



## Candidate for At-Large Member

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**Megan Holmes, PhD**

*Mississippi State University*

I am honored to be considered for the position of Member-at-Large for the Southeastern Chapter of the American College of Sports Medicine (SEACSM). As an Associate Professor of Kinesiology and Director of the Physical Activity and Wellness Laboratory at Mississippi State University, I have dedicated my career to advancing our understanding of physical activity's impact on health, particularly in children. My work emphasizes the relationships between psychosocial stress, metabolic health, and childhood obesity. Currently, I co-lead a CDC High Obesity Program grant focused on implementing a Family Healthy Weight Program in the Mississippi Delta, utilizing a community-based participatory approach.

Throughout my career, I have recognized the critical role professional organizations play in fostering collaboration and advancing the field. My involvement with organizations like ACSM has allowed me to network with thought leaders, engage in translational research discussions, and coauthor impactful publications such as the Physical Activity Alliance call to action paper, *Physical Activity Recommendations for Children and Adolescents: More Important Than Ever-- Physical Activity Recommendations for Middle School Youth*.

As a member of the executive board, I would focus on increasing student engagement and professional development opportunities. I envision initiatives like a targeted workshop series and enhanced financial resources for student participation in meetings. These efforts aim to strengthen the pipeline of future leaders in exercise science and sports medicine.

I believe my experience, passion, and commitment to advancing health through physical activity align closely with the mission of the Southeastern Chapter of ACSM. I would be honored to serve and contribute to the continued growth and success of this organization.

**Megan E. Holmes, Ph.D.**  
299-3 Morrill Rd, Mississippi State University  
P.O. Box 6186  
Mississippi State, Mississippi 39759  
Email: mholmes@colled.msstate.edu

## **Education**

**Michigan State University**, August 2006 to December 2011

Doctor of Philosophy Degree: Kinesiology

Concentration: Exercise Physiology

Internal cognate: Epidemiology and Behavior of Physical Activity

External cognate: Epidemiology

Dissertation: *Physical Activity and Fitness: Moderators of the Stress-Metabolic Syndrome Relationship?*

**Iowa State University**, August 2004 to May 2006

Master of Science Degree: Exercise and Sport Science

Emphasis: Biological Basis of Physical Activity/Exercise Physiology

Thesis: *Physical Activity, Stress, and the Metabolic Syndrome in 8-18 yr old Boys.*

**University of Nebraska at Kearney**, August 1999 to May 2004

Bachelor of Science Degree: Exercise Science

Emphasis: Sports Nutrition

Internship: *University of Nebraska at Kearney – Human Performance Lab*

## **Professional Experience**

2019 – present	Associate Professor, Department of Kinesiology, Mississippi State University
2011 – 2019	Assistant Professor, Department of Kinesiology, Mississippi State University
2019 – present	Board Member, Institutional Review Board for the Protection of Human Subjects in Research Committee, Mississippi State University
2018 – present	Director, Physical Activity and Wellness Laboratory, Mississippi State University
2018 – present	Myrlie Evers-Williams Institute for the Elimination of Health Disparities Affiliate Member, University of Mississippi Medical Center
Summer 2018	Mississippi Center for Clinical and Translational Research, 2018 Community-Engaged Research Summer Institute, Selected Participant, University of Mississippi Medical Center
08/2010 – 05/2011	Adjunct Faculty, Department of Kinesiology, Lansing Community College
08/2010 – 06/2011	Cadaver Lab Supervisor and Prosector, Michigan State University – Division of Human Anatomy, Department of Radiology, Colleges of Osteopathic and Human Medicine

- 08/2006 – 05/2011 Graduate Research Assistant, Michigan State University – Departments of Kinesiology and Epidemiology
- 08/2004 – 07/2006 Graduate Research Assistant, Iowa State University
- 08/2003 – 07/2004 Lab Assistant and Adult Fitness Program (AFP) Coordinator, Human Performance Lab, University of Nebraska at Kearney

## Awards

### *Mississippi State University*

2017 Clyde Muse Service Award, College of Education, Mississippi State University

2015 American Education Research Association Leadership for Social Justice Bridge Award

### *Student/Mentee Achievements (Mississippi State University)*

Ian Macali

2024 College of Education Graduate Student Research Symposium, 1<sup>st</sup> Place

Robert Booker

2021 Southeast American College of Sports Medicine Doctoral Poster Competition, Top 8 Finalist.

2020-2021 Leadership and Diversity Training Program, American College of Sports Medicine

2019-2021 Robert Smith, MD Graduate Scholar, University of Mississippi Medical Center Graduate Training and Education Center, Jackson Heart Study Funded By: National Heart, Lung, and Blood Institute (HHSN268201800012I)

2019 American Public Health Association Physical Activity Section; Outstanding Student Research in Physical Activity Awardee

2019 Travel Assistance Grants for Graduate Students, 2019 American Public Health Association Annual Conference, Philadelphia, PA, Funded by Mississippi State University Graduate School

2019 Student Presenter Grant, Funded by Mississippi Public Health Association (\$260.08).

2019 Leadership and Diversity Training Program, Southeast American College of Sports Medicine

Katherine Wood

2017 Mississippi State University Public Health Research Competition, First Place.

2016-2017 Undergraduate Student of the Year, Department of Kinesiology,  
Mississippi State University.

2015-2016 Mississippi State University Undergraduate Student Researcher of the  
Year, College of Education.

