

Aaron Shain Heller

CURRICULUM VITAE

Assistant Professor

Department of Psychology
University of Miami
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Academic Appointments

2015-present Assistant Professor
Department of Psychology
Department of Psychiatry
Department of Neuroscience
Sylvester Comprehensive Cancer Center (Member)
University of Miami

Education & Training

2013-2015 Postdoctoral Associate of Psychology in Psychiatry at Weill
Cornell Medical College

2012-2013 Predoctoral psychology intern at Weill-Cornell Medical
College / New York Presbyterian Hospital

2006-2013 PhD, Clinical Psychology
University of Wisconsin – Madison

2004-2006 Lab Manager & Research Assistant
Center for Neuroscience, Department of Psychology
University of California, Davis

2003-2004 Travelled in South America

1999-2003 Bachelor of Arts
University of California, Berkeley

Awarded Research Grants

2018-2020 Society of Behavior Change R01 Supplement (NCI)
Culturally Adapted Cognitive Behavioral Stress and Self-Management (C-CBSM)
Intervention for PC
Role: Co-Investigator
Amount awarded: \$806,399

2018-2023 National Institute on Aging
Novel Cognitive and Functional Measures for Alzheimer's Disease Prevention Trials
Role: Co-Investigator

Amount awarded: \$1,442,325

- 2018-2020 John Templeton Foundation
 Pathways To Character Grant
Characterizing Character Growth Following Breast Cancer Diagnosis Using Mobile Health
 Role: Principal Investigator
 Amount awarded: \$225,000
- 2017-2018 Society for a Science of Clinical Psychology
 Varda Shoham Clinical Science Training Initiative
Modernizing a training clinic to enhance patient monitoring
 Role: Principal Investigator
 Amount awarded: (\$1,500)

Honors and Awards

- 2017 Faces of the Future Presentation
Society for Research in Psychopathology
- 2016 Career Development Leadership Program
Anxiety and Depression Association of America
- 2015 Rising Star Award
Association for Psychological Science
- 2015 Hot Topics Presentation
American College of Neuropsychopharmacology
- 2014 Travel Fellowship
Wisconsin Symposium of Emotion
- 2013 Clinical Psychology Intern Research Award
Weill-Cornell Medical College
- 2011 Ramona O. Messerschmidt Clinical Psychology Award
University of Wisconsin – Madison
- 2010-2012 Hertz and Royalty Research Travel Award
University of Wisconsin – Madison
- 2008 Scholarship and Travel Award
Beck Institute for Cognitive Therapy and Research
- 2006-2008 NIMH Emotion Research Training Grant recipient

Peer Reviewed Publications

1. Stamatis, CA, Puccetti, NA, Charpentier, CJ, **Heller AS**, Timpano, KR (*Submitted*). Repetitive negative thinking following exposure to a natural stressor prospectively predicts altered stress reactivity and decision making in the laboratory.
2. Baez LM, **Heller AS** (*Submitted*). Impact of age at onset on the phenomenology of depression in treatment-seeking adults in the STAR*D trial.

