

Dilara Berkay, Ph.D.

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Professional Profile

Dilara Berkay, Ph.D., is a cognitive scientist and neuroscientist with more than 13 years of experience in human learning, judgment, and decision-making. She is particularly experienced in studying how people form beliefs, learn, and make judgments under uncertainty and how cognitive, perceptual, and contextual factors influence behavior.

Dr. Berkay's research has examined the effects of both internal factors, such as mood and perceptual variability, as well as external influences, including time pressure and social context, on learning, judgment, and decision-making. Her research integrates behavioral experimentation, neuroscience, quantitative analysis, and cognitive theory to identify when and why human behavior deviates from normative models and to explain these deviations through underlying cognitive mechanisms.

Prior to joining Exponent, Dr. Berkay completed her Ph.D. in Psychology from the University of Pennsylvania followed by a postdoctoral fellowship, where she investigated the role of uncertainty in social judgment, learning, and belief updating. Before her PhD, she received an M.A. in Cognitive Psychology from Koç University, where she focused on understanding how cognitive limitations and environmental uncertainty relate to optimal decision-making.

Academic Credentials & Professional Honors

Ph.D., Psychology, University of Pennsylvania, 2023

M.A., Cognitive Psychology, Koç University, 2016

B.A., Psychology, Dogus University, 2012

Koç University GSSSH Excellence Award for master's thesis, 2015

The Scientific and Technological Research Council of Turkey Scholarship for graduate studies, 2013

Valedictorian from Doğuş University, 2012

Higher Council of Education, full merit scholarship for undergraduate studies, 2007-2012

Prior Experience

Postdoctoral Researcher, University of Pennsylvania (2023-2026)

Graduate Researcher and Teaching Assistant, University of Pennsylvania (2016-2023)

Graduate Research and Teaching Assistant, Koç University (2013-2016)

Teaching Assistant, Doğuş University (2012-2013)

Communications Officer and Research Associate at European Federation of Psychology Students Association Junior Researcher Programme (2012-2013)

Publications

Berkay D, Taylor SC, Jenkins AC. [Using cognitive load tasks to constrain hypotheses about the role of the default mode network in social cognition: uncertainty reduction as a unifying framework](#). Current Opinion in Behavioral Sciences 2026; 68:101637.

Defendini A, Ham H, Berkay D, Jenkins AC. [Contributions of the brain's mentalizing network to inferences about others' stable and transient beliefs and preferences](#). Journal of Cognitive Neuroscience 2026; 38(6):1232–1243.

Berkay D, Jenkins AC. [Uncertainty, not mental content, drives dorsomedial prefrontal engagement during inferences about others](#). Journal of Neuroscience 2025; 45(23).

Berkay D, Jenkins AC. [Measures of semantic distance from word embeddings predict neural responses during inferences about people and objects](#). Proceedings of the Annual Meeting of the Cognitive Science Society 2023; 45.

Berkay D, Jenkins AC. [A role for uncertainty in the neural distinction between social and nonsocial thought](#). Perspectives on Psychological Science, 18(2), 2023, 491-502.

Berkay D, Eser HY, Sack AT, Çakmak YÖ, Balci F. [The modulatory role of pre-SMA in speed-accuracy tradeoff: a bi-directional TMS study](#). Neuropsychologia 2018; 109:255–261.

Tosun T, Berkay D, Sack AT, Çakmak YÖ, Balci F. [Inhibition of pre-SMA by continuous theta burst stimulation leads to more cautious decision-making and more efficient sensory evidence integration](#). Journal of Cognitive Neuroscience 2017; 29(8):1433–1444.

Berkay D, Freestone D, Balci F. [Mice and rats fail to integrate exogenous timing noise into their time-based decisions](#). Animal Cognition 2016; 19(6):1215–1225.

Berkay D, Çavdaroglu B, Balci F. [Probabilistic numerical discrimination in mice](#). Animal Cognition 2016; 19(2):351–365.

Çoşkun F, Berkay D, Sayalı ZC, Balci F. [Sequential temporal discrimination in humans and mice](#). International Journal of Comparative Psychology 2015; 28(1).

Andrzejewska M, Berkay D, Dreesmann S, Haslbeck J, Mechelmans D, Furlan S. [\(In\)accurate intuition: fast reasoning in decision making](#). Journal of European Psychology Students 2013; 4(2):9–15.

Presentations

Berkay D, Jenkins AC. Resisting social impression updating: motivation to reduce uncertainty inflates reliance on weak explanations for others' trait-inconsistent behavior. Poster presentation at the annual meeting of the Social and Affective Neuroscience Society, 2026.

Berkay D, Plate RC, Jenkins AC. Resisting social impression updating: motivation to reduce uncertainty inflates reliance on weak explanations for others' trait-inconsistent behavior. Poster presentation at the annual meeting of the Society for Neuroeconomics, Boston, MA, 2025.

Berkay D, Jenkins AC. Measures of semantic distance from word embeddings predict neural responses during inferences about people and objects. Poster presentation at the annual meeting of the Cognitive Science Society, Sydney, Australia, 2023.

Berkay D, Jenkins AC. Uncertainty in the mentalizing network: dorsal medial prefrontal cortex activation tracks with the level of uncertainty across mental and nonmental inferences. Poster presentation at the annual meeting for the Society for Neuroscience, San Diego, CA, 2022.

Berkay D, Jenkins AC. Uncertainty in the mentalizing network: dorsal medial prefrontal cortex activation tracks with the level of uncertainty across mental and nonmental inferences. Poster presentation at the annual meeting of the Social & Affective Neuroscience Society, 2022.

Berkay D, Jenkins AC. Dorsal medial prefrontal cortex is associated with uncertainty reduction across social and nonsocial contexts. Poster presentation at the annual convention of the Society for Personality and Social Psychology, San Francisco, CA, 2022.

Berkay D, Ramakrishnan A, Platt M. Can foraging behavior shed insights on depression? Using LFPs, EEG, and eye tracking in conjunction with a foraging task to establish biomarkers for depression. Poster presentation at the annual meeting for the Society for Neuroscience, Washington DC, 2017.

Berkay D, Balci F. Optimal numerical discrimination in mice. Poster presentation at the annual meeting for Association for Psychological Science, New York, 2013.

Andrzejewska M, Berkay D, Dreesmann S, Haslbeck J, Mechelmans D, Furlan S. (In)accurate intuition: fast reasoning in decision making. Oral presentation at the annual Junior Researcher Programme Conference, Cambridge, UK, 2013.

Berkay D, Ateşsaçan ED, Bahçekapılı HG. The effect of pathogen prevalence and resource scarcity on women's mate preferences. Poster presentation at the National Congress of Psychology, Istanbul, Turkey, 2012.

Berkay D, Ateşsaçan ED, Mut E, Bahçekapılı HG. The effect of mood and big five personality traits on domain-specific risk-taking behavior. Poster presentation at the National Congress of Psychology, Istanbul, Turkey, 2012.