

CURRICULUM VITAE

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DATE: January 2024

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EDUCATION:

Degrees:

Ph.D., 2019, Kinesiology & Applied Physiology, Rutgers University, New Brunswick, NJ

B.S., 2014, Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ

POSITIONS HELD:

Assistant Professor , University of Idaho, Moscow, ID	2022-Present
Director , Psychophysiology of Active Lifestyles Laboratory, University of Idaho, Moscow, ID	2022-Present
Postdoctoral Scholar , Florida State University, Tallahassee, FL	2019-2022
Instructor , Florida State University, Tallahassee, FL	2019-2021
Teaching Assistant , Rutgers University, New Brunswick, NJ	2014-2019
Research Assistant , Rutgers University, New Brunswick, NJ	2014-2019

SCHOLARSHIP ACCOMPLISHMENTS:

Publications:

Peer Reviewed/Evaluated:

Book Chapters (3)

1. **Brush, C. J.**, & Burani, K. (2021). Exercise and physical activity for depression. In Z. Zenko & L. Jones (Eds.), *Essentials of exercise and sport psychology: An open access textbook* (pp. 338-368). Society for Transparency, Openness, and Replication in Kinesiology.
2. Alderman, B. L., **Brush, C. J.**, & Bocchine, A. J. (2020). Depression treatment by exercise and physical activity. In D. Hackfort & R. J. Schinke (Eds.), *The Routledge international encyclopedia of sport and exercise psychology: Applied and practical measures (Volume 2)* (pp. 239-253). Routledge.
3. Alderman, B. L., **Brush, C. J.**, & Ehmann, P. J. (2019). Effects of exercise on anxiety and stress-sensitive psychopathology. In M. H. Anshel, S. J. Petruzzello, & E. E. Labbe (Eds.), *APA handbook of sport and exercise psychology: Volume 2* (pp. 345-361). American Psychological Association.

Journals (44)

1. **Brush, C. J.**, Keith, L. R., Santopetro, N. J., Burani, K., & Hajcak, G. (in press). Associations between physical activity, sedentary time, and neurocognitive function during adolescence: Evidence from accelerometry and the flanker P300. *Progress in Brain Research*.
2. Amir, N., Holbrook, A., Kallen, A., Santopetro, N., Klawohn, J., McGhie, S., Bruchnak, A., Lowe, M., Taboas, W., **Brush, C. J.**, & Hajcak, G. (2023, in press). Multiple adaptive attention bias

- modification programs to alter normative increase in the error-related negativity in adolescents. *Clinical Psychological Science*.
3. Thompson, B., Santopetro, N. J., **Brush, C. J.**, Foti, D., & Hajcak, G. (2023). Neural deficits in anticipatory and consummatory reward processing are uniquely associated with current depressive symptoms during adolescence. *Psychophysiology*, *60*(7), e14257.
 4. Santopetro, N. J., **Brush, C. J.**, Mulligan, E. M., & Hajcak, G. (2023). Influences of age and pubertal development on P300 amplitude trajectory across two years in female adolescents. *Developmental Cognitive Neuroscience*, *60*, 101212.
 5. Dell'Acqua, C., Hajcak, G., Amir, N., Santopetro, N. J., **Brush, C. J.**, & Meyer, A. (2023). Error-related brain activity in pediatric major depressive disorder: An ERP and time-frequency investigation. *International Journal of Psychophysiology*, *184*, 100-109.
 6. Burani, K., **Brush, C. J.**, Spahr, C., Slavich, G. M., Meyer, A., & Hajcak, G. (2023). Corporal punishment is uniquely associated with a greater neural response to errors and blunted neural response to rewards in adolescence. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, *8*(2), 210-218.
 7. Burani, K., **Brush, C. J.**, Shields, G. S., Klein, D. N., Nelson, B., Slavich, G. M., & Hajcak, G. (2023). Cumulative lifetime acute stressor exposure interacts with reward responsiveness to predict longitudinal increases in depression severity in adolescence. *Psychological Medicine*, *53*(10), 4507-4516.
 8. Bowyer, C. B., **Brush, C. J.**, Patrick, C. J., & Hajcak, G. (2023). Effort and appetitive responding in depression: Examining deficits in motivational and consummatory stages of reward processing using the effort-doors task. *Biological Psychiatry Global Open Science*, *3*(4), 1073-1082.
 9. Dell'Acqua, C., Hajcak, G., Amir, N., Santopetro, N. J., **Brush, C. J.**, & Meyer, A. (2023). Error-related brain activity: A time-domain and time-frequency investigation in pediatric obsessive compulsive disorder. *Psychophysiology*, *60*(4), e14216.
 10. **Brush, C. J.**, Kallen, A. M., Meynadasy, M. A., King, T., Hajcak, G., & Sheffler, J. L. (2022). The P300, loneliness, and depression in older adults. *Biological Psychology*, *171*, 108339.
 11. Santopetro, N. J., Mulligan, E. M., **Brush, C. J.**, & Hajcak, G. (2022). Reduced P300 amplitude is consistently associated with trait anhedonia across repeated assessments. *Psychophysiology*, *59*(12), e14127.
 12. Burani, K., **Brush, C. J.**, Shields, G. S., Klein, D. N., Nelson, B. D., Slavich, G. M., & Hajcak, G. (2022). Greater cumulative lifetime stressor exposure predicts blunted reward positivity in adolescent girls followed for 2 years. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, *7*(10), 1017-1024.
 13. Klawohn, J., Joyner, K., Santopetro, N., **Brush, C. J.**, & Hajcak, G. (2022). Depression reduces neural correlates of reward salience with increasing effort over the course of the progressive ratio task. *Journal of Affective Disorders*, *307*, 294-300.
 14. Meynadasy, M. A., **Brush, C. J.**, Sheffler, J., Mach, R., Carr, D., Kiosses, D., Hajcak, G., & Sachs-Ericsson, N. (2022). Emotion regulation and the late positive potential (LPP) in older adults. *International Journal of Psychophysiology*, *177*, 202-212.
 15. Dell'Acqua, C., **Brush, C. J.**, Burani, K., Santopetro, N. J., Klawohn, J., Messerotti Benvenuti, S., & Hajcak, G. (2022). Reduced electrocortical responses to pleasant pictures in depression: A brief report on time-domain and time-frequency delta measures. *Biological Psychology*, *170*, 108302.
 16. **Brush, C. J.**, Hajcak, G., Bocchine, A. J., Ude, A. A., Muniz, K. M., Foti, D., & Alderman, B. L. (2022). A randomized trial of aerobic exercise for major depression: Examining neural indicators of reward and cognitive control as predictors and treatment targets. *Psychological Medicine*, *52*(5), 893-903.
 17. Jordan, C. D., Stewart, R. A., **Brush, C. J.**, Cogle, J. R., & Hajcak, G. (2022). Appearance concerns are uniquely associated with LPP amplitude to pictures of oneself. *Social Cognitive and Affective Neuroscience*, *17*(4), 430-436.
 18. Burani, K., **Brush, C. J.**, Gallyer, A., Joiner, T., Nelson, B., & Hajcak, G. (2021). Maternal suicidality interacts with blunted reward processing to prospectively predict increases in depressive symptoms in 8-to-14-year-old girls. *International Journal of Psychophysiology*, *170*, 67-74.
 19. Santopetro, N. J., **Brush, C. J.**, Burani, K., Bruchnak, A., & Hajcak, G. (2021). Doors P300 moderates the relationship between reward positivity and current depression status in adults. *Journal of Affective Disorders*, *294*, 776-785.
 20. Klawohn, J., **Brush, C. J.**, & Hajcak, G. (2021). Neural responses to reward and pleasant pictures prospectively predict remission from depression. *Journal of Abnormal Psychology*, *130*(7), 702-

