

University of Pittsburgh

School of Health and Rehabilitation Sciences

CURRICULUM VITAE

BIOGRAPHICAL

Name: Michelle Varnell
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EDUCATION and TRAINING

UNDERGRADUATE

2000-2004	Grand Canyon University Phoenix, Arizona	Bachelors of Science 2004	Athletic Training
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GRADUATE

2004-2006	A.T. Still University, ASHS Mesa, Arizona	Master of Science 2009	Sports Health Care
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POST-GRADUATE

2011-2015	University of Pittsburgh Pittsburgh, Pennsylvania	Doctor of Philosophy 2015	Rehabilitation Sciences
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2011-2015	Research Associate Neuromuscular Research Lab	Director: Scott Lephart Department of Sports Medicine & Nutrition	
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APPOINTMENTS and POSITIONS

ACADEMIC POSITIONS:

2015-2018	Salem State University, Athletic Training Program Department of Sport and Movement Science Salem, Massachusetts	Assistant Professor
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2019-Current	University of Pittsburgh Athletic Training Program Department of Sports Medicine & Nutrition School of Health & Rehabilitation Science Pittsburgh, Pennsylvania	Assistant Professor
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ACADEMIC APPOINTMENTS:

2024-Current University of Pittsburgh SHRS Director
Health Sciences Office of Sustainability
School of Health & Rehabilitation Science
Pittsburgh, Pennsylvania

NON-ACADEMIC

2004-2006 Xavier College Preparatory Assistant Athletic Trainer
Phoenix, Arizona

2006-2007 Physiotherapy Associates Head Athletic Trainer
Peoria, Arizona *(Centennial High School)*

2007-2011 Banner Health Research Associate
Sun City West, Arizona *(SHRI-CORE Orthopedic Labs)*

CERTIFICATION and LICENSURE

SPECIALTY CERTIFICATION:

CPR & AED for the Professional Rescuer 2000 - Current
American Red Cross

Board Certified Athletic Trainer (BOC#: 100402042) 2004 - Current
National Board of Certification for the Athletic Trainer

MEDICAL or OTHER PROFESSIONAL LICENSURE:

Licensed Athletic Trainer (#ATR-000543) 2004 -2012
Arizona Board of Athletic Training

Licensed Athletic Trainer 2015 - 2018
Massachusetts State Board of Allied Health Professions

Licensed Athletic Trainer (#RT007271) 2019 - Current
Pennsylvania Board of Medicine

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

Arizona Athletic Trainers Association	2004 – 2011
National Athletic Trainers Association	2004 – Current
Eastern Athletic Trainers Association	2019 – Current
Pennsylvania Athletic Training Society	2019 – Current
Clinicians for Climate Action	2024 – Current

PUBLICATIONS

ORIGINAL PEER REVIEWED ARTICLES

1. **Varnell M.** Bhowmik-Stoker M. McCamley J. Jacofsky MC. Campbell M. Jacofsky DJ. Differences in Ability to Perform Stair Negotiation Based on Total Knee Arthroplasty Surgical Approach. *Journal of Knee Surgery*. 2011; 24(02):117-123
2. **Varnell M.** Keenan K. McFate D. Csonka J. Salesi K. Sell T. Musculoskeletal Characteristics of the Dominant Shoulder Complex in Intercollegiate Baseball and Softball Players by Position and Sport. *Athletic Training & Sports Health Care*,.2016; 8(2):70-81
3. Keenan KA. Akins JS. **Varnell M.** Abt JP. Lovalekar M. Lephart SM. Sell TC. Kinesiology tape does not alter shoulder strength, shoulder proprioception, or scapular kinematics in healthy, physically active subjects and subjects with Subacromial Impingement Syndrome. *Physical Therapy in Sport*. 2017;24:60-66
4. Faherty M. **Varnell M.** Csonka J. Salesi K. Gomez S. Sell T. Sex Differences in Lower Extremity Musculoskeletal and Neuromuscular Characteristics in Intercollegiate Soccer Athletes. *Science and Medicine in Football*. 2019;4(1):1-7
5. Johnson CD. Faherty MS. **Varnell MS.** Lovalekar M. Williams VJ. Csonka J. Salesi K. Sell TC. An analysis of musculoskeletal variables, comparative to team norms, leading to an ACL rupture in a female soccer player. *Duke Orthopaedic Journal*. 2019;9(1):6-14
6. Strama E. Keenan KA. Faherty M. Sell T. Raferty D. Salesi K. Csonka J. **Varnell M.** Throwing shoulder adaptations are not related to shoulder injury or pain: a preliminary report. *Sports Health*. 2024;16(3):347-357.

