

Mark R. Scudder, B. S.

Updated January 12, 2016

Work Address

Department of Kinesiology and Community Health
University of Illinois at Urbana-Champaign
316 Louise Freer Hall
906 South Goodwin Avenue
Urbana, IL 61801
Phone: 217-333-3893
Email: msscudde2@illinois.edu
<http://kch.illinois.edu/Research/Labs/neurocognitive-kinesiology/>

Education

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| 2009 – Present | Doctoral Candidate, Department of Kinesiology and Community Health, emphasis in Biobehavioral Kinesiology
University of Illinois, Urbana-Champaign, IL
Anticipated graduation date: Summer, 2016
Advisor: Charles H. Hillman, Ph.D. |
| 2007 – 2009 | Bachelor of Science, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign
Degree awarded with highest honors. |

Professional Experience

Research Experience:

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| 2009 – Present | Doctoral Research Assistant, Neurocognitive Kinesiology Laboratory
University of Illinois, Urbana-Champaign, IL
Responsible for participant recruitment, data collection, reduction, and analysis including the creation of experimental protocols, implementation of task design, database management, and equipment preparation for multiple studies that examine the relationship between physical activity/fitness and cognitive function using electroencephalography and indirect calorimetry systems. Additional duties include the coordination, training, and supervision of undergraduate and graduate research activities (Laboratory Director: Charles Hillman, Ph.D.). |
| 2008 – 2009 | Undergraduate Research Assistant, Neurocognitive Kinesiology Laboratory
University of Illinois, Urbana-Champaign, IL
Responsible for participant recruitment, data collection, and reduction including the implementation of task design, and equipment preparation for multiple studies involving the relationship between physical activity and |

cognitive function using electroencephalography, and indirect calorimetry systems. (Laboratory Director: Charles Hillman, Ph.D.).

Teaching Experience:

Fall 2013 – Present	Social Science of Human Movement (KIN 140) Head Teaching Assistant Responsibilities include overseeing and directing weekly discussion sections, including the modification/updating of class presentation and grading materials. Portions of the main lecture are also periodically taught. Class topics include psychological and sociological concepts related to sport and exercise participation (e.g., gender equality, media, social class, etc.).
Fall 2009 – Spring 2012	Motor Development, Growth & Form (KIN 262) Teaching Assistant Responsibilities included the coordination of multiple discussion sections (~ 100 students), instructing students about concepts surrounding motor development, physical growth, and coordination throughout the lifespan. Major emphasis was placed on the period of birth through adolescence. Additional responsibilities included designing new class assignments centered on student-led research at the UIUC Child Development Lab.
Guest Lectures	Intro to Sport Psychology (KIN 247) – Spring 2011 Title: Measuring the effects of physical activity and fitness on cognitive performance using neuroelectric activity. Psychology of Sport Performance (KIN 447) – Fall 2012 & 2014 Title: Theory of Emotion in Sport

Funded Research Involvement:

FITKids/FITKids2	An afterschool physical activity intervention in children to investigate if improvements in cardiorespiratory fitness lead to better cognitive performance, from both behavioral and neuroelectric perspectives (NIH R01 HD055352, HD069381).
A+PAAC	A cluster randomized controlled physical activity intervention with the goal of determining if physical activity in the 2 nd and 3 rd grade classroom improves childhood health and cognitive/academic performance. In collaboration with the Energy Balance Laboratory at the University of Kansas Medical Center (NIH R01 DK 085317).

Honors

Fall 2013 – Spring 2015	University of Illinois List of Teachers Ranked as Excellent by Their Students (KIN 140).
Fall 2009 – Spring 2012	University of Illinois List of Teachers Ranked as Excellent by Their Students (KIN 262).

Funding

Internal Grants:

1. University of Illinois at Urbana-Champaign, Department of Kinesiology and Community Health Conference Travel Grant, "Increases in children's aerobic capacity over 2 years predict greater improvements in cognitive control", \$100 (funded, Spring 2015).
2. University of Illinois at Urbana-Champaign, Department of Kinesiology and Community Health Conference Travel Grant, "The association between aerobic fitness and language processing in children", \$100 (funded, Fall 2012).
3. University of Illinois at Urbana-Champaign, Graduate College Conference Travel Grant, "A single bout of aerobic exercise improves goal maintenance during a cognitive control task", \$200 (funded, Spring 2011).

