**Date**: 2021-02-25

**CURRICULUM VITAE**

**Keith Robert Lohse, PhD, PStat**

**CONTACT INFORMATION**

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**PRESENT POSITION**

Assistant Professor; Department of Health and Kinesiology; University of Utah; Salt Lake City, UT

(**Starting July 1st 2021**) Associate Professor (Clinical); Program in Physical Therapy and Department of Neurology; Washington University School of Medicine; St. Louis, MO

**EDUCATION**

***Degrees***

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| 2007 | **BS** | Psychology | Idaho State University, Pocatello, ID; USA |
| 2009 | **MA** | Cognitive Psychology | University of Colorado, Boulder, CO; USA |
| 2012 | **Joint-PhD** | Neuroscience, Cognitive Science, and Psychology | University of Colorado, Boulder, CO; USA |
| 2014 | **Postdoctoral Fellowship** | Rehabilitation Science | University of British Columbia, Vancouver, BC; CAN |

***Professional Licenses and Certifications***

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| 2019 | **PStat** ®, Accredited Professional Statistician, *American Statistical Association.* |

**ACADEMIC POSITIONS/EMPLOYMENT**

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| 2007 – 2012 | **Teaching assistant** for the Department of Psychology and Neuroscience; College of Arts and Sciences. University of Colorado, Boulder, CO; USA |
| 2011 | **Instructor** for the Department of Psychology and Neuroscience; College of Arts and Sciences. University of Colorado, Boulder, CO; USA |
| 2012 – 2014 | **Postdoctoral Research Associate**; Motor Skills Laboratory; School of Kinesiology. University of British Columbia, Vancouver, BC; CAN |
| 2014 – 2017 | **Assistant professor**; School of Kinesiology; College of Education. Auburn University, Auburn, AL; USA |
| 2017 – 2021 | **Assistant professor**; Department of Health and Kinesiology; College of Health. University of Utah, Salt Lake City, UT; USA |
| 2017 – 2021 | **Adjunct assistant professor**; Department of Physical Therapy and Athletic Training; College of Health. University of Utah, Salt Lake City, UT; USA |
| 2017 – 2021 | **Adjunct assistant professor**; Department of Psychology; College of Social and Behavioral Science. University of Utah, Salt Lake City, UT; USA |

**TEACHING TITLES AND RESPONSIBILITIES**

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| 2007-2012 | Fall/Spring | PSYC 3101 | **Teaching Assistant** | Introduction to Statistics Lab | University of Colorado |
| 2011 | Summer | PSYC 2145 | **Course Master** | Cognitive Psychology | University of Colorado |
| 2014 | Spring | KIN 371 | **Course Master** | Statistics for Kinesiology | University of British Columbia |
| 2014 | Fall | KINE 3650 | **Course Master** | Motor Learning and Performance | Auburn University |
| 2015 | Spring | KINE 7730 | **Course Master** | Neuromotor Control | Auburn University |
| 2015 | Spring | KINE 3650 | **Course Master** | Motor Learning and Performance | Auburn University |
| 2015 | Summer | KINE 7650 | **Course Master** | Advanced Motor Learning | Auburn University |
| 2015 | Fall | KINE 3650 | **Course Master** | Motor Learning and Performance | Auburn University |
| 2016 | Spring | KINE 7730 | **Course Master** | Neuromotor Control | Auburn University |
| 2016 | Spring | KINE 3650 | **Course Master** | Motor Learning and Performance | Auburn University |
| 2016 | Summer | KINE 7650 | **Course Master** | Advanced Motor Learning | Auburn University |
| 2016 | Fall | KINE 8970 | **Course Master** | Biostatistics I | Auburn University |
| 2017 | Spring | KINE 8970 | **Course Master** | Biostatistics II | Auburn University |
| 2017 | Summer | KINE 7650 | **Course Master** | Advanced Motor Learning | Auburn University |
| 2018 | Spring | KINES 3551 | **Course Master** | Application of Human Motor Development | University of Utah |
| 2018 | Fall | KINES 3550 | **Course Master** | Motor Behavior | University of Utah |
| 2019 | Spring | KINES 7103 | **Course Master** | Design and Analysis I | University of Utah |
| 2019 | Fall | KINES 6770 | **Course Master** | Instrumentation and Measurement in Movement Science | University of Utah |
| 2020 | Spring | KINES 7103 | **Course Master** | Design and Analysis I | University of Utah |
| 2020 | Fall | KINES 6885 | **Course Master** | Advanced Motor Learning | University of Utah |
| 2021 | Spring | KINES 7103 | **Course Master** | Design and Analysis I | University of Utah |

**UNIVERSITY, SCHOOL OF MEDICINE, AND HOSPITAL APPOINTMENTS AND COMMITTEES**

***Departmental Service***

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| 2015 | Search **committee member**, motor development search. School of Kinesiology; Auburn University. |
| 2017 | **Member**, graduate curriculum committee (evaluating research-core classes). HKR; University of Utah. |
| 2017 | Search **committee chair**, applied biomechanics search. HKR; University of Utah. |
| 2017 – 2018 | Search **committee chair**, motor behavior/cognitive neuroscience search. HKR; University of Utah. |
| 2018 – 2019 | Search **committee chair**, motor behavior/cognitive neuroscience search. HKR; University of Utah. |
| 2017 – 2020 | **Theme leader**, Cognitive and Motor Neuroscience (CMN) research theme. HKR; University of Utah. |
| 2020 – *present* | **Member**, Chair’s Advisory Council, representative for pre-tenured faculty. |

***University Service***

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| 2018 | **Reviewer**, Center for Clinical and Translational Science Pilot Grant program. College of Health; University of Utah. |
| 2018 | **Member**, research space taskforce. Focused on collaborative use of research and teaching spaces. Representative for the Cognitive and Motor Neuroscience research theme. College of Health; University of Utah. |

**HONORS AND AWARDS**

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| 2011 | Co-recipient of the Dozier Award for academic excellence among doctoral students from the Department of Psychology and Neuroscience at the University of Colorado, Boulder. |
| 2017 | Recipient of the Early Career Distinguished Scholar Award from the *North American Society for the Psychology of Sport and Physical Activity* (NASPSPA). |
| 2019 | Elected to Board of Directors for the American Society for Neurorehabilitation. |

**EDITORIAL RESPONSIBILITIES**

***Editorial Boards***

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| 2015 – *present* | Editorial board member, *Journal of Motor Learning and Development*. |
| 2018 – 2019 | Guest editor for a special issue of the *Journal of Motor Learning and Development* entitled, “Methodological Advances in Motor Learning and Development”. |
| 2018 – *present* | Associate Editor for Measurement and Evaluation, *Research Quarterly for Exercise and Sport*. |