- 712.
21. **Brush, C. J.**, Burani, K., Schmidt, K. M., Santopetro, N. J., & Hajcak, G. (2021). The impact of a single session of aerobic exercise on positive emotional reactivity in depression: Insight into individual differences from the late positive potential. *Behaviour Research and Therapy*, *144*, 103914.
 22. Foell, J., Klawohn, J., Bruchnak, A., **Brush, C. J.**, Patrick, C. J., & Hajcak, G. (2021). Ventral striatal activation during reward differs between major depression with and without impaired mood reactivity. *Psychiatry Research: Neuroimaging*, *313*, 111298.
 23. Clayson, P. E., **Brush, C. J.**, & Hajcak, G. (2021). Data quality and reliability metrics for event-related potentials (ERPs): The utility of subject-level reliability. *International Journal of Psychophysiology*, *165*, 121-136.
 24. Ehmann, P. J., **Brush, C. J.**, Bernard, L., Dowden, R., Ogilvie, A., Wisniewski, P. J., Piersol, K., McCarthy, T., & Merrill, G. F. (2021). Influences on blood pressure in university students. *Clinical Medical Reviews and Reports*, *4*(1), 1-8.
 25. Santopetro, N. J., **Brush, C. J.**, Bruchnak, A., Klawohn, J., & Hajcak, G. (2021). A reduced P300 prospectively predicts increased depressive severity in adults with clinical depression. *Psychophysiology*, *58*(4), e13767.
 26. Bowyer, C., **Brush, C. J.**, Threadgill, H., Harmon-Jones, E., Treadway, M., Patrick, C. J., & Hajcak, G. (2021). The effort-doors task: Examining the temporal dynamics of effort-based reward processing using ERPs. *NeuroImage*, *228*, 117656.
 27. **Brush, C. J.**, Olson, R. L., Bocchine, A. J., Selby, E. A., & Alderman, B. L. (2020). Acute aerobic exercise increases respiratory sinus arrhythmia reactivity and recovery to a sad film among individuals at risk for depression. *International Journal of Psychophysiology*, *156*, 69-78.
 28. **Brush, C. J.**, Foti, D., Bocchine, A. J., Muniz, K. M., Gooden, M. J., Spaeth, A. M., Miller, M. W., & Alderman, B. L. (2020). Aerobic exercise enhances positive emotional reactivity in individuals with depressive symptoms: Evidence from neural responses to reward and emotional content. *Mental Health and Physical Activity*, *19*, 100339.
 29. **Brush, C. J.**, Bocchine, A. J., Olson, R. L., Ude, A. A., Dhillon, S. K., & Alderman, B. L. (2020). Does aerobic fitness moderate age-related cognitive slowing? Evidence from the P3 and lateralized readiness potentials. *International Journal of Psychophysiology*, *155*, 63-71.
 30. Lesnewich, L. M., Conway, F. M., Buckman, J. F., **Brush, C. J.**, Ehmann, P. J., Eddie, D., Olson, R. L., Alderman, B. L., & Bates, M. E. (2019). Associations of depression severity with heart rate and heart rate variability in young adults across normative and clinical populations. *International Journal of Psychophysiology*, *142*, 57-65.
 31. Ehmann, P. J., **Brush, C. J.**, Bozzini, B., Dowden, R. A., Ogilvie, A., Wisniewski, P. J., Bernard, L. P., & Merrill, G. F. (2019). The effects of salt and water loading on kidney function in healthy undergraduates. *Advances in Applied Physiology*, *4*(2), 11-18.
 32. **Brush, C. J.**, Olson, R. L., Ehmann, P. J., Bocchine, A. J., Bates, M. E., Buckman, J. F., Leyro, T. M., & Alderman, B. L. (2019). Lower resting cardiac autonomic balance in young adults with major depression. *Psychophysiology*, *56*(8), e13385.
 33. Alderman, B. L., Olson, R. L., & **Brush, C. J.** (2019). Using event-related potentials to study the effects of chronic exercise on cognitive function. *International Journal of Sport and Exercise Psychology*, *17*(2), 106-116.
 34. **Brush, C. J.**, Ehmann, P. J., Hajcak, G., Selby, E. A., & Alderman, B. L. (2018). Using multilevel modeling to examine blunted neural responses to reward in major depression. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, *3*(12), 1032-1039.
 35. Olson, R. L., **Brush, C. J.**, Ehmann, P. J., Buckman, J. F., & Alderman, B. L. (2018). A history of sport-related concussion is associated with sustained deficits in conflict and error monitoring. *International Journal of Psychophysiology*, *132*(Part A), 145-154.
 36. **Brush, C. J.**, Ehmann, P. J., Olson, R. L., Bixby, W. R., & Alderman, B. L. (2018). Do sport-related concussions result in long-term cognitive impairment? A review of event-related potential research. *International Journal of Psychophysiology*, *132*(Part A), 124-132.
 37. Olson, R. L., **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2017). A randomized trial of aerobic exercise on cognitive control in major depression. *Clinical Neurophysiology*, *128*(6), 903-913.
 38. Merrill, G. F., **Brush, C. J.**, Ehmann, P. J., & Bernard, L. P. (2017). Acetaminophen and frog skeletal muscle. *Trends in Cell & Molecular Biology*, *12*, 67-76.
 39. Ehmann, P. J., **Brush, C. J.**, Olson, R. L., Bhatt, S. N., Banu, A. H., & Alderman, B. L. (2016). Active workstations do not impair executive function in young and middle-age adults. *Medicine and*