Amari Kimble

2015 SEACSM Annual Meeting, Honorable Mention – Student Poster Competition

Mallory Kvasnicka

Seventh Annual College of Education Faculty/Student Research Forum, April 2014,  
Third Place – Graduate Student Poster Competition

Kurt Cooksey

Sixth Annual College of Education Faculty/Student Research Forum, April 2013,  
First Place – Undergraduate Student Poster Competition

*Michigan State University*

Excellence in Teaching Award – College of Education, 2010

Best Masters Research Slide Presentation – MWACSM, 2006

Doctoral Recruitment Scholarship – College of Education, 2006

*Iowa State University*

Outstanding Masters Student – Health and Human Performance Department

Second Place – Student Poster Competition, ISSN, 2005

*University of Nebraska at Kearney*

Honorable Mention – UNK Student Research Day, 2004

2002-2003 National Collegiate Athletic Association (NCAA) Academic All-American

3-time Rocky Mountain Athletic Conference (RMAC) All-Conference Academic Team

3 semesters on the Dean's List

7 semesters on the Athletic Director's Honor Roll

## **Service and Community Engagement**

*Mississippi State University*

MSU Health and Wellness Committee

Suddeth Elementary School Health Task Team

Starkville Foundation for Public Education

GoPlay Initiative, Research and Evaluation Consultant

Playful City Initiative, Research and Evaluation Consultant

Starkville High School and Middle School, Track and Field Boys and Girls Assistant  
Coach —Throws

*Michigan State University*

Kinesiology Graduate Student Organization (KGSO)

Exercise Physiology Representative (2006-2007)

Curriculum Committee Representative (2008-2009)

Intramural Sports – volleyball

YMCA Women's and Co-ed volleyball leagues  
COGS Graduate student softball league  
YMCA Volunteer – Downtown Wellness Center After School Program

### **Professional Affiliations and Activities**

American Association of University Women Member (2016-2019)  
American College of Sports Medicine Member (2006-present)  
Youth Sport & Exercise Science Special Interest Group Co-Chair (2023-present)  
Southeast Chapter of the American College of Sports Medicine Member (2011- present)  
Midwest Chapter of the American College of Sports Medicine Member (2006-2011)  
International Society of Sports Nutrition Member (2004-2006)  
North American Society for Pediatric Exercise Medicine Member (2004-2006, 2016-17, 2024-present)  
National Physical Activity Plan Alliance  
Colleges and Universities Committee, Academic Applications Subcommittee  
Member (2015-present)

### **Manuscript reviewer**

*Journal of Physical Activity and Health (2007 to present)*  
*International Journal of Exercise Science (2011 to present)*  
*Preventive Medicine (2012 to present)*  
*Pediatric Exercise Science (2013 to present)*  
*PLOS ONE (2014 to present)*  
*Evaluation and Program Planning (2014 to present)*  
*Medicine and Science in Sport and Exercise (2016 to present)*  
*Digital Health (2017 to present)*  
*Journal of Health Care for the Poor and Underserved (2017 to present)*

### **Publications**

#### *Book Chapters*

**Holmes, ME,** Macali IC. Respiratory Physiology. J.W. Smith and M.L. Bello (eds.) In Exercise Physiology Lab Manual. Kendall Hunt Publishing. (In Press)

**Holmes, ME.** Physical Activity Epidemiology. Brown, SP (ed.) In Fundamentals of Kinesiology. 2023. Kendal Hunt Publishing. Dubuque, IA.

**Holmes, ME.** Physical Activity Epidemiology. Brown, SP (ed.) In Fundamentals of Kinesiology. 2021. Kendal Hunt Publishing. Dubuque, IA.

**Holmes, ME.** Physical Activity, Stress, and Obesity. In Handbuch Stressregulation und Sport. Fuchs, R. & Gerber, M. (eds.) 311-323. 2017. Springer Berlin Heidelberg, Berlin, Heidelberg.

**Holmes, ME.** Physical Activity Epidemiology. Brown, SP (ed.) In Fundamentals of Kinesiology. 2013. Kendal Hunt Publishing. Dubuque, IA.

## Manuscripts

Spring KE, Chen CC, Powell MB, Smith JEW, Stratton KK, Wadsworth DD, **Holmes ME**. Impact of Seated Movement Incorporation on Middle School Classroom Physical Activity Levels and Academic Engagement, *Research Quarterly for Exercise and Sport*, 2023. 94(4), 1011-1019 DOI: [10.1080/02701367.2022.2100308](https://doi.org/10.1080/02701367.2022.2100308) \*This article has been viewed over 420 times since publication (usage data collected from publisher July 2024).

Lim CS, Robinson J, Hinton E, Gordy XZ, Gamble A, Compretta C, **Holmes ME**, Ravola M. School-based obesity prevention programs in rural communities: a scoping review. *JBI Evidence Synthesis*, 2022. 20(12):p 2936-2985,| DOI: [10.11124/JBIES-21-00233](https://doi.org/10.11124/JBIES-21-00233)

Chen, C-C (JJ), Kulinna, P.H., Spring, K.E., Ryuh, Y., & Holmes, M.E. The evaluation of physical literacy of preservice physical educators. *The Physical Educator Journal*. 2022: 79, 548-568.

Booker R, Galloway R, Novik M, Jones R, **Holmes ME**. Differences between preemptive and non-preemptive physical activity among 'drunkorexia'-positive college students, *Journal of American College Health*, 2022. DOI: [10.1080/07448481.2022.2136973](https://doi.org/10.1080/07448481.2022.2136973)

Booker R, **Holmes ME**, Newton RL, Norris KC, Thorpe RJ, Carnethon MR. Compositional analysis of movement behaviors' association on high-sensitivity c-reactive protein: the Jackson heart study, *Annals of Epidemiology*, Volume 76, 2022, Pages 7-12, ISSN 1047-2797. <https://doi.org/10.1016/j.annepidem.2022.09.009>

Booker R, Beech BM, Bruce MA, Thorpe Jr. RJ, Norris KC, Heitman E, Newton Jr. RL, **Holmes ME**. The Association of Sedentary Behavior and Physical Activity with Different Measurements of Metabolic Syndrome: The Jackson Heart Study. *American Journal of Lifestyle Medicine*. August 2022. doi:10.1177/15598276221118044

Halfacre K, Buys DR, & **Holmes ME**, King E, Roach J. Barriers to Healthy Living in the Mississippi Delta. *Journal of Healthy Eating and Active Living*. 2022; 2 (1), 32-44.