***Ad-Hoc Reviewer***

* *American Journal of Preventive Medicine;*
* *Applied Cognitive Psychology;*
* *Applied Physiology, Nutrition and Metabolism;*
* *Archives of Physical Medicine and Rehabilitation;*
* *Developmental Neurorehabilitation;*
* *Disability and Rehabilitation;*
* *Games for Health Journal;*
* *Gerontology;*
* *Human Movement Science.*
* *International Journal of Sports Science and Coaching;*
* *Journal of Biomechanics;*
* *Journal of Experimental Psychology: General;*
* *Journal of Experimental Psychology: Human Perception and Performance;*
* *Journal of Mathematical Psychology;*
* *Journal of Motor Learning and Development;*
* *Journal of NeuroEngineering and Rehabilitation;*
* *Journal of Neurologic Physical Therapy.*
* *Journal of Psychophysiology;*
* *Journal of Rehabilitation Research & Development;*
* *Journal of Sport & Exercise Psychology;*
* *Journal of Sport Science;*
* *Motor Control;*
* *Measurement in Physical Education & Exercise Science;*
* *Medicine & Science in Sports & Exercise;*
* *Neurorehabilitation & Neural Repair;*
* *PLOS ONE;*
* *Psychological Bulletin;*
* *Psychology of Sport and Exercise;*
* *Psychonomic Bulletin & Review*;
* *Scandinavian Journal of Medicine & Science in Sports;*
* *Transactions on Neural Systems & Rehabilitation Engineering*

**NATIONAL PANELS, COMMITTEES, AND BOARDS**

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| 2018 | **Member**, programming committee for the motor control and learning section of NASPSPA |
| 2019 | **Member**, NASPSPA student research/travel awards committee |
| 2019 – *present* | **Member**, Board of Directors for ASNR |
| 2019 | **Member**, programming committee for the motor control and learning section of NASPSPA |
| 2019 | **Reviewer**, Canadian Partnership for Stroke Recovery “Catalyst Grants” program |
| 2020 | **Member**, NASPSPA student research/travel awards committee |
| 2020 – *present* | **Member**, ASNR Education Committee |

**COMMUNITY SERVICE CONTRIBUTIONS**

***Current Professional Societies and Organizations***

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| 2009 – *present* | **Member** of the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) |

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| 2014 – *present* | **Member** of the American Society for Neurorehabilitation (ASNR) |
| 2019 – *present* | **Member** of the American Statistical Association (ASA) |

***Workshops and Other Projects***

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| 2012-2016 | I used to write a blog called “Compared to What?” where I worked through topics in statistics and research methods. This blog was designed to be pedagogical, providing step-by-step instructions and code working through issues that I encountered (either directly or indirectly) through my research: <http://compare2what.blogspot.com/> |
| 2016 | I wrote and thoroughly commented R Code to accompany Jeff Long’s 2012 book, Longitudinal Data Analysis for the Behavioral Sciences. Code for all chapters is openly available from: <https://github.com/keithlohse/LMER_Clinical_Science/tree/master/scripts> |
| 2017 – *present* | Working with Allan Kozlowksi, PhD (Michigan State University; Mary Free Bed Hospital), I helped to develop a two-part instructional workshop on longitudinal data analysis for the American Congress of Rehabilitation Medicine. The inaugural session was taught at Progress in Rehabilitation Research, 2017, in Atlanta, GA. <https://github.com/keithlohse/LMER_Clinical_Science/> |
| 2019 | Working with Zack Zenko, PhD, Chris Hill, PhD, and John Mills, PhD, I organized a workshop on open-science research practices at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity in conjunction with the Society for Transparency, Openness, and Replication in Kinesiology. |
| 2019 | With Lei-Sook Liew, PhD, and James Finley, PhD, I helped to organize a pre-conference workshop entitled, “Reliability and Reproducibility in Neurorehabilitation Research”. My section of the presentation focused on “Data visualization: From quality assurance to final publication”. |
| 2020 | I conducted a workshop on mixed-effect regression for experimental sciences at Auburn University in February 2020. This content focused on adapting mixed-effects regression models to many common study designs. I hope to continue working on these materials to develop a book/course on the topic: <https://keithlohse.github.io/mixed_effects_models/> |

**INVITED PROFESSORSHIPS AND LECTURESHIPS**

***Invited Talks***

1. April 2013: "Applied motor learning: Recent developments in motor learning and skill acquisition." National Strength and Conditioning Association Provincial Clinic, Richmond, BC.
2. May 2015: “Longitudinal data analysis for the clinical sciences.” This was a workshop on mixed-effect linear models that I developed and led at the Washington University of St. Louis School of Medicine, St. Louis, MO.
3. May 2015: “Predicting change during outpatient stroke rehabilitation: A retrospective regression analysis.” Presentation at the Washington University School of Medicine, St. Louis, MO.
4. April 2017: “Streamlining clinical science with structured data archives: Data-driven insights from the stroke rehabilitation literature.” Invited presentation as part of the School of Biological and Health Systems Engineering seminar series at Arizona State University, Tempe, AZ.
5. November 2017: “Cognitive and affective determinants of motor skill learning: An applied neuroscientific model.” Invited keynote presentation at the Second Scientific Conference on Motor Skill Acquisition, Kisakallio Sports Institute, Jyväskylä, Finland.
6. June 2018: “Exploring measurement and methodology in motor behavior.” Invited talk for the early career award I received from the *North American Society for the Psychology of Sport and Physical Activity*.
7. November 2018: “Expanding your toolkit: How can you use data science to streamline your research and tackle bigger questions?” Invited participant for a roundtable discussion on data science in neurorehabilitation at the *American Society for Neurorehabilitation* annual meeting. San Diego, CA.
8. May 2020: “Meta-Analysis for Complex Interventions.” Presented as part of the webinar “Research in the Time of COVID” hosted by the *American Society for Neurorehabilitation*.
9. November 2020: “The Logic and Process and Power Analysis: Assumptions, Guesses, and Estimates.” Presented as part of a webinar for the *North American Society for the Psychology of Sport and Physical Activity*.

**RESEARCH SUPPORT**

***Pending***

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| *Submitting* |  | *Harris (PI)* |  | 2021 |
| NIH/NIAMSD R01 | | | | |
| **Title**: Multi-Domain Biomechanics after Periacetabular Osteotomy for Developmental Dysplasia of the Hip. | | | | |
| **Amount:** ###,### USD | | | | |
| **Role**: Co-Investigator (0 to 1.2 calendar months per year over 5 years) | | | | |

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| *Under Review* |  | *Schaefer & Peterson (co-PIs)* |  | 2020 |
| NIH/NIA R01 (sub-award to University of Utah) | | | | |
| **Title**: Using cognition to predict individual differences in motor learning for older adults with and without Parkinson disease. | | | | |
| **Amount:** 298,649 USD (93,485 USD to Utah) | | | | |
| **Role**: Co-Investigator (1.2 calendar months per year) | | | | |

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| *Under Review* |  | *Liew (PI)* |  | 2020 |
| NIH/NICHD-NCMRR R25 | | | | |
| **Title**: Building a data science workforce to improve the reproducibility of rehabilitation research. | | | | |
| **Amount:** 811,744 USD | | | | |
| **Role**: Consultant | | | | |

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| *Under Review* |  | *Kittleson (PI)* |  | 2020 |
| AHRQ R21 (sub-award to University of Utah) | | | | |
| **Title**: Development of personal prognostic profiles for dynamic and static balance. | | | | |
| **Amount:** 250,000 USD (61,000 USD to Utah) | | | | |
| **Role**: Co-Investigator (1 calendar months/year) | | | | |