PUBLISHED ABSTRACTS (in Scientific Journals)

1. **Varnell MS.** McFate DA. Keenan KA. Heebner NR. Salesi T. Csonka J. Kido, Y. Schreppel B. Sell TC. The Effect of Intrinsic Musculoskeletal Characteristics on Shoulder Complex Injury in Collegiate Baseball and Softball Players. Podium presented: *61st Annual Meeting and Clinical Symposia of the National Athletic Trainers Association*. June 24-27, 2013; Las Vegas, Nevada
2. Keenan KA. Akins JS. **Varnell MS.** Abt JP. Sell TC. Lovalekar MT. Lephart SM. Kinesiology Taping Does Not Improve Shoulder Proprioception, Shoulder Strength, or Scapular Kinematics in Healthy

or Shoulder Impingement Subjects: A Preliminary Report. *National Athletic Trainers' Association Annual Meeting*; June 24-27, 2013; Las Vegas, NV.

3. Keenan KA, **Varnell MS**, Sell TC, Abt JP, Lovalekar MT, Lephart SM. The Relationship among Trunk Strength, Trunk Power, and Knee Kinematics during a Stop Jump-Cut Maneuver. *National Athletic Trainers' Association Annual Meeting*; June 23-26, 2015; St. Louis, MO.
4. Sell MA, **Varnell MS**, Keenan KA, Abt JP, Sell TC, Lephart SM. The Relationship between Trunk Kinematics and the Dynamic Postural Stability Index. *National Athletic Trainers' Association Annual Meeting*; June 23-26, 2015; St. Louis, MO.

ABSTRACTS (not published in Scientific Journals)

1. **Varnell M**, Bhowmik-Stoker M, Jacofsky DJ, Jacofsky MC. The Effect of Total Knee Arthroplasty Approach on the Ability to Perform Stair Descent. Podium presented: *The 2010 Annual Meeting for the American Academy of Orthopedic Surgeons*. March 6-9, 2010; New Orleans, LA
2. **Varnell MS**, Jaczynski AM, Hansen ML, Jacofsky DJ. The Relationship Between Posture and Scapular Kinematics during the Performance of Activities of Daily Living in Older Adults. Presented at: *56th Annual Meeting of the Orthopedic Research Society*. March 6-9, 2010; New Orleans, LA.
3. **Varnell M**, Bhowmik-Stoker M, Jacofsky DJ, Jacofsky MC. The Effect of Surgical Approach on Performance of Stair Ascent and Descent at Four Months Following Total Knee Arthroplasty. Presented at: *56th Annual Meeting of the Orthopedic Research Society*. March 6-9, 2010; New Orleans, LA.
4. **Varnell M**, Jaczynski A, Hansen M, Bay RC, Sauers E. The Relationship Between Upper Body Posture and Scapular Kinematics in Older Adults. Presented at: 61st Annual Meeting and Clinical Symposia of the National Athletic Trainers Association; June 23-25, 2010; Philadelphia, PA
5. Mahoney M, Russo S, **Varnell M**, Jaczynski AM, Jacofsky DJ, Jacofsky MC. Lower Extremity EMG During Stair Ascent Following TKA with Four Different Surgical Approaches. Presented at: *56th Annual Meeting of the Orthopedic Research Society*. March 6-9, 2010; New Orleans, LA.
6. **Varnell M**, McCamley JD, Jacofsky MC, Jacofsky DJ. Gait Analysis of Medial and Lateral Osteoarthritis One Year after Total Knee Arthroplasty. Presented at: *57th Annual Meeting of the Orthopedic Research Society*. January 13-16, 2011; Long Beach, CA.
7. **Varnell M**, Jacofsky MC, Jacofsky DJ. Surgical Approach Results in Different Strategies at the Hip and Knee during the Performance of Stair Negotiation at Two Years Following TKA. Presented at: *57th Annual Meeting of the Orthopedic Research Society*. January 13-16, 2011; Long Beach, CA.
8. Onstot BR, Johnson AK, **Varnell M**, Jacofsky MC, Jacofsky DJ. Functional Differences between BMI groups During Ascent One Year After TKA. Presented at: *57th Annual Meeting of the Orthopedic Research Society*. January 13-16, 2011; Long Beach, CA.
9. Nagai T, Sell TC, Abt J, **Varnell MS**, Eagle SR, Lephart SM. Shoulder Strength, Flexibility, and Postural Characteristics among Naval Special Warfare Students with and without History of Shoulder Injury. *National Strength and Conditioning Association Annual Meeting*; July 9-12, 2014; Las Vegas, NV
10. Faherty M, **Varnell M**, Csonka J, Salesi K, Gomez S, Sell T. A Descriptive Analysis of Lower Extremity Flexibility and Strength in Collegiate Men's and Women's Soccer Athletes. *Eastern Athletic Training Association Annual Meeting*; January 8-11, 2016; Boston, MA.
11. Faherty MS, Csonka J, Salesi K, **Varnell M**, Connaboy C, Nagai T, Lovalekar M. Changes in Static Balance and Dynamic Postural Stability Are Associated with History of Ankle Sprain in Male and