Booker R, Chander H, Norris KC, Thorpe RJ, Vickers B, **Holmes ME**. Comparison of Leisure Time Physical Activities by Metabolic Syndrome Status among Adolescents. *International Journal of Environmental Research and Public Health*.2022; 19 (3), 1415 <https://doi.org/10.3390/ijerph19031415>

Galloway R, Booker R, Loftin M, **Holmes ME**, Gdovin J. Physiological and perceptual responses during walking at set and preferred pace in normal and overweight adults. *Int J Obes*. 2022; 46 (1) 100-106. <https://doi.org/10.1038/s41366-021-00963-7>

Battista RA, Baete A, **Holmes ME**, Peyer KL. (2021). *Physical Activity Recommendations for Middle School Youth*. In Elliott E, Greenberg J, Battista R, Guerrero HG. *Physical Activity Recommendations for Children and Adolescents: More Important Than Ever*. US Physical Activity Alliance. Washington, DC: US. Available at <https://paamovewithus.org/white-papers/physical-activity-recommendations-for-children-and-adolescents-more-important-than-ever/>

Booker R, Jones R, Galloway R, **Holmes ME** (2021) Differences of Sedentary Behavior, Physical Activity, and Metabolic Syndrome Severity Among Metabolic Syndrome Clusters. *American Journal of Lifestyle Medicine*. DOI: 10.1177/15598276211056874.

Booker, R., Novik, M., Galloway, R., **Holmes M.E.** Relationship Between Physical Activity Intensities and Drunkorexia Severity Among First-Year College Students. *Journal of American College Health*. 2021; 69:6, 689-692. doi:10.1080/07448481.2019.1710151

Galloway, R., Booker, R., Haynes, H., Holmes, M.E., & Gdovin, J. Physiological and Perceptual Responses to Self-Selected Exercise Pace on A Track Versus Treadmill. *International Journal of Strength and Conditioning*. 2021; 1(1). <https://doi.org/10.47206/ijsc.v1i1.46>

Spring, KE., **Holmes, ME.**, and Smith, JW. Long term Tennis Participation and Health Outcomes: An Investigation of “Lifetime” Activities, *International Journal of Exercise Science*. 2021; 13 (7), Pages 1251-1261. Available at: <https://digitalcommons.wku.edu/ijes/vol13/iss7/7>

Chen C-C (JJ), **Holmes ME**, Wood KE, Ryuh Y-J, Kulinna PH. Are You Better than a 12-year-old Student? A Pilot Study to Explore Physical Literacy in Pre-Service Physical Education Teachers. *The Physical Educator*. 2020; 77 (1), 130-153.

**Holmes ME**, Kvasnicka MA, Webb HE, Brocato DK. Metabolic Health and Academic Achievement in Youth At Risk for High School Dropout in Rural Mississippi: The Role of Classroom Management. *Preventive Medicine Reports*. 2018; (11): 115-9.

**Holmes ME**, Spring KE. A Brief Review of the Physical activity, Stress, and Metabolic Syndrome Relationship in Youth: Consideration of Socioeconomic Position as a Chronic Stressor. *Medical Research Archives*. 2018-04-17 2018;6(4).

Rountree JA, Krings BM, Peterson TJ, Thigpen AG, McAllister MJ, **Holmes ME**, Smith JW. Efficacy of Carbohydrate Ingestion on CrossFit Exercise Performance. *Sports*. 2017; 5(3), 61. *\*Published in Special Issue: Clinical and Sports Nutrition; this Open Access article has been viewed over 8,000 times since publication (usage data collected from publisher July 2024).*

Smith JW, **Holmes ME**, McAllister MJ. Erratum to "Nutritional Considerations for Performance in Young Athletes". *J Sports Med (Hindawi Publ Corp)*. 2015; 2015:734649.

**Holmes ME**, Pivarnik J, Pfeiffer K, Maier KS, Eisenmann JC, Ewing M. The stress-metabolic syndrome relationship in adolescents: An examination of the moderating potential of physical activity. *J Phys Act Health*. 2016;13(10):1088-93.

Knight AC, **Holmes ME**, Chander H, Kimble A, Stewart JT. Assessment of balance among adolescent track and field athletes. *Sports Biomech*. 2016;15(2):169-79.

Smith JW, **Holmes ME**, McAllister MJ. Nutritional Considerations for Performance in Young Athletes. *J Sports Med (Hindawi Publ Corp)*. 2015; 2015:734649.

Hill EE, Eisenmann JC, Gentile D, **Holmes ME**, Walsh D. The association between morning cortisol and adiposity in children varies by weight status. *J Pediatr Endocrinol Metab*. 2011;24(9-10):709-13.

Hill EE, Eisenmann JC, **Holmes ME**, Heelan KA. Morning cortisol is not associated with truncal fatness or resting blood pressure in children: Cross-sectional and 1-2 year follow-up analyses. *J Pediatr Endocrinol Metab.* 2010;23(10):1031-7.

**Holmes ME**, Ekkekakis P, Eisenmann JC. The physical activity, stress and metabolic syndrome triangle: A guide to unfamiliar territory for the obesity researcher. *Obes Rev.* 2010;11(7):492-507. *\*Featured on MDLinx; This document has a 1.68 Field-Weighted Citation Impact. (data collected from Scopus July 2024).*

**Holmes ME**, Eisenmann JC, Heelan KA. Calcium Intake and Adiposity in 9 to 12-year-old Children. *Int J Body Compos Res.* 2009; 7: 1–6.

**Holmes ME**, Eisenmann JC, Ekkekakis P, Gentile D. Physical activity, stress, and metabolic risk score in 8- to 18-year-old boys. *J Phys Act Health.* 2008;5(2):294-307.

Eisenmann J, Ekkekakis P, **Holmes M**. Sleep duration and overweight among Australian children and adolescents. *Acta Paediatr Int J Paediatr.* 2006;95(8):956-63. *\*This document is in the 95th percentile and has a 4.22 Field-Weighted Citation Impact (data collected from Scopus July 2024).*

**Holmes, ME**. Protein and Its Effects on Metabolism. (UNK Journal of Undergraduate Research, 2003: 16-23)

*\*The Field-Weighted Citation Impact shows how well cited this document is when compared to similar documents. A value greater than 1.00 means the document is more cited than expected according to the average. It takes into account the year of publication, the document type, and disciplines associated with its source. Percentile rankings are calculated compared to other articles of same age and document type. Data collected from Scopus.*

#### *Manuscripts in Review*

**Holmes ME**, Summerlin P, Smith M, Macali IC, Buys DR. Quality and Quantity of Physical Activity Resources in the Mississippi Delta. *Translational Journal of the American College of Sports Medicine.* (Accepted)

Chen P-L, **Holmes ME**, Gillen ZM, Zhujun Pan, Buys DR, Lamberth JG. Physical Activity And Sedentary Behavior Patterns Among Older Adults With Regular Pickleball Participation: A Pilot Study. *Journal of Physical Activity and Aging.*

Macali IC, Smith L, Dale M, Lind E, DeShong HL, **Holmes ME**. Influences of Motivation and Personality on Physical Activity Behavior: A Systematic Review. *Qualitative Research in Sport, Exercise, and Health.*

Hargrove ML, **Holmes ME**, Smith JW. Perception of effort and fatigue in collegiate and adolescent cross-country runners. *Journal of Strength and Conditioning Research.*

#### *Published Abstracts*

Smith LK, Macali I, Smith JE, Lance EK, Aarhus C, Taylor C, Baker J, Salisbury S, **Holmes ME**. Investigating the Relationship between Body Composition, Perceived Stress, and Life



Satisfaction in Marching Band Members. (2024) *International journal of Exercise Science: Conference Proceedings*, 16(3), 261.