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| *Under Review* |  | *Earhart & Rawson (PIs)* |  | 2020 |
| NIH/NCCIH R34 (sub-award to University of Utah) | | | | |
| **Title**: Moving Mindfully: A MBSR-Centered Approach to Freezing in Parkinson Disease. | | | | |
| **Amount:** 708,750 USD (81,121 USD to Utah) | | | | |
| **Role**: Co-Investigator (1.2 calendar months/year) | | | | |

***Current***

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| ***1.*** *CIHR**PTJ 153330* |  | *Boyd (PI)* |  | 2017-2022 |
| Canadian Institutes of Health Research/Instituts de recherche en santé du Canada | | | | |
| **Title**: Characterizing Arm Recovery in People with Severe Stroke (CARPSS). | | | | |
| **Amount:** 665,000 CAD | | | | |
| **Role**: Co-Investigator (0 calendar months/year) | | | | |

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| ***2.*** *University of Utah* |  | *Lohse & Weatherwax (Co-PI)* |  | 2020-2021 |
| University of Utah Graduate Teaching Assistantship | | | | |
| **Title**: The Development and Implementation of an Online Laboratory for an Undergraduate Hybrid Biomechanics Course. | | | | |
| **Role**: Co-Mentor (0 calendar months/year) | | | | |

***Completed***

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| ***1.*** *FAA 16-C-TTHP-AU* | *Sefton (PI)* |  | 2016-2018 |
| Federal Aviation Administration – Center for Excellence for Technical Training and Human Performance | | | |
| **Title**: Exploring the use of gamification for training. | | | |
| **Amount:** 238,000 USD | | | |
| **Role**: Co-Investigator (0 calendar months). | | | |

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| ***2.*** *IGP Project # 170138* |  | *Lohse (Co-PI)* |  | 2017-2018 |
| Auburn University Internal Grants Program | | | | |
| **Title**: Improving acquisition of manual-wheelchair skills: An EEG study using motor learning principles. | | | | |
| **Amount:** 20,000 USD | | | | |
| **Role**: Co-Principle Investigator (with Matt Miller; 0 calendar months). | | | | |

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| ***3.*** *CoH Seed Grant* |  | *Fino (PI)* |  | 2019 |
| University of Utah; College of Health Pilot Grant Program | | | | |
| **Title**: Neural activity of balance recovery following concussion. | | | | |
| **Amount:** 17,500 USD | | | | |
| **Role**: Co-Investigator (0 calendar months/year) | | | | |

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| ***4.*** *R01-NCE* |  | *Van Dillen (PI)* |  | 2019 |
| NIH/NICHD/NCMRR 5 R01 HD047709 | | | | |
| **Title**: Spinal control during functional activities to improve low back pain outcomes. | | | | |
| **Amount:** 43,309 USD | | | | |
| **Role**: Consultant | | | | |

***Not Funded***

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| ***1.*** *Not Funded* | *Lohse (PI)* |  | 2014 |
| NIH / NINDS R03 | | | |
| **Title**: Centralized open-access research (COAR): A database for stroke rehabilitation. | | | |
| **Role**: Principal Investigator. | | | |

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| ***2.*** *Not Funded* |  | *Lohse (PI)* |  | 2018 |
| Center on Aging, University of Utah, pilot grant program | | | | |
| **Title**: Cortical Noise as a Biomarker for Age-Related Declines in Cognitive and Motor Function. | | | | |
| **Role**: Principal Investigator with Kevin Duff (0 calendar months). | | | | |

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| ***3.*** *Not Funded* |  | *Dorval (Co-PI)* |  | 2018 |
| NIH / NINDS R01 | | | | |
| **Title**: The Parkinsonian Relationship between Beta-Activity and Movement Kinetics. | | | | |
| **Role**: Co-Principal Investigator (2 calendar months/year for 5 years). | | | | |

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| ***4.*** *Not funded* |  | *Lohse (PI)* |  | 2018 |
| NIH KL2 | | | | |
| **Title**: Getting More Out of Data: Personalized Medicine through Advanced Statistical Modelling in Rehabilitation. | | | | |
| **Role**: Principal Investigator (6.72 calendar months/year for 2 years).  Mentors: Jacob Kean and Tom Greene. | | | | |

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| ***5.*** *Not Funded* |  | *Lohse (PI)* |  | 2018 |
| National Science Foundation: Science of Learning Initiative | | | | |
| **Title**: Measuring and Modeling Age-Related Changes in Reinforcement Learning. | | | | |
| **Role**: Principal Investigator (2 calendar months/year for 3 years).  (Sub-awards to Matt Miller and Matt Jones as co-investigators). | | | | |

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| ***6.*** *Not Funded* |  | *Lohse (PI)* |  | 2018 |
| University of Utah; College of Health Pilot Grant Program | | | | |
| **Title**: Sensorimotor integration and cognitive compensation in walking and turning for older adults. | | | | |
| **Role**: Principle Investigator (0 calendar months/year) | | | | |

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| ***7.*** *Not Funded* |  | *Williams (PI)* |  | 2019 |
| The PAC-12 Student-Athlete Health and Well-Being Grant Program | | | | |
| **Title**: Modeling injury and mental health risk in a sample of collegiate athletes. | | | | |
| **Amount:** 675,000 USD | | | | |
| **Role**: Co-Investigator (1 calendar month/year for 2 years) | | | | |

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| ***8.*** *Not Funded* |  | *Williams (PI)* |  | 2018 |
| NIH / NCI R01 | | | | |
| **Title**: Developing effective training programs for enhancing perceptual-cognitive expertise in radiographic imaging. | | | | |
| **Role**: Co-Investigator (1.2 calendar months/year for 5 years) | | | | |

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| ***9.*** *Not Funded* |  | *Williams (PI)* |  | 2018 |
| NIH/ NIA R01 | | | | |
| **Title**: Multi-sensory processing for real-world spatial navigation in older adults: the influence of mobility-related anxiety. | | | | |
| **Role**: Co-Investigator (1.2 calendar months/year for 5 years) | | | | |

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| ***10.*** *Not Funded* |  | *Euler, Lohse, & Davis (Co-PIs)* |  | 2018 |
| University of Utah Neuroscience Initiative Pilot Seed Grant | | | | |
| **Title**: EEG Biomarkers of Mental Exertion: Validation and Implications for Personalized Medicine. | | | | |
| **Role**: Co-Principle Investigator (0 calendar months/year) | | | | |

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| ***11****. Not Funded* |  | *Lohse (PI)* |  | 2019 |
| University of Utah, Center on Aging Pilot Grants Program | | | | |
| **Title**: Cortical Noise as a Biomarker for Age-Related Declines in Cognitive and Motor Function. | | | | |
| **Amount:** 15,914 USD | | | | |
| **Role**: Principle Investigator (0 calendar months/year) | | | | |

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| ***12****. Not Funded* |  | *Lohse (PI)* |  | 2019 |
| University of Utah, Center on Aging Innovations Grants Program | | | | |
| **Title**: The role of mobility-related anxiety in anticipatory and reactive balance control in older adults. | | | | |
| **Amount:** 39,951 USD | | | | |
| **Role**: Principle Investigator (0 calendar months/year) | | | | |

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| ***13.*** *Not Funded* |  | *Williams (PI)* |  | 2019 |
| The PAC-12 Student-Athlete Health and Well-Being Grant Program | | | | |
| **Title**: Modeling injury and mental health risk in a sample of collegiate athletes. (*Resubmission*) | | | | |
| **Amount:** 300,000 USD | | | | |
| **Role**: Co-Investigator (1 calendar month/year for 2 years) | | | | |

