Lauren B. Raine

Curriculum Vitae

Work Address

Department of Kinesiology & Community Health
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Education

2011- Present	Illinois Transdisciplinary Obesity Prevention Program Scholar
2010	Bachelor of Science in Kinesiology University of Illinois at Urbana-Champaign Degree awarded with honor

Professional Interests

Research Interests:

My research interest is in neurocognitive kinesiology; specifically the relationships between physical activity, fitness, and (excess) body mass on brain health and cognition in children. I have examined the above relationships using behavioral and neuroelectric measures to study the influence of acute and chronic physical activity on cognition. I am also interested in the relationship between body composition and cognition, as the obesity epidemic continues to spread in children. I hope to gain a better understanding of the relationship between body composition and cognitive health that will lead to an increased awareness about the inactivity levels of children and the vast health problems associated with it.

Professional Experience

Research Experience:

2011: Post Bachelors Laboratory Technician, Neurocognitive Kinesiology Laboratory, University of Illinois, Urbana Champaign, IL

2007- 2010: Undergraduate Research Assistant, Neurocognitive Kinesiology Laboratory, University of Illinois, Urbana Champaign, IL

Scholarship

Peer Reviewed Journal Articles:

1. Kamijo, K., Pontifex, M. B., Khan, N., **Raine, L.**, Scudder, M., Drollete, E., Evans, E., Castelli, D., & Hillman, C. H. (in press). The negative association of childhood obesity to the cognitive control of action monitoring. *Cerebral Cortex.* doi: 10.1093/cercor/bhs349

2. Pontifex, M. B., Saliba, B. J., **Raine, L. B.**, Picchietti, D. L., & Hillman, C. H. (in press). Exercise improves behavioral, neurocognitive, and scholastic performance in children with ADHD. *Journal of Pediatrics.* doi:10.1016/j.jpeds.2012.08.036 (PMID: 23084704)

3. Chaddock, L., Hillman, C. H., Pontifex, M. B., Johnson, C. R., **Raine, L. B.**, & Kramer, A. F. (2012). Childhood aerobic fitness predicts cognitive performance one year later. *Journal of Sport Sciences, 30*, 421-430. doi:10.1080/02640414.2011.647706 (PMID: 22260155)

4. Hillman, C. H., Pontifex, M. B., Motl., R. W., O'Leary, K. C., Johnson, C. R., Scudder, M. R., **Raine, L. B.**, & Castelli, D. M. (2012). From ERPs to academics. *Developmental Cognitive Neuroscience, 2S*, S90-S98. doi:10.1016/j.dcn.2011.07.004 (PMCID: PMC3295229)

5. Kamijo, K., Khan, N. A., Pontifex, M. B., Scudder, M. R., Drollette, E. S., **Raine, L. B.**, Evans, E. M., Castelli, D. M., & Hillman, C. H. (2012). The relation of adiposity to cognitive control and scholastic achievement in preadolescent children. *Obesity*, *20,* 2406-2411. doi:10.1038/oby.2012.112 (PMID: 22546743)

6. Kamijo, K., Pontifex, M. B., Khan, N. A., **Raine, L. B.**, Scudder, M. R., Drollette, E. S., Evans, E. M., Castelli, D. M., & Hillman, C. H. (2012). The association of childhood obesity to neuroelectric indices of inhibition. *Psychophysiology, 49*, 1361-1371. doi:10.1111/j.1469-8986.2012.01459.x (PMID: 22913478)

7. Pontifex, M. B., **Raine, L. B.**, Johnson, C. R., Chaddock, L., Voss, M. W., Cohen, N. J., Kramer, A. F., & Hillman, C. H. (in press). Cardiorespiratory fitness and the flexible modulation of cognitive control in preadolescent children. Journal of Cognitive Neuroscience. (PMCID: 20521857)

8. Voss, M., Chaddock, L., Kim, J., VanPatter, M., Pontifex, M. B., **Raine, L. B.**, Cohen, N., Hillman, C. H., & Kramer, A. F. (2011). Aerobic fitness is associated with greater efficiency of the network underlying cognitive control in preadolescent children. *Neuroscience, 199*, 166-176. doi:10.1016/j.neuroscience.2011.10.009 (PMCID: PMC3237764)

9. Wu, C.-T., Pontifex, M. B., **Raine, L. B.**, Chaddock, L., Voss, M. W., Kramer, A. F., & Hillman, C. H. (in press). Aerobic fitness and response variability in preadolescent children performing a cognitive control task. *Neuropsychology*.

