

Jennifer L. Crawford

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Current Position

Postdoctoral Fellow, Neurochemistry & Cognition Lab 2023-present
Mentor: Anne Berry

Education

Ph.D., Psychological & Brain Sciences, Washington University 2022
M.A., Psychological & Brain Sciences, Washington University 2019
B.S., Neuroscience, Brandeis University (*Highest Honors*) 2015

Previous Research Positions

Graduate Student Researcher, Washington University (Mentor: Todd Braver) 2017-2022
Research Assistant, Yale University (Mentor: Gregory Samanez-Larkin) 2015-2017
Undergraduate Research Assistant, Brandeis University (Mentor: Angela Gutches) 2012-2015

Awards & Honors

Individual Postdoctoral Training Fellowship (F32-AG085890) 2024-2026
Postdoctoral Neuroscience Training Fellowship (T32-NS007292) 2023-2024
Dean's Award for Graduate Research Excellence (WUSTL) 2022
Kavli Summer Institute in Cognitive Neuroscience, Fellow 2022
Dissertation Research Award (WUSTL Psychological & Brain Sciences) 2021
Outstanding Teaching Assistant Award (WUSTL Psychological & Brain Sciences) 2021
Cognitive, Computational, & Systems Neuroscience Training Fellowship (T32-NS115672) 2021-2022
Summer School in Social Neuroscience and Neuroeconomics, Fellow 2019
Sallie P. Asche Travel Award, Dallas Aging & Cognition Conference 2019, 2023
Aging & Development Training Fellowship (T32-AG000030) 2018-2021
Provost's Undergraduate Research Fund Summer Research Fellowship 2014
Joel Friedland '76 Endowed Scholarship 2014

Research Support

NIA/NIH – R21-AG086729, Berry (PI)
Aging, activity diversity, and brain health.
Dates: 5/1/2024–4/30/2026; Direct Costs: \$275,000
Role: Postdoc (co-wrote grant)

NIA/NIH – R24-AG054355, Scientific Research Network on Decision Neuroscience and Aging
Cognitive effort and aging: Pilot project.
Dates: 6/1/2019–3/31/2022; Direct Costs: \$30,000
Role: PI (subaward)

Publications

Crawford, J.L. & Berry, A.S. (In Press). Examining resilience to Alzheimer's disease through the lens of monoaminergic neuromodulator systems. *Trends in Neurosciences*.

