Patrick McKnight, PhD

Associate Professor, Department of Psychology

Advisory Board Member, Stats.org

Education

PhD, Psychology, University of Arizona

Key Interests

Data Analysis | Bayesian Methods | Research Design | Program Evaluation | Data Visualization | Missing Data | Survey Design | Health Services Research

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SELECT PUBLICATIONS

> P. E. McKnight, Missing data: a gentle introduction (Guilford Press, 2007), Methodology in the Social Sciences Series.

> J. S. Baer *et al.*, Brief intervention for heavy-drinking college students: 4-year follow-up and natural history. *American Journal of Public Health* 91(8), 1310-1316 (2001).

> N. Hamdan *et al.*, The flipped learning model: a white paper based on the literature review titled a review of flipped learning. (Flipped Learning Network/Pearson/George Mason University, 2013).

> P. E. McKnight *et al.*, Purpose in life as a system that creates and sustains health and well-being: an integrative, testable theory. *Review of General Psychology* 13(3), 242 (2009).

Research Focus

I oversee MRES (Measurement, Research methodology, Evaluation, and Statistics -- pronounced "mysteries") - a group of diverse students and faculty who work together, collaborate with others, travel internationally, and aim to improve science. We collaborate with Google, Intel, Koch Foundation, National Geographic, Merck, among others. My work largely focuses on applications of psychological science to content areas in medicine, psychology (usability, psychophysics, trust, purpose in life, and anxiety/depression) and methods (crowdsourcing, data validity, and scale development). I serve on the Advisory Board of Stats.org and contribute to many scientific initiatives in commercial, military, and public domains. With Todd Kashdan, I co-mentor graduate students in both MRES and the Kashdan Lab to provide well-rounded graduate training. My mentorship style tends to be "hands-off" but I meet with students weekly to collaboratively write and solve problems - often via Google Hangouts. Find out more about me by visiting my personal website and blogs "Climbing On Purpose" and "Life's Purposeful Adventure."

Current Projects

■ The measurement of trust: our efforts focus on developing a more psychometrically sound measurement model of trust to enable researchers to better understand trust's role in automation, decision-making, and human functioning.

■ Quantifying uncertainty: to date, few researchers have adequately quantified human uncertainty without binding the definition to a singular decision process. We aim to develop a clearer quantifiable and replicable model for uncertainty.

■ Prevention of dental caries: we contribute to a national effort to better understand oral hygiene and the role of many mechanisms in the prevention of dental caries.

■ Prophylactic antibiotic use in dental procedures: along with our colleagues, we seek to better understand how antibiotic use among dentists who work with infection-vulnerable patients.