3. **Heller AS**, Villano WJ, Ezie CEC (*Under Review*). Negative Mood Instability is Uniquely Associated with Cognitive Risk for Developing Mood and Anxiety Disorders.
4. Jaso BA, Hudiburgh SE, **Heller AS**, Timpano KR (*Under Review*). The Relationship between Affect Intolerance, Maladaptive Emotion Regulation, and Psychological Symptoms.
5. Villano WJ, Ezie CEC, Gillis R, Otto AR, **Heller AS** (*Under Review*). Real-world, personally meaningful prediction errors preferentially drive human emotion.
6. **Heller AS** (*Under Review*). Plasticity in Emotional Responses: Many Mechanisms and Many Circuits.
7. **Heller AS**, Shi TC, Ezie CEC, Reneau TR, Hartley CA (*Under Review*). The affective benefit of experiential diversity and its neural mechanisms.
8. **Heller AS**, Ezie CEC, Otto AR, Timpano KR (2019). Goal-Directed Decision Making and Negative Affect: The Moderating Role of Stress. *Behavior Research & Therapy*. 111:19-26. doi: 10.1016/j.brat.2018.09.007.
9. Khalsa SS, Adolphs R, Cameron OG, Critchley HG et al., (2018) Interoception and mental health: a roadmap. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* 3(6):501-513 <https://doi.org/10.1016/j.bpsc.2017.12.004>.
10. **Heller AS**, Fox AS, Davidson RJ (2018) Parsing Affective Dynamics to Identify Risk for Mood and Anxiety Disorders. *Emotion*. Jun 4. doi: 10.1037/emo0000440.
11. Nomi JS, Schettini E, Voorhies W, Bolt TS, **Heller AS**, Uddin LQ (2018) Resting-state Brain Signal Variability in Prefrontal Cortex is Associated with ADHD Symptom Severity in Children. *Frontiers in Human Neuroscience*. 12:90. doi: 10.3389/fnhum.2018.00090.
12. Casey BJ, **Heller AS**, Gee DG, Cohen AO (2017). Development of the Emotional Brain. *Neuroscience Letters*. Dec 1. pii: S0304-3940(17)30964-3. doi: 10.1016/j.neulet.2017.11.055
13. Jutagir DR, Blomberg BB, Carver CS, Lechner SC, Timpano KR, Bouchard LC, Gudenkauf LM, Jacobs JM, Diaz A, Lutgendorf SK, Cole SW, **Heller AS**, Antoni MH (2017) Social Well-Being is Associated with Less Pro-Inflammatory and Pro-Metastatic Leukocyte Gene Expression in Women after Surgery for Breast Cancer. *Breast Cancer Research and Treatment*. DOI: 10.1007/s10549-017-4316-3
14. Nomi JS, Bolt TS, Chiemeka Ezie CE, Uddin LQ, **Heller AS** (2017). Moment-to-moment BOLD Signal Variability Reflects Regional Changes in Neural Flexibility Across the Lifespan. *Journal of Neuroscience* 37(22):5539-5548. doi: 10.1523/JNEUROSCI.3408-16.2017
15. Ryff CD, **Heller AS**, Schaefer SM, van Reekum CM, Davidson RJ (2016). Purposeful Engagement, Healthy Aging, and the Brain. *Current Behavioral Neuroscience Reports*. 1-10. doi: 10.1007/s40473-016-0096-z.
16. Grupe DW, **Heller AS** (2016). Brain imaging alterations in PTSD. *Psychiatric Annals*. 46(9): 519-526.