- Female Intercollegiate Soccer Athletes. *International Ankle Symposium*; September 15-17, 2017; Chapel Hill, NC.
12. Khuzeykin I. Coppinger S. **Varnell M.** Silva KJ. Gallo JA. Quadriceps Femoris Muscle Force Production Using a Portable Neuromuscular Electrical Stimulation Device. *Eastern Athletic Training Association Annual Meeting*; January 5-8, 2018; Boston, MA.
 13. Geyster J. Varnell M. Keenan K. Relationship Between Clinical Musculoskeletal Measures and Heel Whip Gait Patterns in Recreational Runners. *APTA MA Annual Conference*; November 5, 2022; Norwood, MA.
 14. Schultz S. Murray ME. **Varnell MS.** Allison KF. Lovalekar MT. Epidemiology of High School Sports-related Injuries: A descriptive epidemiological study of a single high school during the 2021-2022 academic year. *Eastern Athletic Trainers' Association Annual Meeting*; Jan. 5-8, 2023; Mashantucket, CT.
 15. Lopez O, Gulino G. **Varnell M.** Beatrice B. Secondary Analysis of PATH Intervention to Assess Relationship of Sugar Intake with Heart Rate. *Eastern Athletic Training Association Annual Meeting*; January 5-8, 2024; Mashantucket, CT
 16. Geyster J. Varnell M. Keenan K. Relationship Between Clinical Musculoskeletal Measures and Heel Whip Gait Patterns in Recreational Runners. *ACSM Annual Meeting*; May 30, 2024; Boston, MA.

PROFESSIONAL ACTIVITIES

TEACHING

Primary Instruction (Department of Sport & Movement Science, Salem State University)

Course Number	Title	Year(s)	Average Number Of Students	Responsibilities % course taught
SMS 174	Strength and Conditioning, Techniques and Assessment (1 credit)	2015	20	100% of lab
Description: SMS 174 was an undergraduate lab for Athletic Training and Exercise Science majors. This class focused on safe performance of foundational resistance techniques and the appropriate administration of testing procedures to evaluate strength and conditioning athletes.				
ATR 202	Injury Evaluation, Lower Body (4 credits)	2015 - 2017	16	100% development and delivery of content
Description: ATR 202 was an undergraduate course for Athletic Training majors. This class included lectures, discussions, and demonstrations/techniques for evaluating injuries to the abdomen, lumbar spine/low back, hip/pelvis, thigh, knee, lower leg, ankle, and foot.				