Macali I, Smith LK, Smith JE, Lance EK, Aarhus C, Taylor C, Baker J, Salisbury S, **Holmes ME**. Health Characteristics of Marching Band Participation. (2024) *International journal of Exercise Science: Conference Proceedings*, 16(3), 261.

Macali I, **Holmes ME**, Lind E. Relationship between BMI, Physical Activity and Other Health Covariables, and Depression in Adults. (2023) *Medicine & Science in Sports & Exercise*, 55(9S), 102-103.

**Holmes ME**, Hargrove M, Smith JEW. Assessing Fatigue Perceptions In Middle School Cross Country Athletes. (2023) *Medicine & Science in Sports & Exercise*, 55(9S), 616.

Hargrove M, **Holmes ME**, Smith JEW. Perceptions of Fatigue Among Cross Country Athletes During Races and various Types of Training Sessions. (2023) *Medicine & Science in Sports & Exercise*, 55(9S), 373.

Macali I, **Holmes ME**, Lind E. Relationship between BMI, Physical Activity and Other Health Covariables, and Depression in Adults. (2023) *International journal of Exercise Science: Conference Proceedings*, 16(2), 95.

Macali I, **Holmes ME**, Symonds M. Personality and Motivation to Engage in Recreational Exercise. (2022) *International journal of Exercise Science: Conference Proceedings*, 16(1), 95.

**Holmes ME**, Summerlin P, Smith M, Macali I, Booker R, Buys D. Quality and Quantity of Physical Activity Resources in the Mississippi Delta. (2022) *Medicine & Science in Sports & Exercise*, 54(9S), 172.

Booker R & **Holmes ME**. (2021). Physical Activity Types Of General and Metabolic Syndrome Positive Individuals. *Medicine & Science in Sports & Exercise*, 53(8S), 186.

Buys D, Smith M, Halfacre K, **Holmes M**. (2021) Community-Engaged Older Adult-Led Policy, Systems, and Environment Interventions in the MS High Obesity Program. *Innovation and Aging*, 5 (S1), 420.

Booker R & **Holmes ME**. (2020). Continuous Metabolic Syndrome Score and Physical Activity Among Metabolic Syndrome Positive Individuals. *Medicine & Science in Sports & Exercise*, 52(7S), 419.

**ME Holmes**, Thompson, S.E., & Booker, R. (2020). Sleep Duration and Obesity Indices in US Adolescents (NHANES 2015-2016). *Medicine & Science in Sports & Exercise*, 52(7S), 584. 5

R Galloway, S Powell, R Booker, **ME Holmes**, & J Gdovin. (2020). Influence of Affective Valence and High Intensity Intervention on Exercise Engagement. *Medicine & Science in Sports & Exercise*, 52(7S), 445.

R Booker, R Galloway, & **ME Holmes**. (2019) Factors Leading to Discrepancies in Accumulated Physical Activity During School Hours in Elementary School Students. *Medicine & Science in Sports & Exercise*. 51(6), 225

KE Spring (Wood), **ME Holmes**, Y.J. Ryuh, C-C (J.J.) Chen. Compliance with Physical Activity Guidelines and Associations with Physical Literacy Among Future Physical Educators. 2019. *Medicine and Science in Sports Exercise*. 51 (6):224.

KE Wood (Spring), **ME Holmes**, Y.J. Ryuh, C-C (J.J.) Chen, PH Kulinna. So you think you are better than a 12-year old? 2018. *Research Quarterly for Exercise and Sport* 89, A200-A201.

Y.J. Ryuh, C-C (J.J.). Chen, KE Wood (Spring), **ME Holmes**, PH Kulinna. Exploring Physical Competence and Knowledge Performance Among PETE Preservice Educators. 2018. *Research Quarterly for Exercise and Sport* 89, A201-A202.

**ME Holmes**, DK Brocato, KE Wood. Physical Activity Levels of 7th and 8th Graders During a Studio-based Learning Experience. 2017. *Medicine & Science in Sports & Exercise* 49 (5S), 975-976.

KE Wood, **ME Holmes**, K Brocato, JEW Smith. Adolescent Stress, Coping Resources, And Health In High Risk Students Participating In A Studio Based Learning Summer Camp. 2016. *Pediatric Exercise Science* 28.

CM Hill, H Chander, CE Morris, SJ Wilson, AC Knight, **ME Holmes**, ... Impact Of Low Intensity Workload On Muscle Exertion In Alternative Footwear. 2015. *Medicine & Science in Sports & Exercise* 47 (5S), 251.

H DeBusk, H Chander, CE Morris, SJ Wilson, AC Knight, **ME Holmes**, ... The Effect Of Commonly Used Alternative Footwear On Balance. 2015. *Medicine & Science in Sports & Exercise* 47 (5S), 294.

**ME Holmes**, KA Pfeiffer, J Eisenmann, M Ewing, JM Pivarnik. The Stress-Metabolic Syndrome Relationship in Adolescents: Potential Moderation by Physical Activity. 2013. *Medicine and Science in Sports and Exercise*. 45 (5), 266-266.

EE Hill, JC Eisenmann, **ME Holmes**, D Gentile, D Walsh. Independent and Combined Influence of Physical Activity and Sleep on Waking Cortisol in Children. 2010. *Medicine & Science in Sports & Exercise* 42 (5), 819.