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| ***14****. Not Funded* |  | *Podlog (PI)* |  | 2019 |
| AHRQ R03 | | | | |
| **Title**: Enhancing Adherence to Physical Therapy for Chronic Low Back Pain: The Role of Tripartite Efficacy Beliefs. | | | | |
| **Amount:** 99,486 USD | | | | |
| **Role**: Co-Investigator (0.15 calendar months/year) | | | | |

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| ***15.*** *Not Funded* |  | *Lohse (PI)* |  | 2019 |
| NIH/NIA R21 PAR-19-053 | | | | |
| **Title**: The neural and cognitive consequences of anxiety in shaping fall risk for older adults. | | | | |
| **Amount:** 275,000 USD | | | | |
| **Role**: Principal Investigator (2.4 calendar months/year for 2 years) | | | | |

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| ***16.*** *Not Funded* |  | *Boyd (PI)* |  | 2019 |
| Canadian Institutes of Health Research/Instituts de recherche en santé du Canada | | | | |
| **Title**: Individualized pathways to recovery after stroke. | | | | |
| **Amount:** 940,000 CAD | | | | |
| **Role**: Co-Investigator (0.5 calendar months/year) | | | | |

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| ***17.*** *Not Funded* |  | *Lohse (PI)* |  | 2019 |
| University of Utah, Center for Clinical and Translational Science Pilot Program | | | | |
| **Title**: Neural, affective, and cognitive features of fall risk for older adults. | | | | |
| **Amount:** 30,000 USD | | | | |
| **Role**: Principal Investigator (0 calendar month/year for 1 year) | | | | |

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| ***18.*** *Not Funded* |  | *French (PI)* |  | 2020 |
| Utah CCTS S.T.A.R.S. TL1 Program | | | | |
| **Title**: Leveraging the electronic medical record to understand the relationship between functional mobility recovery and health service outcomes after stroke. | | | | |
| **Role**: Mentor (0 calendar months/year) | | | | |

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| ***19****. Not Funded* |  | *Rimer (PI)* |  | 2020 |
| The PAC-12 Student-Athlete Health and Well-Being Grant Program | | | | |
| **Title**: An Applied Epidemiological Approach to Reducing the Incidence of Injury in Collegiate Athletics. | | | | |
| **Amount:** 150,000 USD | | | | |
| **Role**: Co-Investigator (1 calendar month/year for 2 years) | | | | |

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| ***20.*** *ARDEC* |  | *Lohse/Williams (Co-PI)* |  | 2020-2022 |
| Armament Research, Development and Engineering Center (ARDEC) | | | | |
| **Title**: The influence of stress on perception and decision-making in combat. | | | | |
| **Amount:** 302,002 USD | | | | |
| **Role**: Co-Principal Investigator (1 calendar month/year) | | | | |
| \*\*\*Although awarded, these funds were never released. This grant was competitively awarded through Thor Industries, a sub-contractor working with ARDEC. Funds were redirected following COVID19.\*\*\* | | | | |

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| ***21.*** *Not Funded* |  | *Fritz (PI)* |  | 2020 |
| NIH/NCCIH U01 (Clinical Trial Required) | | | | |
| **Title**: SMT Therapeutic Alliance. | | | | |
| **Amount:** 3,812,500.00 USD | | | | |
| **Role**: Co-Investigator (1 calendar months/year) | | | | |

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| ***22.*** *Not Funded* |  | *Kittleson (PI)* |  | 2020 |
| AHRQ R21 (sub-award to University of Utah) | | | | |
| **Title**: Development of personal prognostic profiles for dynamic and static balance. | | | | |
| **Amount:** 250,000 USD (61,000.00 USD) | | | | |
| **Role**: Co-Investigator (1 calendar months/year) | | | | |

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| ***23.*** *Not Funded* | |  | | *Williams (PI)* |  | | 2020 |
| AHRQ R01 | | | | | | | |
| **Title**: Testing evidence-based learning principles in radiology training. | | | | | | | |
| **Amount:** 1,906,250 USD | | | | | | | |
| **Role**: Co-Investigator (1 calendar months/year) | | | | | | | |
| ***24****. Not Funded* |  | | *Hayes (PI)* | | |  | 2020 |
| University of Utah CCTS Pilot Grant | | | | | | | |
| **Title**: Cycling intervention with biofeedback of power symmetry for patients with stroke in an inpatient rehabilitation facility: pilot randomized controlled trial. | | | | | | | |
| **Amount:** 20,000 USD | | | | | | | |
| **Role**: Co-Investigator (0 calendar months per year) | | | | | | | |

**TRAINEE/MENTEE/SPONSORHIP RECORD**

***Post-Doctoral Trainees***

|  |  |  |
| --- | --- | --- |
| 2017 – 2020 | Bradley Fawver, PhD | (secondary advisor) |
| 2018 – *present* | Tiphanie Raffegeau, PhD | (co-advisor) |

***Doctoral Trainees***

|  |  |  |
| --- | --- | --- |
| 2014 – 2017 | Amber Leiker | (now faculty at LaGrange College) |
| 2016 – *present* | Anupriya Pathania | (expected graduation in 2021) |
| 2018 – *present* | Mindie Clark | (expected graduation in 2022) |

***Masters Trainees***

|  |  |  |
| --- | --- | --- |
| 2019 – *present* | Jason Dude | (expected graduation in 2021) |
| 2020 – *present* | Sarah Taylor | (expected graduation in 2022) |

***Undergraduate Trainees***

(Below I call attention to only those trainees who have won awards or specific recognition.)

|  |  |  |
| --- | --- | --- |
| 2019 | Cammy Stukel | Undergraduate Research Opportunities Program Grant recipient (1200 USD; summer semester). |
| 2019 | Sarah Taylor | Undergraduate Research Opportunities Program Grant recipient (1200 USD; summer semester). |
| 2019 | Sarah Taylor | HKR Distinguished Undergraduate Student Award winner. |
| 2019 | Cammy Stukel | Undergraduate Research Opportunities Program Grant recipient (1200 USD; fall semester). |
| 2020 | Ashlee McBride | Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester). |
| 2020 | Sarah Taylor | Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester). |
| 2020 | Ellen Williams | Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester). |
| 2020 | Ellen Williams | HKR Distinguished Undergraduate Student Award winner. |

