



**Exponent**<sup>®</sup>  
Engineering & Scientific Consulting

## Daniel Palac, Ph.D.

Scientist | Human Factors

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### Professional Profile

Dr. Palac currently applies his expertise to the investigation of human factors associated with vehicle accidents, industrial incidents and workplace hazards, warnings and safety information, and other areas of human performance. Dr. Palac has experience in the design and evaluation of warnings and instructions for consumer products and industrial equipment. His experience extends from assessing regulatory compliance standards including those set forth by the Occupational Safety and Health Act (OSHA), the Consumer Product Safety Commission (CPSC), the American National Standards Institute (ANSI) and other regulatory bodies.

Prior to joining Exponent, Dr. Palac studied Kinesiology at the University of Illinois at Urbana-Champaign, where his area of focus was cognition and physical activity behavior. At UIUC, he examined the efficacy of an aerobic exercise and cognitive training program on postconcussion symptomology. He specializes in the study and application of human performance psychology and cognition. Dr. Palac was a researcher at UIUC's Exercise, Technology, and Cognition Laboratory, where he was involved in the design and implementation of federally-funded randomized controlled trials, analysis of quantitative data and statistical modeling, and the assessment of neuropsychological function among healthy and clinical populations. His work concentrated on the evaluation of cognition, performance, and behavior in individuals with concussion. Dr. Palac has also studied the role of various technologies aimed to enhance spatial navigation and reduce the risk of injury associated with physical activity.

### Academic Credentials & Professional Honors

Ph.D., Kinesiology, University of Illinois, Urbana-Champaign, 2019

M.A., Counseling Psychology, Adler University, 2014

B.S., Psychology, University of Illinois, Urbana-Champaign, 2012

UIUC Laura J. Huelster Graduate Student Award, 2019

UIUC Research Apprenticeship Program Mentor, 2018-2019

UIUC Teacher Ranked as Excellent by their Students, 2014-2017

### Licenses and Certifications

OSHA – Qualified Individual for General Industry Standards (OSHA 511)

## Academic Appointments

Graduate Instructor of Record, Social Science of Human Movement, UIUC, 2017

## Professional Affiliations

Human Factors and Ergonomics Society, 2019- Present

American College of Sports Medicine, 2016 – Present

Society of Behavioral Medicine, 2014 – Present

## Publications

Palac D, Scully ID, Jonas RK, Campbell JL, Young D, Cades DM. Advanced Driver Assistance Systems (ADAS): Who's driving what and what's driving use? Proceedings of the Human Factors and Ergonomics Society Annual Meeting. 2021;65(1):1220-1224. doi:10.1177/1071181321651234

Palac D, Bullard T, Cohen JD, Nguyen LT, Mudar RA, Mullen SP. Effects of traditional vs. iPad-enhanced aerobic exercise on wayfinding efficacy and cognition: A pilot randomized controlled trial. *International Journal of Environmental Research and Public Health* 2019; 16(3495): 1-16. doi: 10.3390/ijerph16183495

Mullen SP, Cohen J, Palac D. Physical activity and sedentary behavior. In: *Behavioral and Social Science in Medicine: Principles and Practice of Biopsychosocial Care*. Waldstein SR, Muldoon MF, Satterfield JM, Novack DH, Cole S (eds), Springer, NY, 2017.

Mullen SP, Palac D, Bryant L. Maps to apps: Evaluation of wayfinding technology. In: *Community Wayfinding: Pathways to Understanding*. Hunter R, Anderson L, Belza B, Hooker S (eds), Springer, NY 2016; ch10, 137–151.

## Presentations

Palac D, Mullen SP. Relationships among concussion history and subsequent physical activity, memory, and mindfulness. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, Washington DC, 2019.

Palac D. The role of physical activity and exercise in molding healthy minds. Keynote presentation at North Central College's Health Awareness Week, Naperville, IL, 2018.