ATR 310	Manual Therapy (3 credits)	2015 - 2018	8	50% development and delivery of content
Description: ATR 310 was an undergraduate course for Athletic Training majors. Components that were taught in this class included lectures, discussions, and demonstrations/techniques for principles and application of soft tissue mobilization techniques including: massage, myofascial release, and lymphatic facilitation.				
ATR 454	Organization and Administration in Athletic Training (3 credits)	2015 - 2018	8	100% development and delivery of content
Description: ATR 454 was an undergraduate course for Athletic Training majors. This class included lecture, discussion, and projects to provide students with the knowledge and skills necessary to manage an athletic training facility. Topics included were budgeting, purchasing, facility design, record keeping, injury data collection, computerized programs, administering preparticipation examination, legal concerns, staffing and scheduling.				
SMS 175	First Responder (3 credits)	2016 - 2018	16	100% development and delivery of content
Description: SMS 175 was an undergraduate lab for Athletic Training and Exercise Science majors. This class included lectures, discussions, and demonstrations/techniques necessary to function as a First Responder in emergency situations, including: CPR, AED, and advanced first aid skills.				
ATR 355	Practicum II (3 credits)	2016 - 2018	8	Coordinating Instructor
Description: ATR 355 was an undergraduate course for Athletic Training majors. This course was designed to offer the student opportunities to observe and perform professional skills under the direct supervision of a certified athletic trainer in a field setting.				
ATR 101	Prevention and Care of Athletic Injuries (3 credits)	2016 - 2018	20	100% development and delivery of content
Description: ATR 101 was an undergraduate course for Athletic Training majors. This class included lectures and activities about physiological and pathological nature of injuries, including: etiology/MOI, recognition, and introduction to management of athletic injuries/illnesses.				
ATR 201	Injury Evaluation, Upper Body (4 credits)	2016 - 2018	8	100% development and delivery of content
Description: ATR 201 was an undergraduate course for Athletic Training majors. This class included lectures, discussions, and demonstrations/techniques for evaluating injuries to the upper extremities, thoracic and cervical spine, shoulder, arm, elbow, forearm, wrist, and hand.				
ATR 301	Prevention and Care of Athletic Injuries (4 credits)	2018	20	100% development and delivery of content
Description: ATR 301 was an undergraduate course for Athletic Training majors. This class serves to introduce the student to allied healthcare fields as well as the physiological and pathological nature of injuries and illness. Lectures and activities focused on the pathophysiology of the different body systems, including: the circulatory, respiratory, Integumentary, lymphatic, musculoskeletal, nervous, digestive, and endocrine systems.				

Primary Instruction (Department of Sports Medicine and Nutrition, University of Pittsburgh)

Course Number	Title	Year(s)	Average Number Of Students	Responsibilities % course taught
ATHLTR 1885	Introduction to Evidence Based Rehabilitation (3 credits)	2019 - 2021	20	100% development and delivery of content
Description: ATHLTR 1885 was an undergraduate course in the Athletic Training program. This class introduced key concepts of EBP that are relevant to the field of athletic training and rehabilitation. Lectures, discussions, and assignments focused on components of EBP, research methodology, assessment of research quality and LOE.				
ATHLTR 1822	Injury Evaluation & Treatment II (3 credits)	2020 – 2021	20	100% development and delivery of content
Description: ATHLTR 1822 was an undergraduate course in the Athletic Training program. This class introduced evaluation techniques for injuries to the head, cervical and thoracic spine, thorax, shoulder complex, arm, elbow, forearm, wrist, and hand. Lectures, activities, demonstrations, and labs included: relevant anatomy, injuries, evaluation, and acute treatment.				
ATHLTR 1866	Psychology of Sport (3 credits)	2020 – 2022	20	100% development and delivery of content
Description: ATHLTR 1866 was an undergraduate course in the Athletic Training program. Through lectures, activities, and projects this course examined the psychological factors involved in sport, sport-related injuries, the rehabilitation process, as well as examining the mental health aspects of the athletic trainer working in the sports setting.				
REHSCI 1285	Introduction to Evidence Based Rehabilitation (3 credits)	2021 – Current	40	100% development and delivery of content
Description: REHSCI 1285 is an undergraduate course in the Rehabilitation Science program and a required course for the Pathokinesiology in Rehabilitation certificate. This class introduces key concepts of EBP that are relevant to the rehabilitation fields. Lectures, activities, and assignments focused on components of EBP, research methodology, assessment of research quality/LOE, cultural competency, diagnostic accuracy, clinical prediction rules, patient-oriented outcomes, disablement models/ICF codes, epidemiology & health informatics.				
REHSCI 1000	Principles of Research Methodology (3 credits)	2021 - Current	20	100% development and delivery of content
Description: REHSCI 1000 is a prerequisite course for the accelerated MS in Athletic Training program. This class introduces key concepts or research methodology. Lectures, activities, and assignments focus on the research process, including planning, design, methodological approaches, statistical analysis, synthesis, proposal development, and peer presentations.				
ATHLTR 2810	Evidence-Based Practice in Athletic Training (2 credits)	2022 – Current	20	100% development and delivery of content
Description: ATHLTR 2810 is graduate course in the MS in Athletic Training program. This class introduces key concepts of EBP that are relevant to athletic training and patient care. Lectures, activities, and assignments focus on knowledge and application to patient care, utilizing assessment of research quality/LOE, cultural competency, diagnostic accuracy, clinical prediction rules, patient-oriented outcomes, disablement models/ICF codes, epidemiology & health informatics.				