***Doctoral Student Committees***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student** | **Advisor** | **University** | **Qualifying Exam** | **Proposal** | **Defense** | **External** |
| A. Jagodinsky | Weimar | Auburn | 2014 | 2015 | 2016 | *na* |
| T. Holt | Oliver | Auburn | 2014 | 2015 | 2015 | *na* |
| L. Henning | Oliver | Auburn | 2015 | 2016 | 2016 | *na* |
| K. Grand | Miller | Auburn | 2015 | 2016 | 2016 | *na* |
| M. Godwin | Miller | Auburn | 2015 | 2016 | *na* | *na* |
| A. Thompson | Miller | Auburn | 2015 | 2016 | 2016 | *na* |
| L. Niedert | Kluess | Auburn | 2015 | 2016 | 2017 | *na* |
| J. Irwin | Pangelinan | Auburn | 2016 | 2016 | 2017 | *na* |
| A. Leiker | Lohse | Auburn | 2016 | 2016 | 2017 | *na* |
| C. Wilburn | Weimar | Auburn | 2016 | 2017 | 2017 | *na* |
| L. Smallwood | Weimar | Auburn | 2016 | 2017 | 2018 | *na* |
| J. McAdam | Sefton | Auburn | 2016 | 2016 | 2018 | *na* |
| J. Moody | Pangelinan | Auburn | 2016 | *na* | *na* | *na* |
| A. Benz | Porter | Edith Cowan | *na* | *na* | *na* | 2016 |
| M. Daou | Miller | Auburn | 2016 | 2016 | 2018 | *na* |
| B. Ostlund | Conradt | Utah | *na* | 2018 | 2019 | *na* |
| M. Yamada | Raisbeck | UNCG | 2019 | 2020 | 2020 | *na* |
| J. Thomas | Williams | Utah | 2019 | 2020 | -- | *na* |
| R. Cowan | Williams | Utah | 2019 | 2020 | -- | *na* |
| M. Schreiber | Merryweather | Utah | *na* | 2019 | 2021 | *na* |
| P. Wang | Schaefer | ASU | *2019* | 2020 | 2021 | *na* |
| M. Bacelar | Miller | Auburn | *2020* | 2021 | -- | *na* |
| L. St. Germain | Carter | McMaster | *2019* | -- | -- | *na* |
| B. DeCouto | Williams | Utah | *2020* | -- | -- | *na* |
| A. Weston | Dibble | Utah | *2020* | -- | -- | *na* |
| D. Dummer | Marcus | Utah | *2020* | -- | -- | *na* |
| S. Lotemplio | Strayer | Utah | *2020* |  |  |  |

Note: “--” denotes a committee that has not yet transpired. “na” denotes a position I did not fill or is not applicable.

**BIBLIOGRAPHY**

***Manuscripts Under Peer-Review***

1. \*Thomas, J.L., Fawver, B., Taylor, S., Miller, M.W., Williams, A.M., & **Lohse, K.R.** (under review). Using error-estimation to probe the psychological processes underlying intra-task interference effects. *Human Movement Science.*
2. **\*Lohse, K.R**., Dummer, D., Hayes, H.A., Carson, R., & Marcus, R.L. (under review). Combining the AM-PAC “6-Clicks” and the Morse Fall Scale to predict individuals at risk for falls in an Inpatient Rehabilitation Hospital. *Archives of Physical Medicine and Rehabilitation*.
3. de Havenon, A., Heitsch, L., Sunmonu, N.A., Braun, R., **Lohse, K.R.,** Cole, J., Mistry, E. Lndgren, A., Worral, B., & Cramer, S. (under review). Accurate prediction of persistent upper extremity impairment in patients with ischemic stroke. *Stroke*.
4. Faw, T.D., Lakhani, B., Schmalbrock, P., Knopp, M.V., **Lohse, K.R.** et al. (under review). Eccentric-focused rehabilitation induces white matter plasticity and functional recovery in chronic spinal cord injury. *Science Advances*.
5. \*Hayward, K.S., Ferris, J.K., **Lohse, K.R.**, Borich, M.R., Borstad, A., Cassidy, J., Cramer, S.C., Dukelow, S.P., Findlater, S.E., Hawe, R., Liew, S.L., Neva, J.L., Steward, J.C., & Boyd, L.A. (under review). Identifying biomarkers of upper limb outcome post-stroke: Severity of impairment, lesion volume and region-specific structural integrity. *Brain*.
6. Liew, S-L. et al. (including **Lohse, K.R**.). Non-infarcted subcortical brain volumes are associated with post-stroke sensorimotor behavior across 28 cohorts worldwide: An ENIGMA Stroke Recovery analysis. *Neurology*.
7. Olivier, G.N., Dibble, L.E., Paul, S.S., **Lohse, K.R.,** Walter, C.S., Marker, R.J., Hayes, H.A., Foreman, K.B., Duff, K., & Schaefer, S.Y. Personalized practice dosages improve learning of a stepping task in older adults. *Brain and Behavior Research.*