- Science in Sports and Exercise*, 49(5), 965-974.
40. **Brush, C. J.**, Olson, R. L., Ehmann, P. J., Osovsky, S., & Alderman, B. L. (2016). Dose-response and time course effects of acute resistance exercise on executive function. *Journal of Sport & Exercise Psychology*, 38, 396-408.
 41. Olson, R. L., Chang, Y. K., **Brush, C. J.**, Kwok, A. N., Gordon, V. X., & Alderman, B. L. (2016). Neurophysiological and behavioral correlates of cognitive control during low and moderate intensity exercise. *NeuroImage*, 131, 171-180.
 42. Alderman, B. L., Olson, R. L., **Brush, C. J.** & Shors, T. J. (2016). MAP training: Combining meditation and aerobic exercise reduces depression and rumination while enhancing synchronized brain activity. *Translational Psychiatry*, 6, e726.
 43. Olson, R. L., **Brush, C. J.**, O'Sullivan, D. J., & Alderman, B. L. (2015). Psychophysiological and ergogenic effects of music in swimming. *Comparative Exercise Physiology*, 11(2), 79-87.
 44. Alderman, B. L., Olson, R. L., Bates, M. E., Selby, E. A., Buckman, J. F., **Brush, C. J.**, Panza, E. A., Kranzler, A., Eddie, D., & Shors, T. J. (2015). Rumination in major depressive disorder is associated with impaired neural activation during conflict monitoring. *Frontiers in Human Neuroscience*, 9, 269.

Abstract Publications with Presentations (57)

1. Burani, K., Klawohn, J., **Brush, C. J.**, Threadgill, H., & Hajcak, G. (2023). Error-related (ERN) and reward-related (RewP) event-related potentials: Comparison between a dry electrode and gel-based system. *Psychophysiology*, 60(S1), S154.
2. **Brush, C. J.**, Keith, L. R., & Hajcak, G. (2023). Physical activity and associations with reward responsiveness and internalizing symptoms of depression and anxiety in adolescence. *Journal of Sport & Exercise Psychology*, 45(S1), S65.
3. **Brush, C. J.**, Santopetro, N., Kallen, A., Burani, K., Winkler, A., & Hajcak, G. (2022). Associations between physical activity, sedentary behavior, and the P300 during adolescence. *Psychophysiology*, 59(S1), S157.
4. Dell'Acqua, C., **Brush, C. J.**, Burani, K., Santopetro, N., Klawohn, J., Messerotti Benvenuti, S., & Hajcak, G. (2022). Reduced electrocortical responses to pleasant pictures in depression: A time-domain and time-frequency delta analyses. *Psychophysiology*, 59(S1), S43.
5. Dell'Acqua, C., Hajcak, G., **Brush, C. J.**, Santopetro, & Meyer, A. (2022). Error-related neural activity in children with obsessive-compulsive disorder: A time-frequency investigation. *Psychophysiology*, 59(S1), S43.
6. Thompson, B., Santopetro, N., **Brush, C. J.**, & Hajcak, G. (2022). Reduced neural response to cue and feedback stimuli in the MID task predicts adolescent depressive symptomology. *Psychophysiology*, 59(S1), S122.
7. Kallen, A., **Brush, C.**, Patrick, C., & Hajcak, G. (2022). The P300 during a go/no-go task in adolescent depression: Within-task change and average amplitude differentially relate to anhedonia and negative mood, 59(S1), S133.
8. Santopetro, N., **Brush, C.**, Nelson, B., Hajcak, G., & Klein, D. (2022). Reductions in childhood doors-locked P300 amplitude predicts increased risk for depressive disorders during adolescence. *Psychophysiology*, 59(S1), S145.
9. Keith, L., **Brush, C. J.**, Hajcak, G., Kiosses, D., & Sachs-Ericsson, N. (2022). Psychometric properties of reward-related event-related potentials in older adults. *Psychophysiology*, 59(S1), S146.
10. Bowyer, C., **Brush, C. J.**, Patrick, C., & Hajcak, G. (2022). Dissecting the temporal dynamics of motivational and consummatory reward processing deficits in depression. *Psychophysiology*, 59(S1), S154.
11. **Brush, C. J.**, Hajcak, G., & Alderman, B. L. (2021). Neural indicators of performance monitoring in depression: The error-related negativity and reward positivity as targets and predictors of response to aerobic exercise. *Psychophysiology*, 58(S1), S20.
12. Kallen, A., **Brush, C. J.**, Meyer, A., & Hajcak, G. (2021). Differential within-task change of infrequent go and infrequent no-go P300 amplitude in adolescents. *Psychophysiology*, 58(S1), S33.
13. Santopetro, N., Mulligan, E., **Brush, C.**, & Hajcak, G. (2021). Effects of multiple assessment and depressive symptoms on P300 amplitude. *Psychophysiology*, 58(S1), S42.
14. Burani, K., **Brush, C. J.**, Shields, G., Slavich, G., Nelson, B., & Hajcak, G. (2021). Acute, but not chronic, lifetime stress exposure interacts with the RewP to prospectively predict increases in