Scholarships:

1. Awarded a NIH funded scholarship to attend the 10-day ERP Boot Camp held at the University of California, Davis. The boot camp offers a deep exploration of the ERP technique from many of the top experts in the field (funded, July 2014).

Publications

Peer-Reviewed Journal Articles *(In print or accepted):*

1. **Scudder, M. R.**, Drollette, E. S., Szabo-Reed, A. N., Lambourne, K., Donnelly, J. E., & Hillman, C. H. (in press). Tracking the relationship between children's aerobic fitness and cognitive control. *Health Psychology*.
2. Moore, R. D., Pindus, D. M., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, & Hillman, C. H. (2015). The persistent influence of concussion on attention, executive control and neuroelectric function in preadolescent children. *International Journal of Psychophysiology*.
3. Khan, N. A., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Cohen, N. J., Kramer, A. F., & Hillman, C. H. (2015). The relationship between total water intake and cognitive control among prepubertal children. *Annals of Nutrition & Metabolism*, 66, 38-41.
4. Moore, R. D., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Pindus, D. M., & Hillman, C. H. (in press). The persistent influence of pediatric concussion on attention and cognitive control during flanker performance. *Biological Psychology*.
5. Raine, L. B., **Scudder, M. R.**, Saliba, B. J., Kramer, A. F., Hillman, C. H. (in press). Aerobic fitness and context processing in preadolescent children. *Journal of Physical Activity and Health*.

6. Khan, N. A., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, & Hillman, C. H. (in press). The relation of saturated fats and dietary cholesterol to childhood cognitive flexibility. *Appetite*.
7. Drollette, E. S., **Scudder, M. R.**, Raine, L. B., Moore, R. D., Pontifex, M. B., Erickson, K. I., & Hillman, C. H. (in press). The sexual dimorphic association of cardiorespiratory fitness to working memory in children. *Developmental Science*.
8. **Scudder, M. R.**, Khan, N. A., Lambourne, K., Drollette, E. S., Herrmann, S. D., Betts, J. L., Washburn, R. A., Donnelly, J. E., & Hillman, C. H. (2015). Cognitive control in preadolescent children with risk factors for metabolic syndrome. *Health Psychology, 34*, 243-252.
9. Khan, N. A., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Kramer, A. F., & Hillman, C. H. (2015). Dietary fiber is positively associated with cognitive control among prepubertal children. *The Journal of Nutrition, 145*, 143-149.
10. Khan, N. A., Baym, C. L., Monti, J. M., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Moore, R. D., Kramer, A. F., Hillman, C. H., & Cohen, N. J. (2015). Central adiposity is negatively associated with hippocampal-dependent relational memory among overweight and obese children. *Journal of Pediatrics, 166*, 302-308.
11. Pontifex, M. B., Kamijo, K., **Scudder, M. R.**, Raine, L. B., Khan, N. A., Hemrick, B., Evans, E. M., Castelli, D. M., Frank, K. A., & Hillman, C. H. (2014). The differential association of adiposity and fitness with cognitive control in preadolescent children. *Monographs of the Society for Research in Child Development, 79*, 1-189.
12. Hillman, C. H., Pontifex, M. B., Castelli, D. M., Khan, N. A., Raine, L. B., **Scudder, M. R.**, Drollette, E. S., Moore, R. D., Wu, C.-T., & Kamijo, K. (2014). Effects of the FITKids randomized controlled trial on executive control and brain function. *Pediatrics, 134*, 1063-1071.
13. **Scudder, M. R.**, Federmeier, K. D., Raine, L. R., Direito, A., Boyd, J., & Hillman, C. H. (2014). The association between aerobic fitness and language processing in children: Implications for academic achievement. *Brain and Cognition, 87*, 140-152.
14. Moore, R. D., Drollette, E. S., **Scudder, M. R.**, Bharij, A., & Hillman, C. H. (2014). The influence of cardiorespiratory fitness on strategic, behavioral, & electrophysiological indices of arithmetic cognition in preadolescent children. *Frontiers in Human Neuroscience, 8*:258, 1-14.
15. Baym, C. L., Khan, N. A., Monti, J. M., Raine, L. B., Drollette, E. S., Moore, R. D., **Scudder, M. R.**, Kramer, A. F., Hillman, C. H., & Cohen, N. J. (2014). Dietary lipids are differentially associated with hippocampal-dependent relational memory in prepubescent children. *American Journal of Clinical Nutrition, 99*, 1026-1033.
16. Khan, N. A., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Pontifex, M. B., Castelli, D. M., Donovan, S. M., Evans, E. M., & Hillman, C. H. (2014). Impact of the FITKids physical activity intervention on adiposity in prepubertal children. *Pediatrics, 133*, 875-883.
17. Drollette, E. S., **Scudder, M. R.**, Raine, L. B., Moore, R. D., Saliba, B. J., Pontifex, M. B., & Hillman, C. H. (2014). Acute exercise facilitates brain function and cognition in children who need it most: An ERP study of individual differences in inhibitory control capacity. *Developmental Cognitive Neuroscience, 7*, 53-64.