ATHLTR 2806	Injury Evaluation for the Upper Extremity (4 credits)	2023 – Current	18	100% development and delivery of content
Description: ATHLTR 2806 is graduate course in the MS in Athletic Training program. This class presents an in-depth analysis of upper extremity injury mechanics, associated anatomy, techniques, and application of orthopedic and neurological evaluation for the head, cervical and thoracic spine, thorax, shoulder complex, arm, elbow, forearm, wrist, and hand. Lectures, activities, demonstrations, and labs included: documentation, patient interview, history, observation, palpation, strength testing, neurovascular assessment, and clinical tests.				
ATHLTR 2811	Graduate Research I (3 credits)	2023 - Current	19	100% development and delivery of content
Description: ATHLTR 2811 is graduate course in the MS in Athletic Training program. This class develops more advanced understanding of the principles of research, interpretation, and application to clinical practice. Lectures, group activities, and assignments will expose the student to research instrumentation and methodology for the assessment of anthropometrics, strength, flexibility/postural testing, proprioception, balance/neuromuscular control, electromyography, kinetics, and kinematics.				
ATHLTR 2815	Current Concepts in Sports Medicine (2 credits)	2023	18	Coordinating Instructor
Description: ATHLTR 2815 is graduate course in the MS in Athletic Training program. The class invites guest lectures to educate the students on associated health care professions with an emphasis on the development of collaborative and interdisciplinary patient care.				
ATHLTR 2812	Graduate Research II (3 credits)	2024 - Current	18	100% development and delivery of content
Description: ATHLTR 2812 is graduate course in the MS in Athletic Training program. Through a field research experience students will apply and demonstrate proficiency of concepts from Research Methods and Evidence Based Practice in Athletic Training by using outcomes collected through patient care to answer a clinical research question. Students will gain hands on experience in conducting a literature review related to their clinical question, data collection, data analysis, and dissemination of their findings.				
ATHLTR 2819	Mental Health Considerations In Sports Medicine (3 credits)	2024 - Current	13	100% development and delivery of content
Description: ATHLTR 2819 is an elective graduate course in the MS in Athletic Training program. This course examines the psychological factors involved in sport, sport-related injuries, the rehabilitation process, as well as examining the mental health aspects of the athletic trainer working in the sports setting. Lectures, activities, and assignments will include sport participation, psychological responses to injury, recognizing and referring mental health related issues; strategies for pain tolerance, rehabilitation adherence, and returning to sport after injury; critical incident stress management, psychological first aid, and workplace disaster plans.				