10. Chaddock, L., Erickson, K. I., Prakash, R. S., Kim, J. S., Voss, M. W., VanPatter, M., Pontifex, M. B., **Raine, L. B.**, Konkel, A., Hillman, C. H., Cohen, N. J., & Kramer, A. F. (2010). A neuroimaging investigation of the association between aerobic fitness, hippocampal volume and memory performance in preadolescent children. *Brain Research, 1358*, 172-183.

11. Chaddock, L., Erickson, K. I., Prakash, R. S., VanPatter, M., Voss, M. W., Pontifex, M. B., **Raine, L. B.**, Hillman, C. H., Kramer, A. F. (2010). Basal ganglia volume is associated aerobic fitness in preadolescent children. Developmental Neuroscience, 32, 249-256. (PMCID: 20693803)

12. Hillman, C. H., Pontifex, M. B., **Raine, L. B.**, Castelli, D. M., Hall, E. E., & Kramer, A. F. (2009). The Effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience, 159, 1044-1054. (PMCID: 19356688)

Manuscripts Submitted for Review:

1. Moore, R. D., Wu, C., Pontifex, M. B., O'Leary, K. C., Scudder, M. R., **Raine, L. B.**, Johnson, C. R., & Hillman, C. H. (submitted). Aerobic fitness and intra-individual variability of neurocognition in preadolescent children.

Abstracts:

1. Drollette, E. S., Pontifex, M. B., Scudder, M. R., **Raine, L. B.**, Saliba, B. J., & Hillman, C. H. (2012). Acute exercise modulates P3 amplitude for children who need it most: An ERP study of individual differences using the flanker task. *Psychophysiology, 49*, S89.

2. Kamijo, K., Pontifex, M. B., Khan, N. A., **Raine, L. B.**, Scudder, M. R., Drollette, E. S., Evans, E. M., Castelli, D. M., & Hillman, C. H. (2012). Childhood obesity and action monitoring. *Psychophysiology, 49*, S89.

3. Pontifex, M. B., Kamijo, K., Scudder, M. R., **Raine, L. B.**, Khan, N. A., Evans, E. M., Castelli, D. M., & Hillman, C. H. (2012). The differential association between adiposity, fitness, and cognitive control in preadolescent children. *Psychophysiology, 49*, S100.

4. Scudder, M. R., Federmeier, K. D., **Raine, L. B.**, Direito, A., Boyd, J., Hillman, C. H. (2012). The association between aerobic fitness and semantic processing in children. *Psychophysiology, 49*, S89.

5. Khan, N. A., **Raine, L. B.**, Drollette, E., Scudder, M. R., Pontifex, M. B., Castelli, D. M., Hillman, C. H., Donovan, S. M., & Evans, E. M. (2012). Television viewing and intake of added sugars are related to central adiposity in prepubertal children. *The Journal of the Federation of American Societies for Experimental Biology, 26, 369.5.*

6. Pontifex, M. B., Saliba, B. J., **Raine, L. B.**, Picchietti, D. L., & Hillman, C. H. (2012). Acute exercise enhances inhibition in children with ADHD. *Medicine & Science in Sports & Exercise, 44*, S105.

7. Chien-Ting, W., Pontifex, M. B., O'Leary, K. C., Scudder, M. R., **Raine, L. B.**, Johnson, C. R., & Hillman, C. H. (2011). Aerobic fitness and intra-individual variability on neurocognitive function in preadolescent children. *Medicine & Science in Sports & Exercise, 43*, S174.

8. Pontifex, M. B., , O'Leary, K. C., **Raine, L. B.**, Chien-Ting, W., Drollette, E. S., Castelli, D. M., & Hillman, C. H. (2011). The beneficial effects of fitness training on neurocognitive function in preadolescent children. *Medicine & Science in Sports & Exercise, 43*, S176.

9. Chaddock, L., Erickson, K., I., Prakash, R. S., Kim, J. S. Voss, M. W., VanPatter, M., Pontifex, M. B., **Raine, L. B.**, Konkel, A., Hillman, C. H., Cohen, N. J., & Kramer, A. F. (2010). A Neuroimaging investigation of the association between aerobic fitness, hippocampal volume and memory performance in preadolescent children. *Journal of Cognitive Neuroscience,* SB82.