- depressive symptoms. *Psychophysiology*, 58(S1), S44.
15. Meynadasy, M., **Brush, C. J.**, Sheffler, J., Kiosses, D., Sachs-Ericsson, N., & Hajcak, G. (2021). Internal consistency and stability of the late positive potential during an emotion regulation task in older adults. *Psychophysiology*, 58(S1), S82.
 16. **Brush, C. J.**, & Hajcak, G. (2021). Acute exercise effects on positive emotional reactivity in major depression: Evidence from the late positive potential. *Journal of Sport & Exercise Psychology*, 43, S58.
 17. Meynadasy, M., **Brush, C. J.**, Mach, R., Sheffler, J., Kiosses, D., Sachs-Ericsson, N., & Hajcak, G. (2020). Emotion regulation, depression, and the LPP in older adults. *Psychophysiology*, 57(S1), S9.
 18. Bruchnak, A., **Brush, C. J.**, Klawohn, J., & Hajcak, G. (2020). Examining the role of event-related potentials during self-referential processing in current and remitted depression. *Psychophysiology*, 57(S1), S53.
 19. Jordan, C., Stewart, R., **Brush, C. J.**, Cogle, J., & Hajcak, G. (2020). Appearance concerns are associated with neural response to self-relevant stimuli. *Psychophysiology*, 58(S1), S69.
 20. **Brush, C. J.**, Hajcak, G., & Alderman, B. L. (2020). Neural responsiveness to reward and cognitive control following an eight-week aerobic exercise trial for depression. *Medicine & Science in Sports & Exercise*, 52(7S), 680.
 21. Bocchine, A. J., **Brush, C. J.**, Ude, A. A., Pappas, G. H., Piersol, K. L., & Alderman, B. L. (2020). Does an acute bout of aerobic exercise bolster reactivity to a sad mood induction in clinically depressed individuals? A study of responders and non-responders. *Medicine & Science in Sports & Exercise*, 52(7S), 848-849.
 22. **Brush, C.**, Foti, D., Miller, M., Bocchine, A., Muniz, K., Gooden, M., & Alderman, B. L. (2019). Acute aerobic exercise boosts emotional reactivity to pleasant images but does not impact reward processing. *Psychophysiology*, 56(S1), S49.
 23. Pappas, G., Ude, A., Piersol, K., Bocchine, A., **Brush, C.**, Silverstein, S., Erickson, M., & Alderman, B. (2019). Does aerobic fitness protect against impaired cognition in first-episode psychosis? Evidence from the P3 and lateralized readiness potential. *Psychophysiology*, 56(S1), S64.
 24. Bocchine, A., **Brush, C.**, & Alderman, B. (2019). Aerobic fitness does not moderate the reward positivity across major depressive disorder and first-episode psychosis. *Psychophysiology*, 56(S1), S90.
 25. **Brush, C.**, Alderman, B., & Hajcak, G. (2019). Identifying optimal task length to elicit the largest between group effects in reward processing during a simple gambling task. *Psychophysiology*, 56(S1), S118.
 26. Ude, A., Pappas, G., **Brush, C. J.**, Bocchine, A., Silverstein, S., Erickson, M., & Alderman, B. (2019). The moderating role of aerobic fitness on cognition in first-episode schizophrenia: Evidence from the P3 event-related potential. *Journal of Sport & Exercise Psychology*, 41, S87.
 27. Bocchine, A., **Brush, C.**, Ude, A., Pappas, G., Muniz, K., & Alderman, B. (2019). Aerobic fitness moderates dynamic processing of negative emotional stimuli in depression. *Journal of Sport & Exercise Psychology*, 41, S55.
 28. Bocchine, A., Alderman, B., **Brush, C.**, & Margetich, A. (2019). The effects of acute and chronic exercise on anxiety sensitivity: A meta-analysis. *Annals of Behavioral Medicine*, 53(Suppl 1), S652.
 29. Bocchine, A., **Brush, C.**, Ehmann, P., & Alderman, B. (2018). Selective impairments in recognition memory among individuals with MDD. *Psychophysiology*, 55(S1), S101.
 30. Ehmann, P., **Brush, C.**, Bocchine, A., & Alderman, B. (2018). The reliability and convergent validity of the P3 cognitive ERP elicited by traditional flanker and oddball paradigms. *Psychophysiology*, 55(S1), S53.
 31. **Brush, C.**, Ehmann, P., Selby, E., Hajcak, G., & Alderman, B. (2018). Using multilevel modeling to examine blunted neural responses to reward in major depression. *Psychophysiology*, 55(S1), S49.
 32. Alderman, B., **Brush, C.**, & Ehmann, P. (2018). Influence of comorbid anxiety and depression on error-related brain activity. *Psychophysiology*, 55(S1), S72.
 33. Ehmann, P., **Brush, C.**, Bocchine, A., & Alderman, B. (2018). Acute aerobic exercise improves emotion regulation: Evidence from the late positive potential. *Journal of Sport & Exercise Psychology*, 40, S89-S90.
 34. Muniz, K., **Brush, C.**, Olson, R., Ehmann, P., Bocchine, A., & Alderman, B. (2018). Attentional focus manipulations on affective, exertional, and physiological responses to maximal exercise. *Journal of Sport & Exercise Psychology*, 40, S109.
 35. **Brush, C.**, Ehmann, P., Olson, R., Bocchine, A., & Alderman, B. (2018). Fitness as a moderator of the aging and cognition relationship: An ERP study. *Journal of Sport & Exercise Psychology*, 40,

S80.