**ME Holmes**, D Sutton, L Dithurbide, JM Pivarnik. Physical Activity Moderates the Anxiety-adiposity Relationship in High School-aged Youth. 2010. *Medicine & Science in Sports & Exercise* 42 (5), 100.

**ME Holmes**, JC Eisenmann. Anxiety and Metabolic Syndrome in Normal and Overweight Youth. 2008. *Medicine & Science in Sports & Exercise* 40 (5), S54.

YI Coil, **ME Holmes**, JC Eisenmann. Cardiovascular Reactivity, Physical Activity, And Metabolic Syndrome In Youth. 2008. *Medicine & Science in Sports & Exercise* 40 (5), S316.

### *Published Data*

Holmes, Megan E., "Quality and Quantity of Physical Activity Resources in the Mississippi Delta Data Set" (2024). *College of Education Publications and Scholarship*. 42. <https://scholarsjunction.msstate.edu/coe-publications/42>

### **Grant Awards**

Band-Ade: Physical Activity, Health and Sweat Response Across the Marching Band Season \$2,000 (2024). Mississippi State University – Office of Research and Economic Development: Undergraduate Research Program. (Not funded, Role: PI)

MCCTR Pilot Projects Program (NIH). Increasing physical activity through motor skill proficiency and health-related fitness testing in stage 3 pediatric obesity treatment program patients. (2024) \$50,400.00 (Not funded, Role: PI)

MCCTR Pilot Projects Program (NIH). Physiological, Neuromuscular, and Functional Impairments in Sarcopenic Older Adults. (2024) \$51,625.00 (Not funded, Role: Co-I)

NASA HERO Proposal. Noninvasive Vibration Therapy to Enhance Post-Landing Sensorimotor Recovery Focused on Postural Control and Locomotion. \$798,719.00 (Pending: Invited for stage 2 proposal, Role: Co-I)

Frequent sweet potato ingestion's influence on gut microbiome and health factors associated with 'Healthy People 2030'. \$119,376.00 (2022). State Research Initiative, Mississippi Agriculture and Forestry Experiment Station. (Not funded, Role:Co-I)

Advancing, Inspiring, Motivating for Community Health Through Extension (AIM for CHange), Centers for Disease Control and Prevention, \$896,591.00 (2023 - 2024). Second round of funding for this project. MSU lead for Family Healthy Weight Program arm of project. (Funded, Role: Co-PI)

Advancing, Inspiring, Motivating for Community Health Through Extension (AIM for CHange), Centers for Disease Control and Prevention, \$5,457,840.00 (2019 - 2023). AIM for CHange strives to reduce health disparities by elevating access to accessible and safe locations for physical activity and healthier foods for individuals living in counties with a high obesity prevalence in the Mississippi Delta. (Funded, Role: Co-PI)

International Tennis Federation. (2015) "Influence of tennis participation on parameters of health." \$5,000. (Funded, Role: Co-PI)

Blue Cross Blue Shield of Mississippi Foundation for continuation of MSU on the Move (2016) \$62,944.97 (Funded, Role: PI)

Center for the Advancement of Service Learning Excellence (CASLE) for Starkville-Studio School Human Body Science Summer Camp 2013. \$3500 (Funded, Role: Co-I)

Starkville-Oktibbeha County Achieving Results (SOAR) for Starkville-Studio School Human Body Science Summer Camp 2013 \$1000 (Funded, Role: Co-I)

Appalachian Regional Commission Grant “Studio School Summer Camp 2012” \$26,174  
(Funded, Role: Co-I)

Cross College Research Grant Award. “Exercise is Medicine on Campus Program and Program Evaluation.” 2012. \$2,000. (Funded, PI)

Blue Cross Blue Shield Foundation of Michigan Student Award Program. “Examination of physical activity and physical fitness as possible moderators of the relationship between stress and metabolic syndrome in adolescents.” 2011. \$3,000. (Funded, Role: PI)

College of Education Dissertation Research Grant. “Examination of physical activity and physical fitness as possible moderators of the relationship between stress and metabolic syndrome in adolescents.” 2010. \$5,000. (Funded, Role: PI)

CDC Grants for Public Health Research Dissertation (R36), Opportunity number PAR-07-231  
“Examination of physical activity and physical fitness as possible moderators of the relationship between stress and metabolic syndrome in adolescents.” \$35,000. (Not funded; no projects were funded in 2010 due to budgetary restrictions)

Awarded travel funds to offset costs of travel to UK to present in seminar series at Leeds Metropolitan and Loughborough Universities. Department of Kinesiology, Colleges of Education and Graduate Studies, and International Studies Program. 2008. \$1150 (Funded)

College of Education Summer Research Fellowship. “Examining physical activity and obesity interventions in Michigan schools: Preliminary analysis of baseline data.” 2007. \$6000 (Funded)

## **Teaching**

August 2011 to present

Mississippi State University

*Assistant Professor 2011-2019*

*Associate Professor 2019- present*

EP 3233 Anatomical Kinesiology

EP 3304 Exercise Physiology

EP 3643 Applied Anatomy and Pathophysiology

EP 4113 Fitness Programs and Testing

EP 4603 Physical Activity Epidemiology

EP 4183 Exercise and Weight Control

EP 8323 Science and Practice of Cardiopulmonary Rehabilitation

EP 8243 Cardiorespiratory Exercise Physiology

KI 8303 Research in Kinesiology

KI 8913 Seminar in Exercise Science

KI 8990 Special Topics in Kinesiology – Pediatric Exercise Physiology

January 2011 to May 2011

Michigan State University – *Instructional Staff*

KIN 216 Applied Human Anatomy Lecture

August 2010 to May 2011

Lansing Community College – *Adjunct Faculty*  
KIN 121 Healthy Lifestyles  
KIN 270 Growth and Motor Development

August 2006 to August 2010

Michigan State University – *Graduate Teaching Assistant*  
KIN 217 Applied Human Anatomy Cadaver Lab  
KIN 310 Physiological Basis of Physical Activity  
KIN 121 Healthy Lifestyles  
KIN 411 Lab Techniques in Exercise Physiology  
KIN 216 Applied Human Anatomy Lecture

August 2004 to May 2006

Iowa State University – *Graduate Teaching Assistant*  
and Professions in Health and Human Performance  
Activity classes (volleyball and weight training)

## **Mentorship**

Mississippi State (August 2015 to May 2019)

*Mentor to R. Booker*

- Booker successfully completed his PhD degree at Mississippi State University, and post-doctoral fellowship at Northwestern University in the Department of Preventive Medicine.