10. Pontifex, M. B., O'Leary, K. C., Johnson, C. R., Scudder, M. R., **Raine, L. B.**, Motl, R. W., Castelli, D. M., & Hillman, C. H. (2010). From ERPs to academics. *Psychophysiology, 47,* S42.

11. Wu, C., Pontifex, M. B., O'Leary, K. C., Scudder, M. R., **Raine, L. B.**, Johnson, C. R., & Hillman, C. H. (2010). Aerobic fitness and intra-individual variability in preadolescent children. *Psychophysiology, 47,* S43.

12. Pontifex, M. B., **Raine, L. B.**, Chaddock, L., VanPatter, M., Voss, M. W., Kim, J. S., Cohen, N. J., Kramer, A. F., & Hillman, C. H. (2009). Fitness and the modulation of cognitive control in preadolescent children. *Psychophysiology, 46,* S37.

13. Pontifex, M. B., **Raine, L. B.**, Witten, B. N., Castelli, D. M., Hall, E. E., Hillman, C. H. (2008). The Effects of acute aerobic exercise on the cognitive control of attention and academic achievement in preadolescent children. *Psychophysiology, 45,* S36.

<u>Poster Presentations (not included in Abstracts):</u>

1. Olson, E. A., Drollette, E. S., **Raine, L. B.**, Hillman, C., & McAuley E. *Working Memory Efficiency in Older Adults with Type 2 Diabetes*. Poster presentation at the 7th World Congress on Prevention of Diabetes and its Complications. Madrid, Spain, November 2012.

2. Kamijo, K., Khan, N. A., Pontifex, M. B., Scudder, M. R., Drollette, E. S., **Raine, L. B.**, Evans, E. M., Castelli, D. M., & Hillman, C. H. (2011). The negative relation of adiposity to cognitive health in preadolescent children: Perspectives on academic achievement. Poster presented at the ACSM Conference on Physical Activity, Cognitive Function, and Academic Achievement: Moving Students to Better Performance. Washington: DC.

3. Pontifex, M. B., Saliba, B. J., **Raine, L. B.**, Picchietti, D. L., & Hillman, C. H. (2011). Enhancing inhibition in children with ADHD: The effect of a single bout of physical activity. Poster presented at the ACSM Conference on Physical Activity, Cognitive Function, and Academic Achievement: Moving Students to Better Performance. Washington: DC.

4. **Raine, L. B.**, Pontifex, M. B., Scudder, M. R., O'Leary, K. C., Wu, C. T., Drollette, E. S., Castelli, D. M., & Hillman, C. H. (2011). The FITKIDS Trial: The beneficial effects of a 9-month activity intervention on preadolescent cognition. Poster presented at the ACSM Conference on Physical Activity, Cognitive Function, and Academic Achievement: Moving Students to Better Performance. Washington: DC.

5. Hillman, C. H., Pontifex, M. B., **Raine, L. B.**, Castelli, D. M., Hall, E. E., & Kramer, A. F. (2009). The Effects of acute aerobic exercise on the cognitive control of attention and academic achievement in preadolescent children. Poster presented at the 2009 Biennial Meeting of the Society for Research in Child Development, Denver, CO.

6. **Raine, L. B.**, Hillman, C. H., Pontifex, M. B., Castelli, D. M., Hall, E. E., & Kramer, A. F. (2009). The Effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Poster presented at the 2009 CHAD, Health and Wellness Initiative Symposium, University of Illinois at Urbana-Champaign, IL.

Professional Affiliations

2011-Present Society for Psychophysiological Research

2011-Present American College of Sports Medicine

Professional Development

Fall 2008- Spring 2009	Bio Psych Lab
2011-Present	Brain and Cognition Weekly Brownbag Seminar Series, Beckman Institute for Advanced Science and Technology
2012-Present	Certified Phlebotomist
June 2012	Runner Up in Abbott Innovation University Challenge
Summer 2012	MPH Praticum completed with Lurie Children's Hospital, Chicago Il
Fall 2012	Student Representative on Search Committee for Public Health Epidemiology Candidate