17. **Heller AS** (2016). Rethinking strategies for when to acquire neural markers associated with treatment response. *Molecular Psychiatry* 21(12):1655-1656. doi: 10.1038/mp.2016.176.
18. **Heller AS**, Cohen AO, Dreyfuss M, Casey BJ (2016). Changes in cortico-subcortical and subcortico-subcortical connectivity impact impulsivity to emotional cues across development. *Social Cognitive and Affective Neuroscience* 11(12):1910-1918.
19. **Heller AS** (2016). Cortical-Subcortical Interactions in Depression. *Frontiers in Systems Neuroscience*. 10:1-20. doi: 10.3389/fnsys.2016.00020
20. Cohen AO, Breiner K, Steinberg L, Bonnie RJ, Scott ES, Taylor-Thompson KA, Rudolph MD, Chein J, Richeson JA, **Heller AS**, Silverman MR, Dellarco DV, Fair DA, Galván A, Casey BJ (2016). When is an adolescent an adult? Assessing cognitive control in emotional and non-emotional contexts. *Psychological Science*. 27(4):549-62. doi: 10.1177/0956797615627625.
21. Cohen AO, Dellarco DV, Breiner K, Helion C, **Heller AS**, Rahdar A, Pedersen, G, Chein J, Dyke JP, Galvan A, Casey BJ (2016). The Impact of Emotional States on Cognitive Control Circuitry and Function. *Journal of Cognitive Neuroscience*. 28(3):446-59. doi: 10.1162/jocn_a_00906.
22. **Heller AS** & Casey BJ (2016). The Neurodynamics of emotion: Delineating typical and atypical emotional processes during adolescence. *Developmental Science*. 19(1):3-18. doi: 10.1111/desc.12373
23. **Heller AS** (2015). Neural predictors of depression symptom course. *Current Opinion in Psychology*. 4:104-109.
24. Richey JA, Damiano CR, Sabatino A, Rittenberg A, Petty C, Bizzell J, Voyvodic J, **Heller AS**, Coffman MC, Smoski M, Davidson RJ & Dichter GS (2015). Neural mechanisms of emotion Regulation in Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*.
25. **Heller AS**, Fox AS, Wing EK, McQuisition KM, Vack NJ, Davidson RJ (2015). The Neurodynamics of Affect in the Laboratory Predicts Persistence of Real-World Emotional Responses. *Journal of Neuroscience* 35(29):10503-10509.
26. **Heller AS**, Lapate RC, Mayer KE, & Davidson RJ (2014). The face of negative affect: Trial-by trial corrugator responses to negative pictures are positively associated with amygdala and negatively associated with ventromedial prefrontal cortex activity. *Journal of Cognitive Neuroscience* 26(9): 2102-2110.
27. **Heller AS**, Johnstone T, Peterson M, Kolden G, Kalin N, & Davidson RJ (2013). Increases in prefrontal cortex activity when regulating negative emotion predicts symptom severity trajectory in depression. *JAMA Psychiatry* 70(11):1181-1189.
28. **Heller AS***, van Reekum CM*, Schaefer SM, Lapate RC, Radler BT, Ryff, CD, & Davidson, RJ (2013). Sustained striatal activity predicts eudaimonic well-being and cortisol output. *Psychological Science* 24(11):2191-2200.

29. **Heller AS**, Johnstone T, Light S, Peterson M, Kolden G, Kalin N, & Davidson RJ (2013). Changes in sustained fronto-striatal circuitry resulting from antidepressant treatment correlates with changes in positive affect in major depression. *American Journal of Psychiatry* 170(2):197-206.
30. Lee H, **Heller AS**, van Reekum CM, Nelson B, & Davidson RJ (2012). Amygdala prefrontal coupling underlies individual differences in emotion regulation. *NeuroImage* 62(3):1575-1581.
31. Light SN, **Heller AS**, Johnstone T, Kolden GG, Peterson MJ, Kalin N, & Davidson RJ (2011). Reduced Ventrolateral Prefrontal Cortex Activity While Inhibiting Positive Affect Predicts Anhedonia Treatment Response in Major Depressive Disorder. *Biological Psychiatry* 70(10):962-968.
32. **Heller AS**, Greischar LL, Honor A, Davidson RJ (2011). Simultaneous acquisition of corrugator electromyography and functional magnetic resonance imaging: A new method for objectively measuring affect and neural activity concurrently. *NeuroImage* 58(3):930-934.
33. **Heller AS**, Johnstone T, Shackman AJ, Light S, Peterson M, Kolden G, Kalin N, & Davidson RJ (2009). Reduced capacity to sustain positive emotion in major depression reflects diminished maintenance of fronto-striatal brain activation. *Proceedings of the National Academy of Sciences* 106(52):22445–22450.
34. Deouell LY, **Heller AS**, Malach R, D'Esposito M, Knight RT (2007) Cerebral responses to change in spatial location of unattended sounds. *Neuron* 55(6):985-996.
35. Ranganath C, **Heller AS**, Wilding EL (2007) Dissociable correlates of two classes of retrieval processing in prefrontal cortex. *Neuroimage* 35(4):1663-1673.
36. Cohen MX, **Heller AS**, Ranganath C (2005) Functional connectivity with anterior cingulate and orbitofrontal cortices during decision-making. *Brain Res Cogn Brain Res* 23(1):61-70.
37. Ranganath C, **Heller A**, Cohen MX, Brozinsky CJ, Rissman J (2005) Functional connectivity with the hippocampus during successful memory formation. *Hippocampus* 15(8):997-1005.