36. Gooden, M., Muniz, K., **Brush, C.**, Ehmann, P., Bocchine, A., & Alderman, B. (2018). The effects of acute exercise on reward processing during a monetary gambling task. *Journal of Sport & Exercise Psychology, 40*, S92.
37. Radler, D., Griehs, R., Banu, A., **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2018). Relationship between changes in weight, physical activity & executive function. *Annals of Behavioral Medicine, 52*(Suppl 1), S93.
38. **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2018). Prediction of treatment response to exercise in adults with major depressive disorder. *Annals of Behavioral Medicine, 52*(Suppl 1), S769.
39. Bocchine, A., **Brush, C.**, Ehmann, P., & Alderman, B. (2017). Autonomic and behavioral responses to an emotional stroop task in high and low anxious individuals. *Psychophysiology, 54*(S1), S155.
40. **Brush, C. J.**, Ehmann, P. J., Olson, R. L., Bocchine, A. J., & Alderman, B. L. (2017). Characterizing treatment response to 8-weeks of aerobic exercise training in major depressive disorder. *Journal of Sport & Exercise Psychology, 39*, S228-S229.
41. Ehmann, P. J., **Brush, C. J.**, Olson, R. L., Bocchine, A. J., Bhatt, S. N., Banu, A. H., & Alderman, B. L. (2017). Age and task-specific moderators of the aerobic fitness and executive function relationship. *Journal of Sport & Exercise Psychology, 39*, S245-S246.
42. **Brush, C. J.**, & Alderman, B. L. (2017). The relation of fitness and life stress on the temporal dynamics of cognition in older adults: Evidence from the P3 and lateralized readiness potentials. *Medicine & Science in Sports & Exercise, 49*(5S), 993.
43. Bocchine, A. J., Olson, R. L., **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2017). Effects of an 8-week moderate-intensity aerobic exercise intervention on episodic memory and cognitive control. *Medicine & Science in Sports & Exercise, 49*(5S), 302.
44. Alderman, B. L., Olson, R. L., **Brush, C. J.**, Ehmann, P. J., & Shors, T. J. (2016). Combining aerobic exercise and focused-attention meditation to target cognitive control processes in major depressive disorder. *Psychophysiology, 53*(S1), S13.
45. **Brush, C. J.**, Olson, R. L., Ehmann, P. J., & Alderman, B. L. (2016). Effects of an 8-week moderate-intensity aerobic exercise intervention on conflict monitoring processes in major depressive disorder. *Psychophysiology, 53*(S1), S39.
46. Ehmann, P. J., **Brush, C. J.**, Olson, R. L., & Alderman, B. L. (2016). Resting cardiac autonomic balance (CAB) predicts current major depressive disorder. *Psychophysiology, 53*(S1), S75.
47. Olson, R. L., **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2016). Effects of an 8-week aerobic exercise intervention on ruminative thought patterns in major depressive disorder. *Medicine & Science in Sports & Exercise, 48*(5S), 316-317.
48. **Brush, C. J.**, Olson, R. L., Ehmann, P. J., & Alderman, B. L. (2016). The influence of sport-related concussion on autonomic and cognitive function. *Medicine & Science in Sports & Exercise, 48*(5S), 843.
49. Ehmann, P. J., Olson, R. L., **Brush, C. J.**, Maroldi, N. J., & Alderman, B. L. (2016). Sexual dimorphic association between cardiorespiratory fitness and cardiac autonomic responses to mental challenge. *Medicine & Science in Sports & Exercise, 48*(5S), 424.
50. Olson, R. L., **Brush, C. J.**, Ehmann, P. J., & Alderman, B. L. (2016). Effects of an 8-week aerobic exercise intervention on attention and cognitive control in major depressive disorder. *Journal of Sport & Exercise Psychology, 38*, S238-S239.
51. Ehmann, P. J., **Brush, C. J.**, Olson, R. L., Bhatt, S. N., Banu, A. H., & Alderman, B. L. (2016). Slow walking on a treadmill workstation does not impair executive functions. *Journal of Sport & Exercise Psychology, 38*, S184.
52. **Brush, C. J.**, Olson, R. L., Ehmann, P. J., James-Palmer, A. M., Schreier, C. D., & Alderman, B. L. (2016). Event-related potential indices of cognitive function in long-term yoga practitioners. *Journal of Sport & Exercise Psychology, 38*, S165.
53. Alderman, B. L., Olson, R. L., **Brush, C. J.**, & Alderman, B. L. (2015). Mental and physical (MAP) training as a neurobehavioral intervention for cognitive control and rumination in depression. *Psychophysiology, 52*(S1), S34.
54. Olson, R. L., **Brush, C. J.**, del Prado, K., & Alderman, B. L. (2015). Neural responses to food images in normal weight, overweight, and obese individuals. *Psychophysiology, 52*(S1), S75.
55. **Brush, C. J.**, Olson, R. L., Osovsky, S., & Alderman, B. L. (2015). Dose-response and time-course effects of acute resistance exercise on core executive functions. *Journal of Sport & Exercise Psychology, 37*, S99.
56. Alderman, B. L., Olson, R. L., **Brush, C. J.**, & Shors, T. J. (2015). Effects of a combined mental

and physical (MAP) training intervention on depressive symptoms, rumination, mindfulness, and aerobic fitness in major depressive disorder. *Journal of Sport & Exercise Psychology*, 37, S94.

57. **Brush, C. J.**, Olson, R. L., Townsend, M. A., Perucho, J. F., & Alderman, B. L. (2014). Concussion history and years of high-risk sport participation on cognitive control. *International Journal of Exercise Science: Conference Proceedings*, 9(3), 14.

Peer Reviewed/Evaluated (currently scheduled or submitted):

Journals (8)

1. Simon, J. R., Bruchnak, A., Klawohn, J., Santopetro, N. J., Burani, K., & Hajcak, G., & **Brush, C. J.** (submitted). Positive and negative self-referential emotional bias in current and remitted depression: Evidence from the late positive potential.
2. Burani, K., Klawohn, J., **Brush, C. J.**, Threadgill, A. H., & Hajcak, G. (under review). Recording event-related potentials: Comparison between a mobile dry and a stationary gel-based EEG system.
4. Burani, K., **Brush, C. J.**, Eckel, L., & Hajcak, G. (under review). Acute stress-induced reductions in neural response to reward are associated with acute stress-induced increases in cortisol.
5. Egan, C. A., Orendorff, K. L., Merica, C. B., & **Brush, C. J.** (under review). Movement my favorite thing to do at school: Children's perception of movement in school.
6. Dell'Acqua, C., Palomba, D., Cellini, N., **Brush, C. J.**, Ruggerone, A., & Messerotti Benvenuti, S. (under review). Reduced physical activity as a vulnerability factor for depression: Evidence from wrist-worn actigraphy.
7. Dluzniewski, A., Casanova, M., Ullrich-French, S., **Brush, C. J.**, Larkins, L., & Baker, R. (under review). Assessing the psychometric properties of the Injury Psychological Readiness to Return to Sport Scale (I-PRRS) in an injured physically active population.
8. Thompson, B., Meynadasy, M., Hajcak, G., & **Brush, C. J.** (under review). Accelerometer-measured and self-reported physical activity and sedentary time and their relationships with the P300 in a go/no-go task in older adults.