Additional Instruction (Department of Sports Medicine and Nutrition, University of Pittsburgh)

Course Number	Title	Year(s)	Average Number Of Students	Responsibilities % course taught
HRS 2908	Advanced Musculoskeletal Assessment & Injury Prevention	2011 - 2014; 2019 - Current	10	Guest Lecturer
Description: HRS 2908 is a graduate course in the Sports Medicine program. Guest lecture: Advanced Considerations in Shoulder Complex Evaluation				
HRS 3897	Laboratory Techniques in Sports Medicine and Nutrition II & Lab	2012 - 2015; 2022 - Current	16	Lab Instructor & Guest Lecturer
Description: HRS 3897 is a graduate course in the Sports Medicine program. Lab Instructor: Motion Monitor: Principles and Application; Guest lectures: Hand-Held Dynamometry: Principles and Application				
HRS 2869	Anatomical Basis in Sports Medicine	2013 - 2014	8	Teaching Assistant
Description: HRS 2869 was a graduate course in the Sports Medicine program. This class was a cadaver dissection course focusing on musculoskeletal anatomy.				
ATHLTR 1831	Therapeutic Exercise & Lab	2014	24	Guest Lecturer
Description: ATHLTR 1831 was an undergraduate course in the Athletic Training program. Guest lectured for the shoulder unit.				
HRS 2867	Pathokinesiology of Orthopedic Injury	2015; 2020 - Current	10	Guest Lecturer
Description: HRS 2867 is a graduate course in the Sports Medicine program. Guest lectures: Pathokinesiology of Orthopedic Injury: Elbow Joint (2015); Pathokinesiology of Orthopedic Injury: Shoulder Complex				

Doctoral Dissertation Committee

1. Mallory Faherty, PhD Student, School of Health and Rehabilitation Sciences

Committee Member

Dissertation Title: "A Description of Lower Extremity Musculoskeletal Characteristics, Injury, and Injury Risk Factors in NCAA Division I Athletes Participating in Lower Extremity Dominant Sports"

Dr. Faherty received her PhD in 2017

Master's Thesis Committees

1. Haley Harp, Master's Student, School of Health and Rehabilitation Sciences

Committee Member

Thesis Title: "An analysis of shoulder range of motion in division I collegiate softball and baseball athletes."

Haley Harp received her MS in Sports Medicine in 2020

2. Scout Shultz, Master's Student, School of Health and Rehabilitation Sciences

Committee Member

Thesis Title: "Epidemiology of High School Sports-Related Injuries: A descriptive epidemiological study of a single high school during the 2021-2022 academic year"

Scout Shultz received her MS in Sports Medicine in 2023

Undergraduate Honors Thesis Committees

1. Jordan Geyster, Undergraduate Honors Student, Exercise and Sports Science Department, Fitchburg State University
Second Reader

Thesis Title: "The relationship between clinical musculoskeletal measures and heel whip gait patterns in recreational runners"

Jordan Geyster received her BS in Exercise and Sports Science in 2022

2. Nathaniel Felix, Undergraduate Honors Student, Exercise and Sports Science Department, Fitchburg State University
Second Reader

Thesis Title: "Relationship of Anxiety and Depression with Musculoskeletal Injury Risk Over the Course of an Athletic Season"

Nathaniel Felix will receive his BS in Exercise and Sports Science in 2024

Mentoring:

1. 2018: Research Supervisor/Mentor, Katrina Gallagher and Diandra Gillis, Undergraduate Research Study: An Analysis of Upper Extremity Musculoskeletal Characteristics of Female Overhead Athletes, Department of Sport & Movement Sciences, Salem State University
2. 2018: Research Supervisor/Mentor, William Staffiere and Jacob Moriarty. Undergraduate Research Study: The influence of Menthol on Flexibility, Department of Sport & Movement Sciences, Salem State University
3. 2020: Faculty Research Mentor, Victoria Bulford, Critically Appraised Topic: What is the diagnostic accuracy of apley's compression/grind test when compared to the

arthroscopic findings? Accepted Student Poster Presentation: *2020 Undergraduate Research Fair*.

