics software: SPSS; R; MPlus; Familiarity with MATLAB
Experiment software: E-Prime

Volunteer and Leadership Experience

June 2018 – Dec. 2019 Mental Health and Mentoring Committee, University of Maryland
May 2018 – June 2018 Assistant to the Director, Villanova Washington Minimester
Sept. 2016 – May 2017 Member of Green Committee, University of Maryland
Sept. 2014 - Jan. 2015 Volunteer ESL Teacher at Nationalities Service Center
Aug. 2012 - May 2013 Mentor for Department of Psychology Peer to Peer Mentoring Program
Aug. 2011 - May 2013 Volunteer ESL Teacher for Open Doors English Class