- Crawford, J.L.**, Brough, R.E., Eisenstein, S.A., Peelle, J.E., & Braver, T.S. (2024). Generalized encoding of the relative subjective value of cognitive effort in dorsal ACC. *Journal of Neuroscience*, 44(38), 1-14. ***Selected as featured article by Editor.***
- Aschenbrenner, A.J. **Crawford, J.L.**, Peelle, J.E., Fagan, A.M., Benzinger, T.L.S., Morris, J.C., Hassenstab, J., & Braver, T.S. (2023). Increased cognitive effort costs in healthy aging and preclinical Alzheimer's disease. *Psychology and Aging*, 38(5), 428-442. ***Selected as Editor's Choice featured article.***
- Crawford, J.L.**, English, T., & Braver, T.S. (2023). Cognitive effort-based decision-making across experimental and daily life indices in younger and older adults. *Journal of Gerontology: Psychological Sciences*, 78(1), 40-50.
- Green, M.A., **Crawford, J.L.**, Kuhnen, C.M., Samanez-Larkin, G.R., & Seaman, K.L. (2023). Multivariate associations between dopamine receptor availability and risky investment decision making across adulthood. *Cerebral Cortex Communications*, 4(2), tgad008.
- Crawford, J. L.**, Eisenstein, S. A., Peelle, J. E. & Braver, T. S. (2022). Domain-general cognitive motivation: Evidence from economic decision-making – Final Registered Report. *Cognitive Research: Principles and Implications*, 7(1), 23.
- Crawford, J.L.**, English, T., & Braver, T.S. (2022). Incorporating Ecological Momentary Assessment into multimethod investigations of cognitive aging: Promise and practical considerations. *Psychology and Aging*, 37(1), 84–96.
- Yee, D. M., **Crawford, J. L.** & Braver, T. S. (2022). An fMRI protocol for administering liquid incentives to human participants. *Star Protocols*, 3(4), 101707.
- Yee, D.M., **Crawford, J.L.**, Lamichhane, B., & Braver, T.S. (2021). Dorsal anterior cingulate cortex encodes the subjective motivational value of cognitive task performance. *Journal of Neuroscience*, 41(16), 3707-3720.
- Crawford, J.L.**, Yee, D.M., Hallenbeck, H.W., Naumann, A., Shapiro, K., Thompson, R.J., & Braver, T.S. (2020). Dissociable effects of monetary, liquid, and social incentives on motivation and cognitive control. *Frontiers in Cognition*, 11, 2212.
- Castrellon, J. J., Seaman, K. L., **Crawford, J. L.**, Young, J. S., Smith, C. T., Dang, L. C., et al. (2019). Individual differences in dopamine are associated with reward discounting in clinical groups but not in healthy adults. *Journal of Neuroscience*, 39(2), 321.
- Juarez, E.J., Castrellon, J.J., Green, M.A., **Crawford, J.L.**, Seaman, K.L., Smith, C.T., Dang, L.C., Zald, D.H., & Samanez-Larkin, G.R. (2019). Reproducibility of the correlative triad among aging, dopamine receptor availability, and cognition. *Psychology and Aging*, 34(7), 921–932.
- Smith, C.T., **Crawford, J.L.**, Dang, L.C., Seaman, K.L., San Juan, M.D., Vijay, A., Katz, D.T., Matuskey, D., Cowan, R.L., Morris, E.D., Zald, D.H., & Samanez-Larkin, G.R. (2019). Partial volume correction increases estimated dopamine D2-like receptor binding potential and reduces adult age differences. *Journal of Cerebral Blood Flow & Metabolism*, 39(5), 822–833.

Manuscripts Under Review/In Revision

Chen, H-Y., Gold, B.S., Ciampa, C.J., **Crawford, J.L.**, Adornato, A.A., Cowan, J.L., O'Malley, K.E., Snyder, H.R., & Berry, A.S. (under review). Understanding the cognitive factors which contribute to individual differences in financial capacity in aging. *Psychology and Aging*.

Crawford, J.L., Ciampa, C.J., Cowan, J.L., Adornato, A.A., O'Malley, K.E., & Berry, A.S. (invited revision). Relationships between objective and subjective assessments of cognition and their association with complex mental activity participation across the adult life span. *Journal of Gerontology: Psychological Sciences*.

Manuscripts In Prep

Crawford, J.L., Adornato, A., Matulonis, J., Hooker, J.M., Chex, X., & Berry, A.S. Influence of tau pathology and anxiety and depressive symptoms on metamemory in cognitively normal older adults.

Crawford, J.L., Brough, R.E., Eisenstein, S.A., Peelle, J.E., & Braver, T.S. Dopamine D2-receptors are associated with experimental and daily life measures of cognitive effort.

Crawford, J.L., English, T., & Braver, T.S. Within- and between-person associations of daily life affect and mentally demanding activity participation in younger and older adults.

Talks

Crawford, J.L. (2023). Neural mechanisms of cognitive effort-based decision-making: a multimethod approach. Cognitive Neuroscience Society Conference Data Blitz, San Francisco, CA.

Crawford, J.L. (2022). Aging and the costs of cognitive effort. Aging Well Lab, UT Dallas.

Crawford, J.L. & Braver, T.S. (2021). Domain general cognitive motivation and economic decision-making: A registered report. A Bunch of Control Datablitzes (ABCD) (virtual).

Crawford, J.L. & Braver, T.S. (2020). Aging and the costs of cognitive effort. Scientific Research Network on Decision Neuroscience & Aging Conference, Honolulu, HI.

Local

Crawford, J.L. (2024). Influence of Alzheimer's disease pathology and anxiety and depressive symptoms on memory and metamemory in older adults. Postdoctoral Neuroscience Research Symposium, Brandeis.

Crawford, J.L. (2023). Aging and the costs of cognitive effort. Postdoctoral Neuroscience Research Symposium, Brandeis.