Palac D, Cohen JD, Bullard T, Kramer AF, McAuley E, Mullen SP. Personality profiles, exercise trial attrition and adherence: Do the Big Five matter? Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

Bullard T, Cohen JD, Palac D, Kramer AF, McAuley E, Mullen SP. Exercise self-efficacy growth trajectories after 20 hours of cognitive training. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

Phansikar M, Palac D, Cohen JD, Bullard T, North JR, Wilund K, Wong B, Mullen SP. Complementary effects of exercise and heat therapy on mindfulness and cognition. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

North JR, Cohen JD, Palac D, Bullard T, Phansikar M, Wong B, Wilund K, Mullen SP. Increased sleep efficiency through heat therapy and exercise. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

Cohen JD, Palac D, Bullard T, North JR, Phansikar M, Mullen SP. Relationships among affect, memory, perceptions, and physical function in older adults with cancer. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

Mullen SP, Cohen JD, Palac D, Bullard T, Phansikar M, North JR, Wong B, Wilund K. A pilot RCT testing effects of steam-room usage after exercise on cardiovascular functioning among pre-hypertensive adults. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, New Orleans, LA, 2018.

Palac D. An introduction to the field of sport psychology: An applied approach. Presentation in KIN 160 Introduction to Kinesiology at the University of Illinois at Urbana-Champaign, Urbana, IL, 2017

Palac D, Mullen SP. Self-efficacy for exercise-specific memory and prospective mobile health application use. Poster presented at the Annual Meeting for the Society for Behavioral Medicine, San Diego, CA, 2017.

Bullard T, Rebar A, Cohen JD, Palac D, Wichman AL, Kramer AF, McAuley E, Mullen SP. Exercise-related attitudinal changes after 20 hours of cognitive training. Poster presented at the Annual Meeting for the Society of Behavioral Medicine, San Diego, CA, 2017.

Palac D, Hua AK, Cohen JD, Bullard T, Kramer AF, McAuley E, Mullen SP. Short and long-term effects of multi-modal cognitive training on processing speed. Poster presented at the Annual Meeting for the Society for Behavioral Medicine, Washington DC, 2016.

Hua AK, Bullard T, Cohen JD, Palac D, McAuley E, Kramer AF, Mullen SP. A novel cognitive training intervention reduces back pain in middle-aged adults. Poster presented at the Annual Meeting for the Society for Behavioral Medicine, Washington DC, 2016.

Cohen JD, Palac D, Bullard T, Hua AK, Shroyer R, Wong B, Wilund K, Woods J, Kramer AF, Mullen SP. Chronic cognitive effects of sauna following aerobic exercise on processing speed. Poster submitted to the Annual Meeting for the Society for Behavioral Medicine, Washington DC, 2016.

Bullard T, Cohen JD, Palac D, Hua AK, Kramer AF, McAuley E, Mullen SP. Inter-individual differences in self-regulation of exercise: A latent profile analysis. Poster submitted to the Annual Meeting for the Society for Behavioral Medicine, Washington DC, 2016.

Mullen SP, Bullard T, Cohen JD, Palac D, Hua AK, Johnson A, Mudar R. A comparison of traditional and tablet-delivered Trails A & B in three samples. Poster presented at the Annual Meeting for the Cognitive Neuroscience Society, San Francisco, CA, 2015.

Cohen JD, Bullard T, Palac D, Mullen SP. Physical and cognitive benefits associated with exercise and sauna use. Poster presented at the Annual Meeting for the Cognitive Neuroscience Society, San Francisco, CA, 2015.

Palac D. Psyche of the injured athlete: Importance of stress management, goal setting, social support, and mental imagery. Presentation at North Central College, Naperville, IL, 2014.

Palac D, Brodhead T. Money over equity: An Adlerian perspective examining individual and social effects of athlete exploitation. Poster presented at the Annual Meeting for the Association for Applied Sport Psychology, New Orleans, LA, 2013.

Palac D, Kerulis M. Classroom management and advocacy for concussions: Head injury in schools part two. Workshop presented at the Illinois School Counselor Association, Skokie, IL, 2013.

## Peer Reviewer

BMC Geriatrics

The Gerontologist

Psychology of Sport & Exercise

Centre for Behaviour Change in Digital Health Conference