18. **Scudder, M. R.**, Lambourne, K., Drollette, E. S., Herrmann, S., Washburn, R., Donnelly, J. E., & Hillman, C. H. (2014). Aerobic capacity and cognitive control in elementary school-age children. *Medicine & Science in Sport & Exercise*, *46*, 1025-1035.
19. Chaddock-Heyman, L., Erickson, K. I., Voss, M. W., Powers, J. P., Knecht, A. M., Pontifex, M. B., Drollette, E. S., Moore, R. D., Raine, L. B., **Scudder, M. R.**, Hillman, C. H., & Kramer, A. F. (2013). White matter microstructure is associated with cognitive control in children. *Biological Psychology*, *94*, 109-115.
20. Donnelly, J. E., Greene, J. L., Gibson, C. A., Sullivan, D. K., Hansen, D. M., Hillman, C. H., Poggio, J., Mayo, M. S., Smith, B. K., Lambourne, K., Herrmann, S. D., **Scudder, M.**, Betts, J. L., Honas, J. J., & Washburn, R. A. (2013). Physical activity and academic achievement across the curriculum (A + PAAC): rationale and design of a 3-year, cluster-randomized trial. *BMC Public Health*, *13*, 307-321.
21. Moore, R. D., Wu, C.-T., Pontifex, M. B., O'Leary, K. C., **Scudder, M. R.**, Raine, L. B., Johnson, C. R., & Hillman, C. H., &. (2013). Aerobic fitness and intra-individual variability of neurocognition in preadolescent children. *Brain and Cognition*, *82*, 43-57.
22. 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. (2014). The negative association of childhood obesity to the cognitive control of action monitoring. *Cerebral Cortex*, *24*, 654-662. doi: 10.1093/cercor/bhs349
23. **Scudder, M. R.**, Drollette, E. S., Pontifex, M. B., & Hillman, C. H. (2012). Neuroelectric indices of goal maintenance following a single bout of physical activity. *Biological Psychology*, *89*, 528-531.
24. 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.
25. Pontifex, M. B., **Scudder, M. R.**, Drollette, E. S., & Hillman, C. H. (2012). Fit and vigilant: The relationship between poorer aerobic fitness and failures in sustained attention during preadolescence. *Neuropsychology*, *26*, 407-413.
26. 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.
27. 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*, *25*, S90-S98.
28. Pontifex, M. B., Drollette, E. S., **Scudder, M. R.**, Johnson, C. R., Broglio, S. P., & Hillman, C. H. (2012). The relation of mild traumatic brain injury to chronic lapses of attention. *Research Quarterly for Exercise and Sport*, *83*, 553-559.
29. Kamijo, K., Pontifex, M. B., O'Leary, K. C., **Scudder, M. R.**, Wu, C., Castelli, D. M., & Hillman, C. H. (2011). The effects of an afterschool physical activity program on working memory in preadolescent children. *Developmental Science*, *14*, 1046-1058.