Crawford, J.L. & Braver, T.S. (2022). Does the cost of cognitive effort differ among younger and older adults? A multimethod approach. Cognitive, Computational, and Systems Neuroscience Annual Retreat.

Crawford, J.L., English, T. & Braver, T.S. (2022). Examining cognitive effort costs across experimental and daily life indices in younger and older adults. Washington University Aging & Development Brown Bag.

Poster Presentations

Crawford, J.L., Adornato, A., Matulonis, J., Hooker, J.M., & Berry, A.S. (2024). Influence of tau pathology and anxiety and depressive symptoms on metamemory in cognitively normal older adults. Alzheimer's Association International Conference, Philadelphia, PA.

Wei, M., Etzel, J.A., **Crawford, J.L.**, English, T., Thompson, R.J., & Braver, T.S. (2024). Dissociable effects of age and major depressive disorder on neural mechanisms of cognitive effort-based decision-making. Society for the Science of Motivation Annual Meeting, San Francisco, CA.

Wei, M., Etzel, J.A., **Crawford, J.L.**, Thompson, R.J., English, T., & Braver, T.S. (2024). Neural correlates of reward evaluation in relation to Major Depressive Disorder. Anxiety and Depression Association of America Annual Conference, Boston, MA.

Crawford, J.L., Brough, R.E., Eisenstein, S.A., English, T., Peelle, J.E., & Braver, T.S. (2023). Does the cost of cognitive effort differ among younger and older adults? A multimethod approach. Dallas Aging & Cognition Conference, Dallas, TX.

Crawford, J.L., Brough, R.E., Eisenstein, S.A., Peelle, J.E., & Braver, T.S. (2023). Neural mechanisms of cognitive effort-based decision-making: a multimethod approach. Cognitive Neuroscience Society Conference, San Francisco, CA.

Castrellon, J.J., **Crawford, J.L.**, Hsu, M., & Samanez-Larkin, G.R. (2022). Individual differences in extrastriatal D2-like receptors shape strategic social learning. Society for Neuroeconomics Annual Meeting, Arlington, VA.

Crawford, J.L., English, T. & Braver, T.S. (2022). Effects of gain and loss incentive framing on cognitive effort-based decision-making in younger and older adults: A multimethod approach. Cognitive Aging Conference, Atlanta, GA.

Crawford, J.L., English, T. & Braver, T.S. (2021). Combining experimental and daily life sampling approaches in aging research: opportunities and challenges. Society for Ambulatory Assessment Conference (virtual).

Crawford, J.L., Yee, D.M., Lamichhane, B., Di Rosa, E., & Braver, T.S. (2020). Neural Mechanisms of Motivated Cognitive Control in Older Adults. Organization for Human Brain Mapping Conference (virtual).

Moore, I.L., Fields, E.C., **Crawford, J.L.**, Paige, L.E., Cassidy, B.S., & Gutchess, A. (2020). Attentional Prioritization of Negative Appearance-Behavior Cues in Impression Formation. Cognitive Neuroscience Society Conference, Boston, MA (virtual).

Crawford, J.L., Yee, D.M., & Braver, T.S. (2019). Age-related changes in motivational integration involving socio-emotional incentives. Dallas Aging & Cognition Conference, Dallas, TX.

Johnson, C.P., Castrellon, J.J., **Crawford, J.L.**, & Samanez-Larkin, G.R. (2019). I like it like that: reward discounting and appetitive responses to amphetamine in a drug naïve sample of healthy adults. Interdisciplinary Symposium on Decision Neuroscience, Durham NC.

Juarez, E.J., Castrellon, J.J., **Crawford, J.L.**, Green, M.A., McAllister, G.A., Seaman, K.L., Smith, C.T., Dang, L.C., Zald, D.H., & Samanez-Larkin, G.R. (2018). Reliability of the correlative triad among aging, dopamine, and cognition. Cognitive Neuroscience Society Conference, Boston, MA & Cognitive Aging Conference, Atlanta, GA.