* indicates authors contributed equally to the work.

Book Chapters

1. **Heller AS** (*In Press*). Functional Brain Imaging and PTSD. In: Marmar, C., Nemeroff C.B. (Eds.), *Post-Traumatic Stress Disorder*. New York: Oxford University Press.
2. **Heller AS** (2018). When, and in what ways are emotions adaptive and maladaptive? In: Fox, A.S., Lapate, R.C., Shackman, A.J. & Davidson, R.J. (Eds.), *The Nature of Emotion: Fundamental Questions* (2nd edition). New York: Oxford University Press.

3. Schaefer SM, van Reekum CM, Lapate RC, **Heller AS**, Grupe DW, Davidson RJ (2018). The temporal dynamics of emotional responding: Implications for well-being and health from the MIDUS Neuroscience Project. In: Ryff, C.D., Krueger, R.F. (Eds.), *Oxford Handbook of Integrative Health Science*. New York: Oxford University Press.

Memberships in Professional Societies

Association for Psychological Science
 Cognitive Neuroscience Society
 Social & Affective Neuroscience
 Society for Research in Psychopathology
 Society for Neuroscience

Service to the Field

2018-2019	Co-Organizer; <i>Annual Social & Affective Neuroscience Conference</i>
2017-2018	Co-Organizer; <i>Clinical Neuroscience Preconference to Annual Social & Affective Neuroscience Conference</i>
2017	Program Committee; <i>Society for Research in Psychopathology</i>
2015	Program Committee; <i>Social & Affective Neuroscience</i>
2014	Program Committee; <i>Social & Affective Neuroscience</i>

Institutional Service

2017-2018	Clinical Faculty Search Committee
2015-Present	Co-Chair, Technical Committee: Neuroimaging Suite
2017	Antonio Orlando Award Review Committee
2016-2017	Psychological Services Center Subcommittee
2016-2017	Clinical Faculty Search Committee
2015-2016	Clinical Faculty Search Committee
2015-2016	Member, Communications and Development Committee: Neuroimaging Suite
2015-2016	Co-Chair, Education and Training Committee: Neuroimaging Suite
2011-2012	UW-Madison Recreational Sports Governance Board

Reviewing

2017-Present	Consulting Editor, <i>Emotion</i>
2018-Present	Consulting Editor, <i>Social Cognitive and Affective Neuroscience</i>

Instruction

Course Head

Spring 2019	Psy604 <i>Cognition and Emotion</i>
Spring 2018	Psy604 <i>Cognition and Emotion</i>
Spring 2018	Psy670 <i>Practicum in Clinical Psychology</i>

Fall 2017	Psy260 <i>Introduction to Personality Psychology</i>
Spring 2017	Psy604 <i>Cognition and Emotion</i>
Spring 2017	Psy670 <i>Practicum in Clinical Psychology</i>
Fall 2016	Psy260 <i>Introduction to Personality Psychology</i>
Spring 2016	Psy604 <i>Cognition and Emotion</i>
Spring 2016	Psy670 <i>Practicum in Clinical Psychology</i>
Fall 2015	Psy670 <i>Practicum in Clinical Psychology</i>

Co-Instruction

Spring 2010	Psy710 <i>Multiple Regression & Linear Models</i>
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Academic & Conference Talks