30. Hillman, C. H., Kamijo, K., & **Scudder, M.** (2011). A review of chronic and acute physical activity participation on neuroelectric measures of brain health and cognition during childhood. *Preventive Medicine, 52*, S21-S28.
31. O'Leary, K. C., Pontifex, M. B., **Scudder, M. R.**, Brown, M. L., & Hillman, C. H. (2011). The effects of single bouts of aerobic exercise, exergaming, and videogame play on cognitive control. *Clinical Neurophysiology, 122*, 1518-1525.
32. Pontifex, M. B., **Scudder, M. R.**, Brown, M., O'Leary, K. C., Wu, C., Themanson, J. R., & Hillman, C. H. (2010). On the number of trials necessary for stabilization of error-related brain activity across the lifespan. *Psychophysiology, 47*, 767-773.

Manuscripts Submitted for Review:

1. Drollette, E. S., **Scudder, M. R.**, Raine, L. B., Pontifex, M. B., & Hillman, C. H. (2015). The sexual dimorphic patterns of word recall performance during and after moderate intensity walking.
2. Chaddock-Heyman, L., Erickson, K. I., Chappell, M. A., Kienzler, C., Johnson, C. L., Knecht, A., Drollette, E. S., Raine, L. B., **Scudder, M. R.**, Kao, S-C., Hillman, C. H., & Kramer, A. F. (2015). Aerobic fitness is associated with greater hippocampal cerebral blood flow in children.
3. Pindus, D. M., Drollette, E. S., **Scudder, M. R.**, Khan, N. A., Raine, L. B., Sherar, L. B., Esliger, D. W., Kramer, A. F., & Hillman, C. H. (2015). Associations among moderate-to-vigorous physical activity, indices of cognitive control, and academic achievement in preadolescents.
4. Kao, S-C., Drollette, E. S., **Scudder, M. R.**, Raine, L. B., Pontifex, M. B., Westfall, D. R., & Hillman, C. H. (2015). Aerobic fitness facilitates task performance of inhibitory control in preadolescent children.
5. Moore, R. D., Pindus, D. M., Drollette, E. S., **Scudder, M. R.**, Raine, L. B., Ellemberg, D., & Hillman, C. H. (2015). A targeted neuropsychological examination of the long-term influence of pediatric concussion on cognitive function.
6. Westfall, D. R., Kao, S-C., **Scudder, M. R.**, Pontifex, M. B., & Hillman, C. H. (2015). The association between aerobic fitness and congruency sequence effects in preadolescent children.

Abstracts/Posters *(In print or accepted)*:

1. **Scudder, M. R.**, Drollette, E. S., Raine, L. B., Pontifex, M. B., Moore, R. D., Kao, S.-C., Khan, N. A., Kramer, A. F., & Hillman, C. H. (2015). The influence of socioeconomic factors on neuroelectric, cognitive, and academic achievement in preadolescent children. *Society for Psychophysiological Research Annual Meeting*.
2. Drollette, E. S., Raine, L. B., **Scudder, M. R.**, Pontifex, M. B., Moore, R. D., Kao, S.-C., Pindus, D. M., Khan, N. A., Kramer, A. F., & Hillman, C. H. (2015). Dimorphic sex differences in conflict monitoring and the flexible modulation of cognitive control in young children: An ERP investigation. *Society for Psychophysiological Research Annual Meeting*.