*Mentor to K. Spring (née Wood)*

- Spring successfully completed her BS and MS degrees at Mississippi State University, Ph.D. at Auburn University, and is pursuing her post-doctoral studies at Pennington Biomedical Research Center.

Michigan State University/Adrian College (May to August 2008)

*Supervised internship experience, L Smith*

- Smith successfully completed her BS degree at Adrian College and MS degree at Michigan State University and is currently acting as the Clinical Exercise Physiologist at the Helen DeVos Children's Hospital Healthy Weight Center.

Iowa State University (November 2005 to August 2006)

*Mentor to McNair Scholar, YI Coil*

- Explained and discussed research process with student
- Familiarized student with ongoing projects and relevant lab techniques
- Helped student develop project to be presented at national conference
- Coil successfully completed her BS degree at Iowa State University and MS degree at Michigan State University and MBA at Iowa State University.

## **Invited Presentations**

Music Executives of the Southeastern Conference Annual Meeting, May 2024. Assessment of fitness and heat responses in marching band. Music Executives of the Southeastern Conference Annual Meeting. Mississippi State University

Starkville Oktibbeha School District School Board Meeting, September 2015. Reported on Service and Research efforts of Studio School/ Generation S Project. Greensboro Center, Starkville, Mississippi

Northeast Mississippi Association of Health Underwriters Annual Meeting. “Worksite Wellness: A Business Case & Basic Strategies for Implementation” April 2013, Hunter Henry Center, Mississippi State University

City of Starkville Alderman Meeting. Reported on Service and Research efforts of Studio School Project. Starkville City Hall, Starkville, Mississippi. February 2013.

ACCESS: Cognitive Science Research Forum. Department of Psychology, Mississippi State University. “Physical Activity and Fitness: Moderators of the Stress Metabolic Syndrome Relationship?” January 2012.

International Society of Sports Nutrition 6<sup>th</sup> Annual Meeting. New Orleans, LA. Symposium on the special considerations in pediatric exercise physiology and beverage choices for the young athlete. June 2009.

Leeds Metropolitan University, Leeds, UK. Carnegie Research Institute (CRI) seminar series “Physical activity, stress, and the metabolic syndrome in youth.” March 2008.

Loughborough University, Loughborough, UK. “Physical activity, stress, and the metabolic syndrome in youth.” March 2008.

Twin Cities Cross Country Camp. Scottsbluff, Nebraska. Roundtable discussion on macronutrients as they relate to endurance athletes. July 2002.

### **Presentations**

Fall 2024, NASPEM Bi-Annual Meeting. Holmes ME, Silver LE, Pfeiffer KA. Relationship between mental health and adiposity in children from an urban, low socioeconomic community.

Spring 2024, SEACSM Annual Meeting. Smith LK, Macali I, Smith JE, Lance EK, Aarhus C, Taylor C, Baker J, Salisbury S, **Holmes ME**. Investigating the Relationship between Body Composition, Perceived Stress, and Life Satisfaction in Marching Band Members. (Poster)

Spring 2024, SEACSM Annual Meeting. Macali I, Smith LK, Smith JE, Lance EK, Aarhus C, Taylor C, Baker J, Salisbury S, **Holmes ME**. Health Characteristics of Marching Band Participation. (Poster)

Spring 2023, MSU Undergraduate Research Symposium. Garcia SM, Smith TA, Macali IC, Smith LK, **Holmes ME**, Association of Dog Ownership with Physical Activity in Students Attending a Southeastern University. (Poster)

June 2023, ACSM Annual Meeting. Macali I, **Holmes ME**, Lind E. Relationship between BMI, Physical Activity and Other Health Covariables, and Depression in Adults. (Poster)

June 2023, ACSM Annual Meeting. Assessing Fatigue Perceptions In Middle School Cross Country Athletes. **Holmes ME**, Hargrove M, Smith JEW. (Poster)

June 2023, ACSM Annual Meeting. Perceptions of Fatigue Among Cross Country Athletes During Races and various Types of Training Sessions. Hargrove M, **Holmes ME**, Smith JEW. (Poster)

February 2022, SEACSM Annual Meeting. Macali I, **Holmes ME**, Lind E. Relationship between BMI, Physical Activity and Other Health Covariables, and Depression in Adults. (Poster)

June 2022, ACSM Annual Meeting. Holmes ME, Summerlin P, Smith M, Macali I, Booker R, Buys D. Quality and Quantity of Physical Activity Resources in the Mississippi Delta. (Oral presentation)

March 2022, American Society for Public Administration Annual Meeting. Smith M, **Holmes ME**, Buys DR. What Place of Residence Says about your Health Status: Continued Need for PSE Interventions in the Mississippi Delta. (Oral presentation)

March 2022, AHA EPI | Lifestyles Annual Meeting. Booker R, Newton Jr. RL, Norris KC, Thorpe Jr. RJ, & **Holmes ME**. An Innovative Statistical Approach to Investigate the Association of Movement Behaviors on High-Sensitivity C-Reactive Protein: The Jackson Heart Study. (Oral presentation)

March 2022, Council of Educators in Landscape Architecture Annual Meeting. Summerlin P, **Holmes M**, Smith M, Wichlan M, Buys D. How Do Rural Parks Stack Up? A Physical Activity Resource Assessment of Park Systems in the Mississippi Delta. <https://thecela.org/wp-content/uploads/2022-CELA-Proceedings-FINAL.pdf> (Oral presentation)

February 2022, SEACSM Annual Meeting. Macali I, Symonds M, **Holmes ME**. Personality and Motivation to Engage in Recreational Exercise. (Poster)

November 2021, The Gerontological Society of America Annual Scientific Meeting. Buys D, Smith M, Halfacre K, **Holmes M**. Community-Engaged Older Adult-Led Policy, Systems, and Environment Interventions in the MS High Obesity Program. (Poster)

June 2021, ACSM Annual Meeting. Booker R & **Holmes ME**. Physical Activity Types of General and Metabolic Syndrome Positive Individuals. (Poster)