***Peer-Reviewed Articles***

1. **Lohse, K.R.**, Sherwood, D.E., & Healy, A.F. (2010). How changing the focus of attention affects performance, kinematics, and electromyography in dart throwing. *Human Movement Science, 29,* 542-555. doi:10.1016/j.humov.2010.05.001.
2. **Lohse, K.R.**, Healy, A.F., & Sherwood, D.E. (2010). Mental practice in the intermanual transfer of motor skills. *Journal of Imagery Research in Sport and Physical Activity, 5,* A1*.* doi*:* 10.2202/1932-0191.1052.
3. **Lohse, K.R**., Sherwood, D.E., & Healy, A.F. (2011). Neuromuscular effects of shifting the focus of attention in a simple force production task. *Journal of Motor Behavior*, *43*, 174-184. doi: 10.1080/00222895.2011.555436.
4. **Lohse, K.R.** & Sherwood, D.E. (2011). Defining the focus of attention: Effects of attention on perceived exertion and fatigue. *Frontiers in Psychology*, *2*, 332. doi: 10.3389/fpsyg.2011.00332.
5. **\*Lohse, K.R.** (2012). The influence of attention on learning and performance: Pre-movement time and accuracy in an isometric force production task. *Human Movement Science*, *31,* 12-25. doi:10.1016/j.humov.2011.06.001.
6. **Lohse, K.R.**, & Healy, A. F. (2012). Exploring the contributions of procedural and declarative training to performance: A test of the procedural reinstatement principle. *Journal of Applied Research in Memory and Cognition.* 1, 65-72.doi:10.1016/j.jarmac.2012.02.002
7. **Lohse, K.R.**, & Sherwood, D.E. (2012). Thinking about muscles: The neuromuscular effects of internally focused attention in accuracy and fatigue. *Acta Psychologica, 140,* 236-245. doi:10.1016/j.actpsy.2012.05.009
8. Carpenter, S.K., **Lohse, K.R.**, Healy, A.F., Bourne, L.E., & Clegg, B. (2013). External focus of attention improves retention and transfer in a speeded aiming task. *Journal of Applied Research in Memory and Cognition, 2,* 14-19*.* doi:10.1016/j.jarmac.2012.11.002
9. **Lohse, K.R.**, Shirzad, N., Verster, A., Hodges, N.J., & Van der Loos, H.F.M. (2013). Video games and rehabilitation: Using design principles to enhance patient engagement. *Journal of Neurologic Physical Therapy, 37,* 166-175*.*
10. **Lohse, K.R.**, Sherwood, D.E., & Healy, A.F. (2014). On the advantage of an external focus of attention: A benefit to learning or performance? *Human Movement Science, 33,* 120-134. doi: 10.1016/j.humov.2013.07.022
11. **Lohse, K.R.**, Hilderman, C.G.E., Cheung, K.L., Tatla, S., & Van der Loos, H.F.M. (2014). Virtual reality therapy for adults post-stroke: A systematic review and meta-analysis exploring virtual environments and commercial video games in therapy. *PLOS ONE,* 9(3), e93318. doi: 10.1371/journal.pone.0093318
12. **Lohse, K.R.**, Jones, M.C., Healy, A.F. & Sherwood, D.E. (2014). The role of attention in motor control. *Journal of Experimental Psychology: General, 143,* 930-948. doi: 10.1037/a0032817
13. **Lohse, K.R.**, Wadden, K., Boyd, L.A. & Hodges, N.J. (2014). Motor skill acquisition across short and long time scales: A meta-analysis of neuroimaging data. *Neuropsychologia, 59,* 130-141*.*
14. Ong, N. T., Chua, R., **Lohse, K. R.**, Sinnett, S., & Hodges, N. J. (2014). A test of motor skill-specific action embodiment in ice hockey players. *Acta Psychologica, 150,* 61-68.
15. **\*Lohse, K.R.**, Lang, C.E., & Boyd, L.A. (2014). Is more better? Using meta-data to explore dose-response relationships in stroke rehabilitation. *Stroke, 45,* 2053-2058.
16. Hodges, N.J., **Lohse, K.R.**, Wilson, A., Lim, S.B., & Mulligan, D. (2014). Exploring the dynamic nature of the contextual interference effect: Previous experience affects current practice but not learning. *Journal of Motor Behavior, 46,* 455-467.
17. Sherwood, D.E., **Lohse, K.R.**, & Healy, A.F. (2014). Judging joint angles and movement outcome: Shifting the focus of attention in dart-throwing. *Journal of Experimental Psychology: Human Perception and Performance, 40, 1903-1914.*
18. Lam, M.Y., Tatla, S.K., **Lohse, K.R.**, Hoens, A.M., Miller, K.J., Holsti, L., Virji-Babul, N., & Van der Loos, H.F.M. (2015). Perceptions of Technology and its Use for Therapeutic Application for Individuals with Hemiparesis: Findings from Adult and Paediatric Focus Groups. *Journal of Medical Internet Research: Rehabilitation and Assistive Technologies,* 2, e1.
19. Tatla, S.K., Shirzad, N., **Lohse, K.R.**, Virji-Babul, N., Hoens, A., Holsti, L., Li, L.C., Miller, K.M., & Van der Loos, H.F.M. (2015). Therapists' perceptions of social media and video game technologies in upper limb rehabilitation. *Journal of Medical Internet Research: Serious Games, 3, e2*.
20. Ong, N., **Lohse, K.R.**, & Hodges, N. J. (2015). Manipulating target-size to influence perceptions of success when learning a dart-throwing skill. *Frontiers in Psychology, 6:1378. doi: 10.3389/fpsyg.2015.01378*
21. Karlinsky, A., **Lohse, K.R.**, & Hodges, N.J. (2015). The nature of the cognitive advantage: A quarter of a century later. *International Journal of Sport and Exercise Psychology, 6, 486.*
22. Lang, C.E., **Lohse, K.R.**, & Birkenmeier, R.L. (2015). Dose and timing in neurorehabilitation: Prescribing motor therapy after stroke. *Current Opinion in Neurology, 28,* 549-555.
23. **\*Lohse, K.R.**, Boyd, L.A., & Hodges, N.J. (2016). Engaging environments enhance motor learning in a computer gaming task. *Journal of Motor Behavior,* 48, 172-82. doi: 10.1080/00222895.2015.1068158
24. \*Leiker, A.M., Miller, M.W., Brewer, L., Nelson, M., Siow, M., & **Lohse, K.R.** (2016). The relationship between engagement and neurophysiological measures of attention in motion-controlled video games: A randomized controlled trial. *Journal of Medical Internet Research: Serious Games, 4, e4.* doi: 10.2196/games.5460
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26. \*Buchanan, T.L. & **Lohse, K.R**. (2016). Researchers’ perceptions of statistical significance contribute to bias in health and exercise science. *Measurement in Physical Education and Exercise Science, 20,* 1-9*.*
27. Meadows, C., Gable, P., **Lohse, K.R.**, & Miller, M.W. (2016). The effects of reward magnitude on reward processing: An averaged and single trial event-related potential study. *Biological Psychology*, 118, 154-160.
28. \*Leiker, A.M., Bruzi, A.T., Miller, M.W., Nelson, M., Wegman, R., & **Lohse, K.R.** (2016). The effects of autonomous difficulty selection on engagement, motivation, and learning during a motion-controlled videogame task. *Human Movement Science*, 49, 326-335.
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33. Sherwood, D.E., **Lohse, K.R.**, & Healy, A.F. (2016). Direction and relevance of the focus of attention in dart throwing with and without visual feedback. *Journal of Motor Learning and Development*, 4, 248-261.
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36. \*Grand, K.F., Daou, M., **Lohse, K.R.**, & Miller, M.W. (2017). Investigating the mechanisms underlying the effect of incidental choice on motor learning. *Journal of Motor Learning and Development,* 1-35.
37. \*Brown, K.E., **Lohse, K.R.**, Mayer, I.S., Strigaro, G., Desikan, M., Casula, E.P., Meunier, S., Popa, T., Leavitt, B., Durr, A., Tabrizi, S.J., Rothwell, J.C., Boyd, L.A., & Orth, M. (2017). The reliability of commonly used electrophysiology measures. *Brain Stimulation,* 10, 1102-1111.
38. Daou, M., **Lohse, K.R.**, & Miller, M.W. (2018). Does practicing a skill with the expectation of teaching alter motor preparatory cortical dynamics? *International Journal of Psychophysiology, 127,* 1-10.
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41. Peterson, D., **Lohse, K.R.**, & Macini, M. (2018). Anticipatory postural responses prior to protective steps are similar in people with PD who do and do not freeze. *Gait & Posture, 64,* 126-129.
42. Hayward, K.S., **Lohse, K.R.,** Bernhardt, J., Lang, C.E., & Boyd, L.A. (2018). Characterizing arm recovery in people with severe stroke (CARPSS): Protocol for a 12-month observational study of clinical, neuroimaging, and neurophysiological biomarkers. *British Medical Journal: Open*. <http://dx.doi.org/10.1136/bmjopen-2018-026435>
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47. \*Leiker, A.M., Pathania, A., Miller, M.W., & **Lohse, K.R.** (2019). Exploring the neurophysiological effects of self-controlled practice in motor skill learning. *Journal of Motor Learning and Development, 7, 13-34.*
48. Rhoads, J.A., Daou, M., **Lohse, K.R.**, & Miller, M.W. (2019). The effects of expecting to teach and actually teaching on motor learning. *Journal of Motor Learning and Development, 7,* 84-104.
49. Daou, M., Hutchinson, Z., Bacelar, M., Rhoads, J.A., **Lohse, K.R.**, & Miller, M.W. (2019). Learning a skill with the expectation of teaching impairs the skills execution under psychological pressure. *Journal of Experimental Psychology: Applied, 25, 219-229.*
50. \*Sainani, K.S., **Lohse, K.R.**, Jones, P.R. *†*, & Vickers, A.J. (2019). Magnitude-Based Inference is not Bayesian and is not a valid method of inference*. Scandinavian Journal of Medicine & Science in Sports, 29, 1428-1436*.
51. Sherwood, D.E., **Lohse, K.R.**, & Healy, A.F. (2020). The effect of an external and internal focus of attention on dual task performance. *Journal of Experimental Psychology: Human Perception and Performance, 46,* 91-104*.*
52. **\*Lohse, K.R.**, Miller, M.W., Daou, M. Valerius, W., & Jones, M.C. (2020). Dissociating the contributions of reward-prediction errors to trial-level adaptation and long-term learning. *Biological Psychology, 149,* 107775.
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54. Caldwell, A. R., et al. (including **Lohse, K.R.**) (2020). Moving sport and exercise science forward: a call for the adoption of more transparent research practices. *Sports Medicine*, 50(3), 449-459.
55. \***Lohse, K.R.***,* Shen, J.*,* & Kozlowski, A.L. (2020). Modeling longitudinal outcomes: A contrast of two methods. *Journal of Motor Learning and Development,* 8, 145-165.
56. \***Lohse, K.R.** (2020). Methodological advances in motor learning and development. *Journal of Motor Learning and Development, 8, 1-13*.
57. \*Bacelar, M.F.B., **Lohse, K.R.**, & Miller, M.W. (2020). The effect of rewards and punishments on learning action selection and execution components of a motor skill. *Journal of Motor Learning and Development.* doi: 10.1123/jmld.2019-0039.
58. Liew, S-L. et al. (including **Lohse, K.R.**) (2020). The ENIGMA Stroke Recovery Working Group: Big data neuroimaging to study brain-behavior relationships after stroke. *Human Brain Mapping*. doi: 10.1002/hbm.25015
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64. \*Raffegeau, T.E., Fawver, B., Young, W.R., Williams, A.M., **Lohse, K.R.**, & Fino, P.C. (2020). The direction of postural threat alters balance control responses when standing at virtual elevation. *Experimental Brain Research, 238,* 2653-2663.
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66. \***Lohse, K.R.**, Hawe, R.L., Dukelow, S.P., & Scott, S.H. (2021). Statistical considerations for drawing conclusions about recovery. *Neurorehabilitation and Neural Repair, 35,* 10-22.
67. \*Lingo VanGilder, J., **Lohse, K.R.**, Duff, K., Wang, P., Schaefer, S.Y. (2021). Associations between Rey-Osterrieth Complex Figure test and motor skill learning in older adults. *Acta Psychologica, 214,* 1-9.
68. Braun, R.G., Heitsch, L., Cole., J.W., Lindgren, A.G., **Lohse, K.R.**, Dude, J., de Havenon, A., Cramer, S.C., & Worrall, B.B. (in press). What the Modified Rankin isn’t ranking: Stroke outcomes differ by domain. *Neurology*.