3. **Scudder, M. R.**, Drollette, E. S., Lambourne, K., Henley, K. R., Szabo, A. N., Fenton, C. I., Donnelly, J. E., & Hillman, C. H. (2014). Increases in children's aerobic capacity over 2 years predict greater improvements in cognitive control. *American College of Sport Medicine's 62nd Annual Meeting*.
4. Khan, N. A., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, Kao, S. C., Kramer, A. F., Donovan, S. M., & Hillman, C. H. (2014). Gestational deficits have selectively negative long-term effects on cognitive control among female preadolescents. *Experimental Biology Annual Meeting*.
5. **Scudder, M. R.**, Khan, N. A., Lambourne, K., Drollette, E. S., Herrmann, S. D., Betts, J. L., Washburn, R. A., Donnelly, J. E., & Hillman, C. H. (2014). The influence of aerobic fitness and metabolic syndrome risk factors on cognitive control in elementary age children. *International Society for Behavioral Nutrition and Physical Activity Annual Meeting*.
6. Drollette, E. S., Komisarz, C. E., **Scudder, M. R.**, Raine, L. B., & Hillman, C. H. (2014). Maintenance of scholastic performance and brain function during and following an acute bout of cycling in 9- to 10-year-old children. *Society for Psychophysiological Research Annual Meeting*.
7. Drollette, E. S., Khan, N. A., Raine, L. B., **Scudder, M. R.**, Moore, R. D., Komisarz, C. E., Kramer, A. F., & Hillman, C. H. (2014). The sexual dimorphic pattern of central adiposity on ERPs in 8- to 10-year-old children. *Society for Psychophysiological Research Annual Meeting*.
8. Raine, L. B., Pontifex, M. B., Khan, N. A., **Scudder, M. R.**, Drollette, E. S., Moore, R. D., Wu, C.-T., Kamijo, K., Castelli, D. M., & Hillman, C. H. (2014). The FITKids randomized controlled trial: Effects of physical activity on cognitive and brain health in children. *Society for Psychophysiological Research Annual Meeting*.
9. Moore, R. D., Pindus, D. M., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, & Hillman, C. H. (2014). Wear your helmet! The persistent influence of pediatric concussion on cognitive control. *Society for Psychophysiological Research Annual Meeting*.
10. Drollette, E. S., **Scudder, M. R.**, Moore, R. D., Raine, L. B., Pontifex, M. B., & Hillman, C. H. (2014). The relation of sex differences to fitness and working memory in preadolescent children. *American College of Sport Medicine's 61st Annual Meeting*.
11. Moore, R. D., Pindus, D. M., Raine, L. B., Drollette, E. S., **Scudder, M. R.**, & Hillman, C. H. (2014). The persistent influence of pediatric concussion on behavioral and neural indices of attention and cognitive control. *Development, Functions and Disorders of the Nervous System 2014: Joint Meeting of the 20th Biennial Meeting of the International Society for Developmental Neuroscience and the 5th Annual NeuroDevNet Brain Development Conference*.
12. Moore, R. D., Drollette, E. S., **Scudder, M. R.**, Bharij, A., & Hillman, C. H. (2014). The influence of aerobic fitness on strategic, behavioral, & neuroelectric indices of arithmetic cognition in children. *Development, Functions and Disorders of the Nervous System 2014: Joint Meeting of the 20th Biennial Meeting of the International Society for Developmental Neuroscience and the 5th Annual NeuroDevNet Brain Development Conference*.
13. Raine, L. B., Saliba, B., **Scudder, M. R.**, Kramer, A. F., & Hillman, C. H. (2014). Cardiorespiratory fitness and context processing in preadolescent children. *Cognitive Neuroscience Society Annual Meeting*.

14. Drollette, E. S., **Scudder, M. R.**, Moore, R. D., Raine, L. B., Pontifex, M. B., & Hillman, C. H. (2014). The differential relation of sex on fitness and working memory in pre-pubertal children. *Cognitive Neuroscience Society Annual Meeting*.
15. Khan, N. A., Raine, L. B., Drollette, E., **Scudder, M.**, Cohen, N. J., Kramer, A. F., & Hillman, C. H. (2014). Associations between diet quality and cognitive control in childhood. *Experimental Biology Annual Meeting*.
16. **Scudder, M. R.**, Khan, N. A., Lambourne, K., Herrmann, S., Drollette, E. S., Washburn, R., Donnelly, J. E., & Hillman, C. H. (2013). Aerobic fitness and HDL cholesterol are independently associated with children's cognitive performance. *American College of Sport Medicine's 60th Annual Meeting*.
17. Drollette, E. S., Komisarz, C. E., **Scudder, M. R.**, Raine, L. B., Hillman, C. H. (2013). Modulation of brain function in children during and after exercise. *American College of Sport Medicine's 60th Annual Meeting*.
18. Raine, L. B., Khan, N. A., Drollette, E., **Scudder, M.**, Cohen, N. J., Kramer, A. F., & Hillman, C. H. (2013). Towards a better understanding of the negative relationship between adiposity and cognitive health in prepubertal children. *FASEB Journal*.
19. **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. *Society for Psychophysiological Research Annual Meeting*.
20. 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 fatness, fitness, and cognitive control. *Society for Psychophysiological Research Annual Meeting*.
21. 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. *Society for Psychophysiological Research Annual Meeting*.
22. 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. *Society for Psychophysiological Research Annual Meeting*.
23. **Scudder, M. R.**, Raine, L. B., Direito, A., Boyd, J., Federmeier, K. D., & Hillman, C. H. (2012). Aerobic fitness and semantic processing during sentence reading in 9-10 year old children. *Cognitive Neuroscience Society Annual Meeting*.
24. **Scudder, M. R.**, Drollette, E. S., Pontifex, M. B., Paras, F., & Hillman, C. H. (2011). Neuroelectric indices of goal maintenance following moderate aerobic exercise. *Society for Psychophysiological Research Annual Meeting*.
25. Kamijo, K., Pontifex, M. B., **Scudder, M. R.**, Drollette, E. S., Khan, N. A., Castelli, D. M., Evans, E. M., & Hillman, C. H. (2011). Body mass and inhibitory control in preadolescent children. *Society for Psychophysiological Research Annual Meeting*.