2019	Presentation at the MidLife in the United States (MIDUS) meeting. <i>Persistence of Amygdala Activity Following Negative Stimuli Predicts Day-to-Day Affective Experience</i> Madison, WI
2019	Symposium Organizer & Co-Chair, International Conference on Psychological Science: <i>The Importance of Affective Dynamics in Emotional, Social, and Behavioral Regulation</i> Paris, FR
2019	Symposium Presentation, International Conference on Psychological Science Meeting <i>Instability of negative emotion specifically predicts risk for psychopathology</i> Paris, FR
2019	Clinical Psychology Seminar McGill University
2018	Clinical Psychology Seminar Northwestern University
2018	Symposium Organizer & Co-Chair, Association for Behavioral and Cognitive Therapies Meeting: <i>Models and Methods for Capturing Affective Processes in Psychopathology</i> Washington DC
2018	Symposium Presentation, Association for Behavioral and Cognitive Therapies Meeting <i>Utilizing Bi-Factor Models to Identify the Emotional Dynamics Promoting Common and Unique Risk For Mood and Anxiety Disorders</i> Washington DC
2018	Association for Psychological Science Rising Star Clinical Science Forum

Affective and Neural Dynamics, and Psychopathology Across the Lifespan
San Francisco, CA

- 2018 Pathways to Character Workshop
Characterizing Character Growth Following Breast Cancer Diagnosis Using Mobile Health & Lab Assessments
Arizona State University & John Templeton Foundation
- 2017 Conference Talk
Society for Research in Psychopathology
- 2017 Clinical Psychology Seminar
Yale University
- 2016 Conference Talk
Society for Research in Psychopathology
- 2015 Hot Topics Presentation
American College of Neuropsychopharmacology
Hollywood, FL
- 2015 Nanosymposium Presentation
Society for Neuroscience Meeting
Chicago, IL
- 2014 Conference Talk
Anxiety & Depression Association of America
- 2014 Clinical Psychology Seminar
Harvard University
- 2014 Department of Psychology Colloquium
State University of New York, Stony Brook
- 2014 Department of Psychology Colloquium
University of North Carolina, Chapel Hill
- 2014 Department of Psychology Colloquium
University of Miami
- 2013 Department of Psychiatry Sackler Seminar Series
Weill Cornell Medical College
- 2013 Department of Psychiatry Grand Rounds
Weill Cornell Medical College
- 2013 Department of Psychology Colloquium
Vanderbilt University
- 2013 Department of Psychology Colloquium
University of Texas-Austin
- 2010 Nanosymposium Presentation
Society for Neuroscience Annual Meeting

Refereed Paper Presentations

2019

- Arditte Hall KA, Brown CA, Puccetti N, Heller AS, Timpano KR (2019, October). Poorer Set Shifting Ability Prospectively Predicts Trauma-Related Rumination among Individuals Exposed to Hurricane Irma. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Jaso BA, Villano W, Ezie CEC, Heller AS (2019, October). Utilizing empirically derived emotion groups to better understand symptoms of psychopathology. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Stamatis CA, Puccetti NA, Heller AS, Timpano KR (2019, October). Decision-making in hoarding and OCD symptoms: A behavioral economic perspective. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Baez L & Heller AS (2019, September). Adolescent Age At Onset of Depression: A Unique Psychological Symptom Network. Poster presented at the Annual Meeting of the Society for Research in Psychopathology, Buffalo, NY.
- Puccetti NA, Schaefer SM, van Reekum CM, Ryff CD, Davidson RJ, Heller AS (2019, September). Persistence of amygdala activity following negative stimuli predicts day-to-day affective experience. Annual Meeting of the Society for Research in Psychopathology, Buffalo, NY.
- Nomi JS, Bolt T, Heller AS, Uddin LQ (2019, July). Test-Retest Reliability of Resting-State BOLD Signal Variability Measures. Poster presented at the Organization for Human Brain Mapping, Rome, IT.
- Puccetti NA, Brown CA, Timpano KR, Heller AS (2019, May). Patterns of day-to-day affect differentially mediate the effect of repetitive negative thinking on depression and anxiety symptoms. Poster presented at the Social Affective Neuroscience Society meeting, Miami Beach, FL.
- Baez L, Puccetti N, Villano W, Ezie CEC, Brown CA, Timpano KR, Heller AS (2019, May). How is repetitive negative thinking associated with daily affective dynamics? Poster presented at the Social Affective Neuroscience Society meeting, Miami Beach, FL.
- Puccetti NA, Schaefer SM, van Reekum CM, Ryff CD, Davidson RJ, Heller AS (2019, March). Persistent amygdala activity following negative stimuli predicts day-to-day affective experience. Poster presented at the 2019 Wisconsin Symposium on Emotion.
- Baez L & Heller AS (2019, March). Adolescent Age At Onset of Depression: A Unique Psychological Symptom Network. Poster presented at the 2019 Wisconsin Symposium on Emotion.