4. 2020: Faculty Research Mentor, Brandon Gallimore, Critically Appraised Topic: Effectiveness of the Ottawa ankle rules as a sideline diagnostic tool. Accepted Student Poster Presentation: *2020 Undergraduate Research Fair*.
5. 2020: Faculty Research Mentor, Kaitlyn Sweeney, Critically Appraised Topic: Comparison of the moving valgus stress test against magnetic resonance imaging (MRI) to assess diagnostic accuracy of UCL tears, a critical appraisal. Accepted Student Poster Presentation: *2020 Undergraduate Research Fair*.
6. 2020: Faculty Research Mentor, Gabriella Winder, Critically Appraised Topic: Diagnostic accuracy of the kim test versus the jerk test for posterior labrum pathologies in athletes. Accepted Student Poster Presentation: *2020 Undergraduate Research Fair*.
7. 2020: Faculty Research Mentor, Madeline Mahonski, What is the diagnostic accuracy of the quadriceps active test for diagnosing a PCL sprain? Accepted for Podium Presentation. *Pennsylvania Athletic Training Society Student Symposium*.
8. 2022: Faculty Research Mentor, Victoria Hudson. Critically Appraised Topic: WOMAC Outcome Score: How Does TKA vs Hyaluronic Acid Injection Compare with Knee Osteoarthritic Patients. Accepted Student Poster Presentation: PATS Annual Meeting and Clinical Symposium. June 10th, 2022. First Place Winner for Student Poster Award.
9. 2022: Faculty Research Mentor, Nathan Lang, Critically Appraised Topic: Effects of Conservative vs Surgical Treatment of Meniscal Tears on the Knee Injury and Osteoarthritis Outcomes Score. Accepted Student Poster Presentation: PATS Annual Meeting and Clinical Symposium. June 10th, 2022.
10. 2022: Faculty Research Mentor, Ivy Hill, Critically Appraised Topic: Conservative and Surgical Intervention for Improving Pain and NAHS Scores in Military Personnel with Femoroacetabular Impingement (FAI). Accepted Student Poster Presentation: *2022 Undergraduate Research Fair*.
11. 2023: Faculty Research Mentor, Mia Anthony, Research Proposal: "Protocol: Most Effective Treatments Used To Treat Patellar Tendinopathy in Jumping Athletes". Presented at Pitt "Human Performance Research Symposium, April 17th, 2023.
12. 2023: Faculty Research Mentor, Alexis Babjak, Research Proposal: Protocol: Relative Energy

Deficiency in Sports Specific Screening Tool as a Risk Assessment for RED-S in Track and Field Adolescent Athletes”. Presented at Pitt Human Performance Research Symposium, April 17th, 2023.

13. 2023: Faculty Research Mentor, Sara DeGurian, Research Proposal: “Protocol: The Evaluation of Different Types of Lower Extremity Injuries Seen in Women's Gymnastics Compared to Cheer and Dance”. Presented at Pitt Human Performance Research Symposium, April 17th, 2023.
14. 2023: Faculty Research Mentor, Abby Lontz, Research Proposal: “Protocol: The Effects of Flexibility Training on Performance and Incidence of Injury in Long Distance Runners”. Presented at Pitt Human Performance Research Symposium, April 17th, 2023.
15. 2024 Second Reader/Research Mentor, Jorge Roman-Argueta, Critically Appraised Topic required for MS is Sports Medicine & Nutrition: How does the presence or absence of an Athletic Trainer impact the level of care student athletes receive at high schools?

Advising:

1. 2019/2020, 12 Athletic Training undergraduate students
2. 2020/2021, 23 Athletic Training undergraduate students
3. 2021/2022, 15 Athletic Training undergraduate students
4. 2022/2023, 5 Athletic Training graduate students, 4 Rehabilitation Science (pre-professional Athletic Training) undergraduate students
5. 2023/2024, 9 Athletic Training graduate students, 5 Rehabilitation Science (pre-professional Athletic Training) undergraduate students

RESEARCH

Prior Grant Support

<u>Freddie H Fu Research Award</u> <i>The relationship between clinical measures and scapular kinematics</i>	Principle Investigator	2012 - 2013	Direct Costs: \$1,944.00
<u>Freddie H Fu Research Award</u> <i>The evaluation of scapular kinematics and muscular characteristics of the scapular stabilizers in overhead athletes presenting with scapular dyskinesis compared to healthy controls</i>	Principle Investigator	2014 - 2015	Direct Costs: \$3,500.00
<u>SHRS Research Development Fund</u> <i>The evaluation of scapular kinematics and muscular characteristics of the scapular stabilizers in overhead athletes presenting with scapular dyskinesis compared to healthy controls</i>	Principle Investigator	2014 - 2015	Direct Costs: \$3,500.00
<u>Special Olympics, Inc</u> <i>Evaluation of a standardized physical activity and fitness measurement protocol within Special Olympics programming</i>	Co-Investigator & IRB Coordinator 5% effort	2022 – 2023	Direct/Indirect Costs: \$15,000.00