26. 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 FIT Kids trial: The beneficial effects of a 9-month physical activity intervention on preadolescent cognition. *Society for Psychophysiological Research Annual Meeting*.
27. Khan, N. A., Richey, A. L., Drollette, E. S., **Scudder, M. R.**, Pontifex, M. B., Castelli, D. M., Hillman, C. H., & Evans, E. M. (2011). Maternal level of education is negatively related to television watching and adiposity in prepubertal children. *Society for Nutritional Education*.
28. Kamijo, K., Pontifex, M. B., O'Leary, K. C., **Scudder, M. R.**, Wu, C.-T., Castelli, D. M., & Hillman, C. H. (2011). Aerobic fitness and brain health in preadolescent children. *European Journal of Sports Sciences*.
29. **Scudder, M. R.**, Drollette, E. S., Pontifex, M. B., & Hillman, C. H. (2011). A single bout of aerobic exercise improves goal maintenance during a cognitive control task. *American College of Sport Medicine's 58th Annual Meeting*.
30. Pontifex, M. B., **Scudder, M. R.**, O'Leary, K. C., Raine, L. B., Wu, C.-T., Drollette, E. S., Castelli, D. M., & Hillman, C. H. (2011). The beneficial effects of fitness training on neurocognitive function in preadolescent children. *American College of Sport Medicine's 58th Annual Meeting*.
31. Kamijo, K., Pontifex, M. B., O'Leary, K. C., **Scudder, M. R.**, Wu, C.-T., Castelli, D. M., & Hillman, C. H. (2011). An afterschool physical activity program improves working memory in preadolescent children. *American College of Sport Medicine's 58th Annual Meeting*.
32. Khan, N. A., Richey, A. L., Drollette, E. S., **Scudder, M. R.**, Pontifex, M. B., Castelli, D. M., Hillman, C. H., & Evans, E. M. (2011). Gender and race differences in bone mineral density, fat, and lean mass among black and white prepubertal children. *The Journal of the Federation of American Societies for Experimental Biology*, 25, 332.
33. 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.
34. Wu, C.-T., 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.
35. O'Leary, K. C., **Scudder, M. R.**, Brown, M. L., Gilbert, T. R., Flynn, Z. A., Pontifex, M. B., & Hillman, C. H. (2010). The effects of single bouts of aerobic exercise, videogame play, and exergaming on attentional control. *Psychophysiology*, 47, S42.
36. Pontifex, M. B., **Scudder, M. R.**, Brown, M. L., O'Leary, K. C., Wu, C.-T., Themanson, J. R., & Hillman, C. H. (2009). Stabilization of error-related brain activity across the lifespan. *Psychophysiology*, 46, S37.

Presentations & Symposia *(not included in Abstracts)*

1. Johnson, M. B., Fenton, C. I., Drollette, E. S., **Scudder, M. R.**, & Hillman, C. H. (2015). Aerobic fitness is selectively associated with better cognitive performance for task conditions requiring greater demand. *Poster presented at the Annual Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois Champaign-Urbana*.