2018

- Westwright JS, Szeto A, Heller AS, McCabe PM, Mendez AJ (2018, November). Regulation of pancreatic islet oxytocin by autonomic nervous system agonists. Poster presented at the Annual Society for Neuroscience Meeting, San Diego, CA.

- Baez L, Kamisetty S, Villano WJ, Newport J, Heller AS (2018, November). Using Mobile Health to Assay Change in Real World Affect in Women with Peripartum Depression. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Brown CA, Puccetti NA, Heller AS, Timpano, KR (2018, November). The impact of repetitive negative thinking on risk and loss aversion in response to stress. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Hudiburgh SE, Jaso BA, Heller AS, Timpano KR (2018, November). If You're Stressed, Don't Suppress: Understanding the Relationship between Affect Intolerance, Maladaptive Emotion Regulation, and Psychological Symptoms. Poster presented at the Annual Association for Behavioral and Cognitive Therapies Conference Meeting, Washington DC.
- Nomi JS, Bolt T, Heller AS, Uddin LQ (2018, September). Test-Retest Reliability of Resting-State BOLD Signal Variability Measures, Poster presented at the Biennial Conference on Brain Connectivity, Montreal, CA
- Puccetti NA, Brown CA, Timpano KR, Heller AS (2018, September). Repetitive negative thinking as a transdiagnostic mediator between symptom severity and decision-making under stress. Poster presented at the Annual Meeting of the Society for Research in Psychopathology, Indianapolis, IN.
- Villano W, Ezie CE Chiemeka, Jaso B, Heller AS (2018, September). Risk for depression is associated with altered affective reactivity to prediction errors. Poster presented at the Annual Meeting of the Society for Research in Psychopathology, Indianapolis, IN.
- Saragosa-Harris NM, Reneau TR, Villano WJ, Cohen AO, Heller AS, Hartley CA (2018, August). Affective sensitivity to real-world exploration is heightened in adolescence. Poster presented at the Annual Flux Congress, Berlin, GER
- Saragosa-Harris NM, Cohen AO, Reneau TR, Villano WJ, Heller AS, Hartley CA (2018, May). Real-world exploration is associated with greater positive affect in adolescents and adults. Poster presented at the Annual Social Affective Neuroscience Society Meeting, Brooklyn, NY.
- Villano W, Ezie CE Chiemeka, Gillis RC, Otto RA, Heller AS (2018, May). Emotional variability is associated with risk for depression. Poster presented at the Annual Social Affective Neuroscience Society Meeting, Brooklyn, NY.

2017

- Villano W, Ezie CE Chiemeka, Jaso B, Heller AS (2017, September). Emotional Variability Is Associated With Risk For Depression. Poster presented at the Annual Meeting of the Society for Research in Psychopathology, Denver, CO
- Jaso BA, Ezie CE Chiemeka, Timpano KR, Heller AS (2017, November) Using EMA to

Delineate the Specific Affective Dynamics Associated With Maladaptive Cognitive Styles Poster presented at the Annual Meeting of the Association for Behavioral and Cognitive Therapies, San Diego, CA.

Yang J, Heller AS. (2017, Summer) Physiology and feeling: Emotional coherence and activation in the ventromedial prefrontal cortex. Presented at the University of Miami College of Arts and Sciences Summer Research Program for Underrepresented Minorities & Women

2016

Nomi JS, Bolt TS, Ezie C, Uddina LQ, Heller AS (2016, September). Moment-to-Moment BOLD Variability Reflects Functional Specialization Across the Lifespan. Poster presented at the Annual Flux Meeting, St. Louis, MO.