Non-Funded Research

- 2012 - 2015 **University of Pittsburgh Injury Initiative for the Upper Extremity**
The relationship between strength, range of motion/flexibility, and posture with shoulder complex injury in intercollegiate baseball and softball players
Co-Investigator/Project Manager (PI: Mary Murray, EdD, ATC)
- 2013 - 2015 **University of Pittsburgh Injury Initiative for the Lower Extremity**
Injury Risk Factors for Lower Extremity Injury in Collegiate Soccer and Basketball Athletes
Co-Investigator/Project Manager (PI: Mary Murray, EdD, ATC)
- 2018 **Salem State University**
The influence of Menthol on Flexibility
Co-Investigator, Student Supervisor (PI: Jason Gillis, PhD)
- 2023 - Current **Fitchburg State University**
Relationship between Clinical Musculoskeletal Measures and Heel Whip Gait Patterns in Recreational Runners (IRB # 202122-07)
Co-Investigator (PI: Karen Keenan, PhD, ATC)

2023 – 2024

University of Pittsburgh

Comparison of athletic injuries before and after the implementation of the athlete performance model (IRB# STUDY23090069)

Primary Investigator

List of CURRENT RESEARCH INTERESTS

- Upper extremity musculoskeletal injury as related to sport specialization and the development of sport specific musculoskeletal adaptations
- Evaluation of musculoskeletal characteristics associated with altered scapular kinematics
- Evaluation of biomechanics and musculoskeletal characteristics of the throwing athlete throughout maturation and association with overuse injury
- Lower extremity running gait and biomechanics
- Environmental Sustainability in healthcare and healthcare education

INVITED SEMINARS, LECTURESHIPS, AND FORUMS

Regional Presentations

1. April 2015, Neuromuscular Aspects in Shoulder Joint Stability, Noraxon Research Symposium. Denver, CO.

National Presentations

1. November 30th, 2023, A Peek Behind the Paper: The Relationship between Throwing Shoulder Adaptations and Injury or Pain, American Academy of Sports Physical Therapy

SERVICE

Service to Department

1. 2019 – Current Jill Conley Memorial Award – Scholarship Reviewer
Department of Sports Medicine and Nutrition, University of Pittsburgh
2. 2023 – Current University of Pittsburgh IRB – Scientific Reviewer
Department of Sports Medicine and Nutrition, University of Pittsburgh

Service to School of Health and Rehabilitation Sciences

1. 2019 – 2022 Nominations Committee – Committee Member
School of Health and Rehabilitation Science, University of Pittsburgh
2. 2023 – Current Council on Entry-Level Professional Curriculum - Committee Member
3. 2023 – Current SHRS Building Program Design Task Force – Task Force Member (SMN)

Service to University of Pittsburgh

1. 2019 – 2022 Senate Governmental Relations Committee – Committee Member
University of Pittsburgh
2. 2020, 2022 Annual Rehabilitation Institute Research Day – Judge
University of Pittsburgh
3. 2022 – 2024 Council or Representatives – Committee Member
United Steelworkers, Faculty Union

Diversity, Equity, and Inclusion Activities

1. 2020- 2021 Diversity, Equity, and Inclusion Task Force – Member
Mt. Lebanon School District, Pittsburgh PA

Service to Community

1. 2017, 2018 Elementary Science Fair – Judge
Cove Elementary School, Beverly MA

Service to Professional Organizations

1. 2020 – Current Clinical Orthopedics and Related Research – Reviewer
The Association of Bone and Joint Surgeons
 2. 2021 – Current Physical Therapy in Sport – Reviewer
The Association of Chartered Physiotherapists in Sports and Exercise Medicine
 3. 2022 – Current Research Grants Committee – Reviewer
The Pennsylvania Athletic Trainers Society
 4. 2022 – Current ATs Care Committee – Committee Member
The Pennsylvania Athletic Trainers Society
 5. 2023 – Current Journal of Athletic Training – Reviewer
National Athletic Trainers Association
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