Crawford, J.L., Seaman, K.L., Vijay, A., Matuskey, D., Morris, E.D., & Samanez-Larkin, G.R. (2017). Effects of age on extrastriatal dopamine D2 receptor availability are overestimated without partial volume correction. Dallas Aging and Cognition Conference, Dallas, TX & Cognitive Neuroscience Society Conference, San Francisco, CA.

McAllister, G.A., Castellon, J.J., Seaman, K.L., **Crawford, J.L.**, Blow, T., Smith, C.T., Dang, L.C., Hsu, M., Zald, D.H., & Samanez-Larkin, G.R. (2017). Individual differences in dopamine receptor availability are not associated with preferences for time, probability, or effort across adulthood. Society for Neuroeconomics Annual Meeting, Toronto, Canada.

Zhang, Z., Saez, I., **Crawford, J.L.**, Seaman, K.L., Samanez-Larkin, G.R., Hsu, M., & Kayser, A. (2017). Dopamine, prefrontal cortex, and strategic learning. Society for Neuroscience Annual Meeting, Washington D.C.

Vijay, A., **Crawford, J.L.**, Seaman, K.L., Morris, E.D., & Samanez-Larkin, G.R. (2016). Decreased extrastriatal dopamine D2 receptor availability over human adulthood using [11C]-FLB457. International Symposium on Functional NeuroReceptor Mapping of the Living Brain, Boston, MA.

Crawford, J.L., Paige, L.E., Cassidy, B.S., & Gutchess, A.H. (2015). Facing the facts: Assessing the role of face-behavior incongruities in social cognition through the modulation of the N400. Social and Affective Neuroscience Society Conference, Boston, MA.

Teaching Experience

Teaching Assistant, Psych 3604: Cognitive Neuroscience (WUSTL) Fall 2020, Spring 2021
Introductory survey course on cognitive neuroscience for undergraduate students
Lectures prepared: Motivation & Decision-Making; Executive Function; Cognitive Neuroscience of Aging

Guest Lecturer, Psych 121B: Alzheimer's Disease Resilience and Risk Factors (Brandeis) Fall 2024
Advanced seminar course on emerging topics in Alzheimer's disease research
Lecture prepared: Understanding Alzheimer's Disease Through the Lens of Daily Life

Mentoring (* denotes mentee who received external research support)

Washington University

Casey Mason [Undergraduate] 2018-2019*
Jadyn Park [Undergraduate] 2018-2020*
Jada Smith [Undergraduate] 2018-2021*
Vivian Gao [Undergraduate] 2019-2022
Janelli Rodriguez [Undergraduate] 2019-2021*
Angela Gormley [Undergraduate] 2020-2022

Brandeis University

Elizabeth Marsh [PhD rotation student] 2023
Veronica Koralewski [Post-bac research assistant] 2024-present

Departmental & Community Service

Brandeis Aging Journal Club Organizer	2023-present
Psychological & Brain Sciences (PBS) Aging Search Committee	2021-2022
Project SHORT (mentor)	2020-present
Psychology Graduate Student Association (PGSA) Diversity Committee	2020-2022
PBS Diversity, Equity, and Inclusion Committee (student rep)	2020-2021
PBS fMRI Journal Club (co-organizer)	2018-2022
PGSA Wellness Committee	2018-2019

Reviewing

Affective Science

Cell Reports

Cognitive, Affective, and Behavioral Neuroscience

Cognitive Research: Principles and Implications

Current Biology

Journal of Gerontology: Psychological Sciences

Motivation & Emotion

Neurobiology of Aging

Psychology and Aging

Scientific Reports

Professional Memberships

Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART)

Cognitive Neuroscience Society

Gerontological Society of America

Organization for Human Brain Mapping

Society for Ambulatory Assessment

Additional Training

Intensive Longitudinal Methods Workshop 2022

Aging & Decision Neuroscience Harmonization Workshop, SRNDNA 2019

Cognitive, Computational, and Systems Neuroscience Training Pathway 2017-2019

Other Skills

Programming: R, Matlab, bash/tcsh

Software: Adobe Creative Suite, AFNI, E-prime, Inquisit Lab, PMOD, Psychtoolbox, SPM (PET)