February 2021, SEACSM Annual Meeting. Booker R & **Holmes, ME**. Comparison of Leisure Time Physical Activities of Metabolic Syndrome Positive and General Populations. (Poster)

June 2020, ACSM Annual Meeting. Galloway R, Powell S, Booker R & **Holmes ME**, Gdovin J. Influence Of Affective Valence And High Intensity Intervention On Exercise Engagement. (Poster)

June 2020, ACSM Annual Meeting. Booker R & **Holmes ME**. Continuous Metabolic Syndrome Score and Physical Activity Among Metabolic Syndrome Positive Individuals. (Poster)

June 2020, ACSM Annual Meeting. **Holmes, ME**, Thompson SE, & Booker R. Sleep Duration and Obesity Indices in U.S. Adolescents (NHANES 2015-2016). (Poster accepted but not presented due to COVID-19)

February 2020, SEACSM Annual Meeting. Booker R, & **Holmes ME**. Continuous Metabolic Syndrome Score and Physical Activity Among Metabolic Syndrome Positive Individuals. (Poster)

February 2020, SEACSM Annual Meeting. Spring KE, **Holmes ME**, Wadsworth DD. Impact of Movement Incorporation on Middle School Classroom Physical Activity Levels. (Poster)

February 2020, SEACSM Annual Meeting. Thompson SE, Booker R, & **Holmes ME**. Sleep Duration and Obesity Indices in Adolescents. (Poster)

November 2019, American Public Health Association Annual Conference. **Holmes ME**, Wood KE, Chen C-C (JJ), Ryuh Y-J. Differences in Perceived and Measured Physical Activity Indices Among Physical Education Undergraduate Students. (Oral presentation)

November 2019, American Public Health Association Annual Conference. Booker R, **Holmes ME**, & Galloway R. Sedentarism Among the Different Clusters of Metabolic Syndrome and Gender. Thematic Poster)

October 2019, Booker R, **Holmes, ME**, & Galloway R. Sedentarism Among the Different Clusters of Metabolic Syndrome and Gender. 2019 MPHA Annual Conference, Jackson, MS.

June 2019, ACSM Annual Meeting. Booker R. Galloway R, **Holmes ME**. Factors Leading to Discrepancies in Accumulated Physical Activity During School Hours in Elementary School Students. (Poster)

June 2019, ACSM Annual Meeting. Spring KE, **Holmes ME**, Ryuh Y-J, Chen C-C (JJ). Compliance with Physical Activity Guidelines and Associations with Physical Literacy Among Future Physical Educators. (Poster)

February 2019, ACSM Annual Meeting. Booker R. Galloway R, **Holmes ME**. Factors Leading to Discrepancies in Accumulated Physical Activity During School Hours in Elementary School Students. (Poster)

February 2019, ACSM Annual Meeting. Spring KE, **Holmes ME**, Ryuh Y-J, Chen C-C (JJ). Compliance with Physical Activity Guidelines and Associations with Physical Literacy Among Future Physical Educators. (Poster)

February 2019, SEACSM Annual Meeting. Mathis A, **Holmes ME**, Chen C-C (J.J.), Ryuh Y.J., Spring (Wood) KE. Gender Differences in Physical Activity and Sedentary Behavior Indices Among Physical Education Pedagogy Undergraduate Students.

October 2018 SWACSM Annual Meeting. Realzola RA, Smith JEW, **Holmes ME**, Krings BM, Price F, McAllister MJ. Effects of acute carbohydrate supplementation on performance for female, Division I, collegiate cheerleaders. (Poster)



March 2018, SHAPE America Annual Meeting. Wood KE, **Holmes ME**, Ryuh Y-J, Chen C-C (JJ), Kulinna PH. So You Think You Are Better Than a 12-year- old Student? Relationships between Physical Self-Concept Profile, Physical Competence and Perceived-competence among PETE. (Poster)

March 2018, SHAPE America Annual Meeting. Ryuh Y-J, Chen C-C (JJ), **Holmes ME**, Wood KE, Kulinna PH. Are you better than a 12-year old student? Exploring Physical Competence and Knowledge Among PETE Pre-Service Educators. (Poster)

June 2017, ACSM Annual Meeting. **Holmes ME**, Wood KE, Brocato K. Physical Activity Levels of 7th and 8th Graders Participating in a Studio-Based Learning Experience. (Poster)

February 2017 SEACSM Annual Meeting. Wood KE, **Holmes ME**, Smith JW. Impact of Tennis Participation on Parameters of Health. (Poster)

August 2016, NASPEM Bi-Annual Meeting. Wood KE, **Holmes ME**, Brocato K, Smith JW. Adolescent Stress, Coping Resources, and Health in High Risk Students Participating in a Studio Based Learning Summer Camp. (Poster)

February 2016, SEACSM Annual Meeting. Wood KE, **Holmes ME**, Brocato K, Smith JW. Adolescent Stress, Coping Resources, and Health in High Risk Students Participating in a Studio Based Learning Summer Camp. (Poster)

February 2015, SEACSM Annual Meeting. In symposium: Getting Children and Youth Moving in Many Ways and for Many Reasons. The Role of Physical Activity in Cognitive and Psychosocial Development (Oral presentation)

February 2015, SEACSM Annual Meeting. Stewart T, Brown J, Kimble A Chander H, **Holmes ME**, & Knight AC. Balance Performance with the Eyes Closed in High School Track and Field Athletes. (Poster)

February 2015, SEACSM Annual Meeting. Kimble A, Brown J, Stewart T, Chander H, **Holmes ME**, & Knight AC. Influence of Event, Gender, and Leg Dominance on Balance Among High School Track and Field Athletes. (Poster)

February 2015, SEACSM Annual Meeting. Chander H, Morris CE, Wilson SJ, Knight AC, **Holmes ME**, Wade C & Garner JC. Impact of Alternative Footwear on Balance Perturbations. (Poster)

February 2015, SEACSM Annual Meeting. DeBusk H, Chander H, Morris CE, Wilson SJ, Knight AC, **Holmes ME**, Hill CM, Wade C & Garner JC. The Effect of Commonly Used Alternative Footwear on Balance. (Poster)