***Peer-Reviewed Articles Outside My Line of Research***

*At times, my effort has included serving as a methodological/statistical consultant. These are publications outside of my line of research, but for which I met the ICMJE authorship criteria.*

1. MacInnis, M. J., **Lohse, K.R.**, Strong, J., & Koehle, M.S., (2015). Is previous history a reliable predictor for acute mountain sickness susceptibility? A meta-analysis of diagnostic accuracy. *British Journal of Sports Medicine, 49, 69-75*.
2. MacInnis, M., Nugent, S. MacLeod, K., & **Lohse, K.R**. (2015). Methods to estimate VO2max upon acute hypoxia exposure. *Medicine & Science in Sports & Exercise, 47, 1869-1876*. (*Note that there was a rounding error in Eq. 3 of this manuscript. The correct formula was presented in the appendix, however. A corrigendum rectifying this error was published in MSSE in December, 2018.)*
3. Oliver, G., **Lohse, K.R.**, & Gascon, S. (2015). Kinematics and kinetics of youth baseball catchers and pitchers. *Sports, 3,* 246-257.
4. Daou, M., **Lohse, K.R.**, & Miller, M. W. (2016). Expecting to teach enhances motor learning and information processing during practice. *Human Movement Science, 49,* 336-345.
5. Sefton, J.M., **Lohse, K.R.**, & McAdam, J.S. (2016). Common fitness screen can predict injury and injury type in Army infantry, armor, and cavalry Trainees. *Journal of Athletic Training, 51,* 849-857*.*
6. Daou, M., Buchanan, T.L., Lindsay, K.R., **Lohse, K.R.**, & Miller, M.W. (2016). Expecting to teach enhances learning: Evidence from a motor learning paradigm. *Journal of Motor Learning and Development, 4,* 197-207*.*
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10. Karlinsky, A., **Lohse, K. R.**, & Lam, M.Y. (2017). A meta-analysis of the Joint-Simon Effect. *Proceedings of the 39th Annual Conference of the Cognitive Science Society*.
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16. Daou, M., Rhaods, J.A., Jacobs, T. **Lohse, K.R.**, & Miller, M.W. (2019). Does limiting pre-movement time during practice eliminate the benefit of practicing while expecting to teach? *Human Movement Science, 64,* 153-163.
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19. Fawver, B., Cowan, R.L., DeCouto, B., **Lohse, K.R.**, Podlog, L., & Williams, A.M. (2020). Psychological characteristics, sport engagement, and performance in alpine skiers. *Psychology of Sport and Exercise, 47, 101616*.
20. Cowan, R.L., Fawver, B., **Lohse, K.R.**, Ford, P.R., & Williams, A.M., (under review). Modeling talent development pathways in alpine ski racers. *Psychology of Sport and Exercise*.
21. DeCouto, B.S., Williams, A.M., **Lohse, K.R.**, Creem-Regehr, S.H., Strayer, D.L., & Fino, P.C. (under review). Cognitive engagement rather than anxiety impacts postural control during a stressful video gaming task. *Experimental Brain Research.*
22. Wang, P., Hooyman, A., Schambra, H., **Lohse, K.R.**, Dettmer, A., & Schaefer, S.Y. (under review). Expectations from the general public about the efficacy of transcranial direct current stimulation for improving motor function. *Brain Stimulation*.

***Book Chapters***

1. **Lohse, K.R.,** & Bourne, L.E., Jr. (2012). Cognitive retraining following acquired brain injury. In A.F. Healy and L. E. Bourne, Jr. (Eds.), *Training cognition: Optimizing efficiency, durability, and generalizability* (pp. 307-325). London: Psychology Press.
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3. **Lohse, K.R.,** Wulf, G., & Lewthwaite, R. (2012). Attentional focus affects movement efficiency. In N. J. Hodges and A. M. Williams (Eds.), *Skill acquisition in sport: Research, theory & practice, 2nd Ed* (pp. 40-58). New York, NY: Routledge.
4. Hodges, N.J., & **Lohse, K.R.** (2014). Motor control. In R. Eklund and G. Tenebaum (Eds.), *Encyclopedia of sport and exercise psychology*. New York, NY: Sage Publications.
5. **Lohse, K.R.** (2015). On attentional control: A dimensional framework for attention in expert performance. In D. Farrow and J. Baker (Eds.), *Routledge handbook of sports expertise*. New York, NY: Routledge.
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8. **Lohse, K.R.,** Miller, M.W., Bacelar, M., & Krigolson, O. (*2020*). Errors, rewards, and reinforcement in motor skill learning. In N. J. Hodges and A. M. Williams (Eds.), *Skill acquisition in sport: Research, theory & practice, 3rd Ed*. New York, NY: Routledge.