Presentations and Other Creative Activities:

Invited Presentations

1. Brush, C. J. (February, 2020). *Event-related potentials and their application to translational behavioral science*. Center for Translational Behavioral Science, Florida State University, Tallahassee, FL.
2. Brush, C. J. (June, 2019). *Benefits of physical activity on mental health*. Living Well: Rutgers Conference on Lifestyle and Health, Rutgers University, New Brunswick, NJ.
3. Brush, C. J. (March, 2018). *How does exercise reduce depression? Targeting cognitive and emotional biomarkers of depression*. Rutgers Robert Wood Johnson Medical School, Piscataway, NJ.

Professional Conference Presentations (without abstract publications)

1. Banu, L., Buckman, J., Olson, R., **Brush, C. J.**, Eddie, D., Peyser, D., Bates, M, Shors, T., & Alderman B. (2016). *Relationships between alcohol use, depression, and neurocardiac functioning* [Poster Presentation]. APA Division 50 Collaborative Perspectives on Addiction Annual Meeting, San Diego, CA.
2. Millon, E. M., Alderman, B., Olson, R., **Brush, C. J.**, & Shors, T. J. (2016). *Learning not to ruminate about the past with mental and physical (MAP) training* [Poster Presentation]. Eastern Psychological Association Annual Meeting, New York, NY.

Grants and Contracts Awarded:

Awarded

University of Idaho College of Education, Health and Human Sciences Huckabay Excellence Award

Title: Examining associations between physical activity and positive valence systems in young adults with depressive symptoms
 Role: PI
 Total costs:\$14,060
 Dates: 2023-Present

National Institutes of Health (NIH), National Institute of Mental Health (NIMH), F32 MH125504
 Ruth L. Kirschstein National Research Service Award – Postdoctoral Fellowship
 Title: Examining effort-based reward processing and lifetime stress in relation to depression during adolescence
 Role: PI
 Sponsor: Greg Hajcak, Ph.D.
 Consultants: Alexandria Meyer, Ph.D., George Slavich, Ph.D., Michael Treadway, Ph.D.
 Total costs: \$205,410
 Dates: 2021-2022
 (Note: 13 of 36 months of fellowship were completed before accepting position at University of Idaho)

National Institutes of Health (NIH), National Institute of Mental Health (NIMH), T32 MH093311
 Ruth L. Kirschstein National Research Service Institutional Training Grant Award – Predoctoral Fellowship
 Title: Neural risk markers of Alzheimer’s Disease and their modulation through exercise
 Role: Co-Mentor (PI: Melissa Meynadasy, M.S.)
 Total costs: \$60,540
 Dates: 2020-2022

Society for Psychophysiological Research
 Research Training Grant
 Title: Examining neural responses to reward and cognitive control in major depression using time-frequency and principal components analytical approaches
 Role: PI
 Sponsor: Dan Foti, Ph.D.
 Total costs: \$2,500
 Dates: 2018-2019

Honors and Awards:

International

Graduate Student Poster Award, Society for Psychophysiological Research, 2016

National

Doctoral Scholar Award, American Kinesiology Association, 2019

UC-Davis ERP Boot Camp Fellow, National Institute of Mental Health, 2016

University

Conference Travel Award, Rutgers University, 2015-2019

TEACHING ACCOMPLISHMENTS:

Areas of Specialization: Exercise and Health Psychology, Psychophysiology, Research Design and Analysis

Courses Taught:

University of Idaho (Instructor of Record)

PEP 499 Exercise and Mental Health Research, Fall 2023

MVSC 570 Research in Physical Activity, Theory and Design, Fall 2023

PEP 305 Applied Sports Psychology, Spring 2023, Summer, 2023, Fall 2023

PEP 499 Psychophysiology Research, Spring 2023

PEP 455 Design & Analysis of Research in Movement Sciences, Spring 2023

PEP 560 Sport Psychology, Fall 2022

Florida State University (Instructor of Record)

BSC 4900/4901 Directed Individual Study, Summer 2021-Fall 2021

PSY 4039 Honors Work, Summer 2021

CLP 3314 Health Psychology, Fall 2019-Fall 2021

Rutgers University (Teaching Assistant)

01:146:357 Systems Physiology Lab, Fall 2016-Spring 2019

01:119:115/116 General Biology I/II, Fall 2015, Spring 2016, Summer 2016

01:377:371 Exercise Physiology Lab, Spring 2015

Rutgers University (Instructor of Record)

01:377:140 Foundations of Exercise Science & Sport Studies, Fall 2014

Students Advised:

Undergraduate Students:

University of Idaho (as an Assistant Professor)

Academic Advisor: 6 students, 2023-Present

Mentor: 11 students in the Psychophysiology of Active Lifestyles Laboratory, 2023-Present

Mentor: 5 students in the Psychophysiology of Active Lifestyles Laboratory, 2022-2023

Florida State University (as a Postdoctoral Scholar)

Honors Project Mentor: 1 student in the Risk for Anxiety and Depression Laboratory, 2021-2022

Mentor: 6 students in the Risk for Anxiety and Depression Laboratory, 2021-2022

Mentor: 14 students in the Risk for Anxiety and Depression Laboratory, 2020-2021

Mentor: 7 students in the Risk for Anxiety and Depression Laboratory, 2019-2020

Rutgers University (as a Graduate Researcher)