2. Szabo-Reed, A. N., **Scudder, M. R.**, Ptomey, L., Lambourne, K., Hansen, D., Hillman, C. H., & Donnelly, J. E. (2015). Physical activity across the curriculum (A+PAAC): Baseline cognition in elementary aged children and beyond. *American College of Sport Medicine's 62nd Annual Meeting*.
3. Pindus, D. M., Khan, N. A., Drollette, E. S., Moore, R. D., **Scudder, M. R.**, Raine, L. B., Sherar, L. B., Biddle, S. J. H., Castelli, D. M., & Hillman, C. H. (2014). Physical activity intervention and changes in cognitive control in pre-pubertal children: Does intensity matter? Insights from the FITKids randomized controlled trial. *International Society for Behavioral Nutrition and Physical Activity*.
4. Rodriguez, V., Hagan, H. C., Urban, R. W., Drollette, E. S., Raine, L. B., **Scudder, M. R.**, & Hillman, C. H. (2013). Body mass index is related to academic achievement in preadolescent girls, but not boys. *Poster presented at the Annual Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois Champaign-Urbana*.
5. Dixon, M., Drollette, E. S., Raine, L. B., **Scudder, M. R.**, & Hillman, C. H. (2013). Maintenance of academic achievement during an acute bout of exercise in children. *Poster presented at the Annual Undergraduate Research Symposium and the Annual Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois Champaign-Urbana*.
6. Neufeld, M. W., Chang, M. A., Silverman, E. R., Drollette, E. S., **Scudder, M. R.**, Raine, L. B., & Hillman, C. H. (2013). The effects of physical activity duration and intensity on BMI and fitness in children. *Poster presented at the Annual Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois Champaign-Urbana*.
7. Lamb, E. M. B., Drollette, E. S., Raine, L. B., **Scudder, M. R.**, & Hillman, C. H. (2013). Fitness selectively modulates aspects of academic achievement in children. *Poster presented at the Annual Undergraduate Research Symposium and the Annual Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois Champaign-Urbana*.
8. **Scudder, M. R.**, Raine, L. B., Direito, A., Boyd, J., Federmeier, K. D., & Hillman, C. H. (2011). The relation of aerobic fitness on vocabulary and academic achievement: an event-related brain potential study. *American College of Sport Medicine's Physical Activity, Cognitive Function, and Academic Achievement Conference*.
9. 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. *American College of Sport Medicine's Physical Activity, Cognitive Function, and Academic Achievement Conference*.
10. Raine, L. B., Kamijo, K., **Scudder, M. R.**, Wu, C.-T., Drollette, E. S., Pontifex, M. B., Castelli, D. M., & Hillman, C. H. (2011). The beneficial effects of an afterschool physical activity program on preadolescent cognition: the FITKids trial. *American College of Sport Medicine's Physical Activity, Cognitive Function, and Academic Achievement Conference*.

Games for Health Journal	2014
Journal of Neural Transmission	2015
Journal of Sport and Health Science	2015
Pediatrics	2015
Physiology and Behavior	2012
Scandinavian Journal of Medicine and Science in Sports	2014

Professional Development

2013 – 2015	Bi-monthly Seminar for EEG/ERP Methodology (UIUC, Beckman Institute)
2010	How to win a NIH/Kirschstein/F30-F31 Predoctoral Fellowship Workshop (UIUC)
2010	UIUC Center for Teaching Excellence Development Workshops <ul style="list-style-type: none"> - <i>Graduate Student Time Management Strategies</i> - <i>Quick and Simple Classroom Assessment Techniques</i> - <i>More Complex Classroom Assessment Techniques</i> - <i>Interpreting ICES Results</i> - <i>Advising and Mentoring Our Students</i>
2009 – 2014	Weekly Seminar for Topics on Brain and Cognition (UIUC, Beckman Institute)

Certifications

2010	UIUC Center for Teaching Excellence, Graduate Teaching Certificate
2007 – Present	Certified in American Red Cross CPR/First Aid

Professional Affiliations

2014	International Society for Behavioral Nutrition and Physical Activity
2011 – Present	Cognitive Neuroscience Society
2010 – Present	American College of Sports Medicine
2009 – Present	Society for Psychophysiological Research

Media Coverage of Research

1. American Kinesiology Association (2014). Reading cognition and fitness are positively linked in kids. *Kinesiology Today*, 7(3), 9.
http://www.americankinesiology.org/AcuCustom/Sitename/DAM/129/AKA_Summer_2014_final.pdf
2. UIUC News Bureau (June 3, 2014). Brain signals link physical fitness to better language skills in children. http://news.illinois.edu/news/14/0603language_CharlesHillman.html