***Pre-Prints (Not Peer-Reviewed)***

1. Caldwell, A. R., et al. (including **Lohse, K. R.**) (2019). Moving sport and exercise science forward: A call for the adoption of more transparent research practices. *SportRxiv*. doi: 10.31236/osf.io/fxe7a
2. **Lohse, K.R.,** Hawe, R.L., Dukelow, S.P., & Scott, S.H. (2020). Statistical considerations for drawing conclusions about recovery. *MedRxiv*. doi: 10.1101/19013060
3. Liew, S-L. et al. (including **Lohse, K.R.**) (2020). The ENIGMA Stroke Recovery Working Group: Big data neuroimaging to study brain-behavior relationships after stroke. *PsyArXiv*. doi: 10.31234/osf.io/wu7mh
4. **Lohse, K.R.**, Taylor, J.A., Butson, M., Knight, E.J., Sainani, K.S., & Vickers, A.J. (2020). Systematic Review of the use of “Magnitude-Based Inference” in Sports Science and Medicine. *SportRxiv*. doi: 10.31236/osf.io/wugcr
5. Faw, T.D., Lakhani, B., Liu, H., Nguyen, H.T., Schmalbroack, P., Knopp, M.V., **Lohse, K.R.**, Kramer, J.L.K., McTigue, D.M., Boyd, L.A., & Basso, M. (2020). Eccentric-focused rehabilitation promotes myelin plasticity in individuals with chronic, incomplete spinal cord injury. *MedRxiv*. doi: 10.1101/2020.04.27.20079970v1.
6. Lingo VanGilder, J., **Lohse, K.R.**, Duff, K., Wang, P., Schaefer, S.Y. (2020). Associations between Rey-Osterrieth Complex Figure test and motor skill learning in older adults. *bioRxiv*. doi: 10.1101/2020.09.27.315168
7. Pathania, A., Clark. M., Cowan, R., Euler, M.J., Duff, K., & **Lohse, K.R.** (2021). Relating resting EEG power spectra to age-related changes in cognitive performance: An observational pilot study. *bioRxiv*.

***Abstracts/Conference Presentations***

*(This is an abbreviated list showing what I consider my most substantive presentations.)*

1. **Lohse, K. R.** (2014, November). How much is more? Meta-analytic approaches to studying dose in rehabilitation. *American Society for Neurorehabilitation.* Part of a symposium with Lara Boyd and Catherine Lang. Washington DC, US.
2. **Lohse, K.R.,** Boyd, L.A., & Hodges, N.J. (2015). Engaging environments enhance motor learning in a computer gaming task. *North American Society for the Psychology of Sport and Physical Activity.* Portland, OR.
3. **Lohse, K.R.**, Buchanan, T.L., & Miller, M.W. (2015). Under-powered and over-worked: Problems with data analysis in motor learning studies. *North American Society for the Psychology of Sport and Physical Activity.* Portland, OR.
4. **Lohse, K.R.**, Boyd, L.A., & Lang, C.E. (2015, October). Centralized Open-Access Research (COAR): A database for stroke rehabilitation. *American Society of Neurorehabilitation*. Chicago, IL.
5. Bland, M.D., **Lohse, K.R.**, & Lang, C.E. (2016, May). Quantifying change during outpatient stroke rehabilitation: A retrospective regression analysis. *9th World Congress for Neurorehabilitation*. Philadelphia, PA.
6. Hayward, K.S., Schmidt, J.Y., **Lohse, K.R.**, et al. (2016, May). Severe upper limb impairment after neurological injury: A systematic review of individual data or brain-derived biomarkers. *9th World Congress for Neurorehabilitation*. Philadelphia, PA.
7. Leiker, A., Bruzi, A., Nelson, M., Wegman, R., Miller, M.W., & **Lohse, K.R.** (2016, June). The effects of self-controlled difficulty progression on engagement and learning in a computer gaming task. *North American Society for the Psychology of Sport and Physical Activity*. Montreal, QC.
8. **Lohse, K.R.** (2016, November). How do game mechanics in virtual environments impact motivation, engagement and motor learning in healthy young adults? In D. Levac (Chair), “Maximizing motivation and engagement during motor learning: insights from practice in a virtual environment” symposium at the 93rd *Annual Meeting of the American Congress of Rehabilitation Medicine*. Chicago, IL.
9. **Lohse, K.R.** (2016, November). Information architecture in rehabilitation trials: The Centralized Open-Access Rehabilitation Database for Stroke (SCOAR). In L. Sook-Liew and S. Cramer (Chairs), “’Big Data’ for Rehabilitation: Promises, Pitfalls, and Future Potential” symposium at the *Annual Meeting of the American Society of Neurorehabilitation*. San Diego, CA.
10. **Lohse, K.R.,** Pathania, A., Wegman, R., Boyd, L.A., & Lang, C.E. (2017, June). Insufficient reporting of control therapies in stroke rehabilitation trials: A systematic review and meta-analysis. *North American Society for the Psychology of Sport and Physical Activity*, San Diego, CA.
11. Hayward, K.S., Ferris, J.K., **Lohse, K.R.**, Cramer, S.C., Borich, M.R., Stewart, J.C., Borstad, A., Dukelow, S., Cassidy, J., Findlater, S., Neva, J.L., Liew, S.L., & Boyd, L.A. (2017, November). Regional diffusion differences in people with severe upper limb impairment post-stroke: A preliminary neuroimaging mega-analysis. Poster presentation at the *Annual Meeting of the American Society of Neurorehabilitation*. Washington DC.
12. **Lohse, K.R.**, (2018, June). Longitudinal data-analysis techniques in motor learning and development: A focus on time-varying covariates. Symposium presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*. Denver, CO.
13. **Lohse, K.R.**, (2018, June). Exploring Measurement and Methodology in Motor Behavior. Presentation at the *North American Society for the Psychology of Sport and Physical Activity*. Denver, CO. (*I gave this talk upon receipt of my Early Career Distinguished Scholar Award from NASPSPA*.)
14. **Lohse, K.R.**, Zheng, T., Greene, T., Kean, J., Presson, A., Shen, J.C. (2018, November). Inpatient Cognitive Rehabilitation following Traumatic Brain Injury: Main Effects and Patient by Therapy Interactions using Causal Inference Models. Poster presentation at the annual meeting of the *American Society for Neurorehabilitation*. San Diego, CA.
15. Hayward, K.S., Ferris, J.K., **Lohse, K.R.**, Borich, M.R., Cramer S.C., Borstad, A., Stewart, J.C., Cassidy, J., Neva, J.L., & Boyd, L.A. (2018, November). Severity of Impairment is Important when Exploring Biomarkers of Upper Limb Outcome Post-Stroke. Poster presentation at the annual meeting of the *American Society for Neurorehabilitation*. San Diego, CA. (*Won the 2018 Fletcher H. McDowell Award for the best clinical science abstract.*)
16. **Lohse, K.R.** (2019, October). Data visualization: From quality assurance to final publication. Part of “Reliability and Reproducibility in Neurorehabilitation Research” with Liew, S-L. and Finley, J.M. at the annual meeting of the *American Society for Neurorehabilitation*. Chicago, IL.
17. Pathania, A., Clark, M., Cowan, R., Williams, E., Raffegeau, T.E., Euler, M., Duff, K. & **Lohse, K.R.** (2020, June). Explaining age-related declines in cognitive and motor function with EEG power spectra: A cross-sectional feasibility study. Oral presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*.