Mentor: 22 students in the Exercise Psychophysiology Laboratory, 2018-2019

Mentor: 8 students in the Exercise Psychophysiology Laboratory, 2018-2019

Mentor: 15 students in the Exercise Psychophysiology Laboratory, 2016-2017

Mentor: 14 students in the Exercise Psychophysiology Laboratory, 2015-2016

Mentor: 10 students in the Exercise Psychophysiology Laboratory, 2014-2015

Graduate Students:

University of Idaho (as an Assistant Professor)

Mentor: 2 students in the Psychophysiology of Active Lifestyles Laboratory, 2023-Present

Committee Member: Gena Irwin, M.S., Movement and Leisure Sciences, 2023-Present

Committee Member: Alexandra Dluzniewski, Ph.D., Education (Exercise Science Emphasis), 2022-2023

Florida State University (as a Postdoctoral Scholar)

Mentor: 10 Ph.D. students in the Risk for Anxiety and Depression Laboratory, 2021-2022

Mentor: 10 Ph.D. students in the Risk for Anxiety and Depression Laboratory, 2020-2021

Mentor: 8 Ph.D. students in the Risk for Anxiety and Depression Laboratory, 2019-2020

Courses Developed:

Florida State University

CLP 3314 Health Psychology, Fall 2020 (online)

CLP 3314 Health Psychology, Fall 2019

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

Seminars

1. Brush, C. J. (March, 2023). *Physical activity as an antidepressant: Understanding how, why, and for whom?* Seminar presented to the College of Education, Health and Human Sciences, University of Idaho, Moscow, ID.

Workshops

1. Hajcak, G., & Brush, C. J. (October, 2019). *Introduction to advanced signal processing approaches using EEG data*. Workshop presented to the Department of Psychology, Florida State University, Tallahassee, FL.

Invited Guest Lectures

1. Brush, C. J. (Fall 2023). *Overview of conducting psychophysiological research in an exercise psychology laboratory*. Lecture presented to PEP 495 Practicum in Exercise Science & Health. Department of Movement Sciences, University of Idaho, Moscow, ID.
2. Brush, C. J. (Spring 2023). *Brief overview of learning how to conduct exercise and mental health research*. Lecture presented to PEP 498 Internship in Exercise Science & Health. Department of Movement Sciences, University of Idaho, Moscow, ID.
3. Brush, C. J. (Fall 2021). *Psychophysiological mechanisms of anxiety and depression*. Lecture presented to PSY 3213C Research Methods. Department of Psychology, Florida State University, Tallahassee, FL.
4. Brush, C. J. (Spring 2019). *A basic introduction into human-subjects research and conducting ethical research*. Lecture presented to 16:572:505 Research Methods in Exercise Science. Department of Kinesiology & Health, Rutgers University, New Brunswick, NJ.
5. Brush, C. J. (Spring 2018). *Using statistical techniques to guide basic research design*. Lecture presented to 16:572:505 Research Methods in Exercise Science. Department of Kinesiology & Health, Rutgers University, New Brunswick, NJ.
6. Brush, C. J. (Summer 2017). *Exercise as a treatment for depression*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
7. Brush, C. J. (Summer 2017). *Using psychophysiological techniques in exercise psychology research*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
8. Brush, C. J. (Summer 2017). *Integrating and implementing theories of physical activity behavior science*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
9. Brush, C. J. (Summer 2016). *Exercise and cognitive function: Acute and chronic effects and methodological approaches*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
10. Brush, C. J. (Summer 2016). *Integrating and implementing theories of physical activity behavior science*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
11. Brush, C. J. (Spring 2016). *An introduction to the event-related brain potential technique: Recording and measurement considerations*. Lecture presented to 01:090:293 Interdisciplinary Honors Seminar: One Mind, Two Languages. School of Arts & Sciences, Rutgers University, New Brunswick, NJ.
12. Brush, C. J. (Spring 2015). *Exploring exercise science: An introduction to exercise and sport psychology research using neuroscientific techniques*. Lecture presented to 01:090:120 First-Year Interest Group Seminar in Exercise Science. School of Environmental & Biological Sciences, Rutgers University, New Brunswick, NJ.
13. Brush, C. J. (Summer 2015). *Theories of physical activity and exercise behavior*. Lecture presented to 01:377:455 Exercise Psychology. Department of Exercise Science & Sport Studies, Rutgers University, New Brunswick, NJ.
14. Brush, C. J. (Fall 2014). *Exercise and mental health: An overview of psychological outcomes and emotional wellbeing*. Lecture presented to 01:830:341 Abnormal Psychology Lab. Department of Psychology, Rutgers University, New Brunswick, NJ.

Honors and Awards:

Teaching Assistant Professional Development Award, Rutgers University, Summer 2015-Summer 2018

SERVICE:**Major Committee Assignments:**

International

Education and Training Committee, Society for Psychophysiological Research, 2021-Present

College

Equity Research Events Committee, Center for Translational and Behavioral Science, Florida State University, 2019

Departmental

Tenure & Promotion Committee Member, Movement Sciences, University of Idaho, 2023
 Student Scholarship Ad Hoc Committee, Movement Sciences, University of Idaho, 2023-Present
 PhD in Movement Sciences Ad Hoc Committee, Movement Sciences, University of Idaho, 2022-Present
 MVSC 201 Curriculum Committee, Movement Sciences, University of Idaho, 2022-Present
 M.S./M.L.S. Curriculum Committee, Movement Sciences, University of Idaho, 2022-Present
 Departmental Chair Faculty Search Committee, Kinesiology and Health, Rutgers University, 2017
 Tenure-Track Faculty Search Committee, Kinesiology and Health, Rutgers University, 2016

Professional and Scholarly OrganizationsMemberships

American College of Sports Medicine, 2014-Present
 American College of Sports Medicine Mid-Atlantic Chapter, 2014
 Association for Behavioral and Cognitive Therapies, 2019-2020
 North American Society for Psychology of Sport and Physical Activity, 2015-Present
 Society of Behavioral Medicine, 2018
 Society for Psychophysiological Research, 2014-Present

Recommender Board (Note: At PCI, recommenders serve the role of associate editors.)