June 2015, ACSM Annual Meeting. DeBusk H, Chander H, Morris CE, Wilson SJ, Knight AC, **Holmes ME**, Hill CM, Wade C & Garner JC. The Effect of Commonly Used Alternative Footwear on Balance. (Poster)

February 2015, SEACSM Annual Meeting. Hill CM, Chander H, Morris CE, Wilson SJ, Knight AC, **Holmes ME**, DeBusk H, Wade C & Garner JC. Impact of Low Intensity Workload on Muscle Exertion in Alternative Footwear. (Poster)

June 2015, ACSM Annual Meeting. Hill CM, Chander H, Morris CE, Wilson SJ, Knight AC, **Holmes ME**, DeBusk H, Wade C & Garner JC. Impact of Low Intensity Workload on Muscle Exertion in Alternative Footwear. (Poster)

October 2014, Annual National Mentoring Conference. Brocato K, Knight A, **Holmes ME**. Developing a Mentoring Program: College of Education Faculty Mentors and Mentees Embrace a Studio Based Learning Model. (Oral presentation)

June 2014, ACSM Annual Meeting. In symposium: The power of play: Influences on motor development, fitness and physical activity and sport participation. Physical, Developmental, and Social Aspects of Play and Physical Activity. (Oral presentation)

June 2014, ACSM Annual Meeting. Early Career: R1 vs R2 vs R3 – What’s the Difference and What Are the Expectations of an Assistant Professor at Each? (Oral presentation)

June 2013, ACSM Annual Meeting. **Holmes ME**, Pfeiffer KA, Eisenmann JC, Ewing M, Pivarnik JM. The Stress-Metabolic Syndrome Relationship in Adolescents: Potential Moderation by Physical Activity. (Poster)

February 2013, SEACSM Annual Meeting. Cooksey KD, **Holmes ME**, and Brocato DK. Physical Activity Levels of 7th and 8th Graders Participating in a Studio-Based Learning Summer Camp. (Poster)

November 2011, MI AAHPERD Annual Meeting. Cregg T, **Holmes ME**, Hill L. Utilizing a Middle School for Physical Activity Research: Tips from the Trenches. (Oral presentation)

June 2010, ACSM Annual Meeting. **Holmes ME**, Sutton D, Dithurbide L, Pivarnik JM. Physical Activity Moderates the Anxiety-Adiposity Relationship in High School-Aged Youth. (Oral presentation)

June 2010, ACSM Annual Meeting. Hill EE, Eisenmann JC, **Holmes ME**, Gentile D, Walsh D. Independent and combined influence of physical activity and sleep on waking cortisol in children. (Poster)

September 2008, NASPEM Bi-Annual Meeting. **Holmes ME**, Bauer PW, Knous JL, Ode JJ, Pivarnik JM. Prevalence of healthy behaviors in Michigan high school students. (Poster)

June 2008, ACSM Annual Meeting. **Holmes ME**, Eisenmann JC. Anxiety and metabolic syndrome in normal and overweight youth. (Slide presentation)

June 2008, ACSM Annual Meeting. Coil YI, **Holmes ME**, Eisenmann JC. Cardiovascular reactivity, physical activity, and metabolic syndrome in youth. (Poster)

October 2007, MWACSM Annual Meeting. **Holmes ME**, Eisenmann JC. Anxiety and metabolic syndrome in normal and overweight youth. (Poster)

October 2007, MWACSM Annual Meeting. Coil YI, **Holmes ME**, Eisenmann JC. Physical activity, cardiovascular reactivity, and metabolic syndrome in youth. (Oral presentation)

June 2007, ACSM Annual Meeting. **Holmes ME**, Eisenmann JC, Ekkekakis P, Gentile D. Physical activity, stress, and the metabolic syndrome in 8-18 yr old boys. (Thematic Poster Presentation)

October 2006, MWACSM Annual Meeting. Slide Presentation. **Holmes ME**, Eisenmann JC, Ekkekakis P, Gentile D. Physical activity, stress, and the metabolic syndrome in 8-18 yr old boys. (Oral presentation) \**Best Masters Research Oral Presentation*

July 2006, Annual SAEOPP/UTK McNair National Scholars Research Conference. Coil YI, **Holmes ME**, Eisenmann JC. Cardiovascular reactivity in overweight and normal weight 8-18 yr old boys. (Oral presentation) \* *First place – Biological sciences division*

June 2006, ACSM Annual Meeting. **Holmes ME**, Eisenmann JC, Heelan KA. Associations between physical activity, waist circumference and blood pressure in 3-8 yr old children (Oral presentation)

October 2005, NAASO 2005 Annual Scientific Meeting. JC Eisenmann, P Ekkekakis, **ME Holmes**. Sleep Duration, Overweight, and Waist Circumference in 7-15 Year Old Youth. (Poster)

June 2005, Annual conference for the International Society of Sports Nutrition. **Holmes ME**, Eisenmann JC, Johannsen D, Heelan KA. The association between calcium intake and adiposity in 9-12 yr old children. Journal of the International Society of Sports Nutrition. 2(1):1-2, 2005. (Poster) \* *Second place in the Student Poster Competition*

May 2004, UNK Student Research Day. **Holmes ME**, McFarland S, Heelan KA. Association between physical activity and food choices among 4th and 5th grade children. (Poster) \**Received honorable mention in poster competition*

## **Other Activities**

### *Michigan State University*

Kinesiology Graduate Student Organization – Social Committee

Intramural Sports – Softball

Downtown Lansing YMCA – After-school program volunteer

Partnership with MSU-KIN & ELPS-PE – Organized Physical Education (PE) outreach program in conjunction with my dissertation project

### *Iowa State University*

Health and Human Performance Graduate Student Association – Social Chair, Finance Committee

Women in Science and Engineering – Lab tours promoting various aspects of kinesiology

Part-time job – Dishwasher in nucleic acids lab

Intramural Sports – Indoor Soccer, Volleyball

Ames Park and Recreation – Sand Volleyball, Softball

*University of Nebraska at Kearney*

Women's Track and Field Team

2002-2003 Co-Captain

4-time Varsity Letter Winner

2 Rocky Mountain Athletic Conference (RMAC) Individual Titles

3-time NCAA National Qualifier

2-time RMAC All-Conference Team – Weight Throw

2-time RMAC All-Conference Team – Hammer Throw

Intramural Sports – Volleyball