PCI Health & Movement Sciences, Recommender, 2022-Present

Ad Hoc Journal Reviewer for

Aging & Mental Health
 Behavior Research Methods
 Biological Psychiatry: Cognitive Neuroscience and Neuroimaging
 Biological Psychology
 BMJ Open
 Brain and Behavior
 Cerebral Cortex
 Cognitive, Affective, & Behavioral Neuroscience
 Cognitive Development
 Cognitive Processing
 Cortex
 Frontiers in Human Neuroscience
 Frontiers in Psychology
 Frontiers in Psychiatry
 International Journal of Psychophysiology
 International Reviews of Sport & Exercise Psychology
 Journal of Affective Disorders
 Journal of Psychopathology and Clinical Science (formerly Journal of Abnormal Psychology)
 Journal of Sport & Exercise Psychology
 Journal of Strength & Conditioning Research
 Mental Health and Physical Activity
 Nursing Open
 PLoS One
 Psychological Medicine
 Psychological Reports
 Psychology of Sport & Exercise
 Psychophysiology

Research Quarterly for Exercise and Sport
 Scientific Reports
 Sustainability
 Theoretical Issues of Ergonomic Science

Textbook Reviewer for
 The Sport List at Routledge Books

Grant Reviewer for
 National Science Centre of Poland
 The Wellcome Trust of the United Kingdom

Outreach:

News Articles

Bergland, C. (2020, August 25). *New clues about the antidepressant power of aerobic exercise*. Psychology Today. <https://www.psychologytoday.com/us/blog/the-athletes-way/202008/new-clues-about-the-antidepressant-power-aerobic-exercise>

Ellwood, B. (2020, December 16). *A single exercise session can boost emotional reactivity to positive content among those with depressive symptoms*. PsyPost. <https://www.psypost.org/2020/12/a-single-exercise-session-can-boost-emotional-reactivity-to-positive-content-among-those-with-depressive-symptoms-58813>

Holohan, M. (2016, May 2). *The power of meditation: Growing research shows all the ways it's good for us*. Today. <https://www.today.com/series/one-small-thing/power-meditation-growing-research-shows-all-ways-it-s-good-t88991>

Reynolds, G. (2016, March 16). *Meditation plus running as a treatment for depression*. The New York Times Well Blog. <https://archive.nytimes.com/well.blogs.nytimes.com/2016/03/16/meditation-plus-running-as-a-treatment-for-depression/>

PROFESSIONAL DEVELOPMENT: (workshops and seminars attended)

Teaching:

Attended the Following Workshops

Florida State University Learning Management Systems and Canvas Training, 2019

Rutgers University Teaching Assistant Project: Preparing for the Professoriate Workshops, 2016

Rutgers University Teaching Assistant Project Workshops for Professional Development, 2014-2017

Rutgers University Teaching Assistant Orientation, 2014

Scholarship:

Attended the Following Workshops

University of Idaho & Lewis-Clark State College INBRE Professional Development Roundtables, 2022-Present

University of Idaho Office of Research and Economic Development NIH Funding Success Program Part 1, 2022

Florida State University Office of Research Compliance Responsible Conduct of Research Workshop, 2021

Florida State University-University of Florida K Scholar Program, 2020-2022

Florida State University Office of Postdoctoral Affairs Career Development Workshops, 2019-2022

“What You Need to Know about Writing Grants: Tips and Techniques from Experts” Pre-Conference Workshop at the Society of Behavioral Medicine Annual Meeting, 2018

University of California at Davis Center for Mind & Brain ERP Boot Camp, 2016

Rutgers University Brain Imaging Center (RUBIC) Neuroimaging NSF Training, 2015

Rutgers University GradFund Mentoring Program for Securing External Funding, 2014-2015

NIH Ethical Scientific Conduct Course at Rutgers University, 2014

“What is Cognitive Science?” Talk Series at Rutgers Center for Cognitive Science, 2014-2018

University of California at Davis Center for Mind & Brain Mini ERP Boot Camp Pre-Conference Workshop at the Society for Psychophysiological Research Annual Meeting, 2014

Attended the Following Seminars

Mind and Body Balance: Understanding the Role of Physical Health in Mental Illness, Metro South Health

Addiction and Mental Health Services, Queensland, Australia (Attended Online), November 2022
Rutgers University Center of Alcohol Studies Emerging Addiction Science Seminar Series, 2018-2019
Rutgers University Structural Equation Modeling and Multilevel Modeling Seminar Course, 2017

Attended the Following Conferences

North American Society for the Psychology of Sport and Physical Activity Annual Meeting, June 2023
Society for Psychophysiological Research Annual Meeting, Vancouver, BC, CA, September/October 2022
Society for Psychophysiological Research Annual Meeting, Virtual, September 2021
North American Society for the Psychology of Sport and Physical Activity Annual Meeting, Virtual, June 2021
American College of Sports Medicine Annual Meeting, Virtual, May/June 2020
Association for Behavioral and Cognitive Therapies Annual Meeting, Atlanta, GA, November 2019
Society for Psychophysiological Research Annual Meeting, Washington, D.C., September 2019
Society for Psychophysiological Research Annual Meeting, Quebec City, QC, CA, September/October 2018
North American Society for the Psychology of Sport and Physical Activity Annual Meeting, June 2018
Society of Behavioral Medicine Annual Meeting, April 2018
North American Society for the Psychology of Sport and Physical Activity Annual Meeting, June 2017
American College of Sports Medicine Annual Meeting, May/June 2017
Society for Psychophysiological Research Annual Meeting, September 2016
North American Society for the Psychology of Sport and Physical Activity Annual Meeting, June 2016
American College of Sports Medicine Annual Meeting, May/June 2016
Society for Psychophysiological Research Annual Meeting, September/October 2015
North American Society for the Psychology of Sport and Physical Activity Annual Meeting, June 2015
American College of Sports Medicine Mid-Atlantic Annual Meeting, October 2014
Society for Psychophysiological Research Annual Meeting, September 2014
American College of Sports Medicine Annual Meeting, May/June 2014

Other Training and Certifications:

Rutgers University Animal Laboratory Safety Training Workshop, 2016-2018
Collaborative Institutional Training Initiative (CITI) Human Subjects Training, 2015-Present
Rutgers University Laboratory Safety Training Workshop, 2012-2019