

GENA M. HENDERSON, PT, DPT, PCS

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AREAS OF RESEARCH INTEREST

Biomechanics and rehabilitation of atypical pediatric gait patterns

Development of typical and atypical movement patterns

Role of spasticity and spasticity management in atypical movement patterns

Effects of treadmill training in a variety of pediatric populations

Effects of motor intervention on cognitive and language outcomes in pediatric populations

EDUCATIONAL BACKGROUND

Georgia State University – Atlanta, Georgia – 2015 - present

Doctoral candidate in Kinesiology

Anticipated completion date – Spring 2020

Belmont University – Nashville, Tennessee - 2008

Doctor of Physical Therapy (DPT)

Mississippi College – Clinton, Mississippi - 2002

B.S. in Biology/Medical Sciences

PROFESSIONAL CREDENTIALS

Board-Certified Pediatric Clinical Specialist – 2016 – present

American Physical Therapy Association Credentialed Clinical Instructor – 2010 – present

Licensed Physical Therapist – 2008 - present

Certified BLS CPR/AED for Health Care Professionals – 2008 - present

INSTRUCTIONAL EXPERIENCE

2020 – present Assistant Clinical Professor, Georgia State University Department of Physical Therapy

- Acted as lead instructor teaching core pediatrics curriculum to second-year physical therapy students
- Selected textbook, developed course content, and provided 5 hours of lecture and lab instruction each week
- Authored and administered written examinations and lab practicals for all students

2016 – 2019 Instructor, Georgia State University Department of Physical Therapy

- Acted as lead instructor teaching core pediatrics curriculum to second-year physical therapy students
- Selected textbook, developed course content, and provided 5 hours of lecture and lab instruction each week

GENA M. HENDERSON, PT, DPT, PCS

- Authored and administered written examinations and lab practicals for all students

2009 – 2014 Clinical Instructor

- Taught second- and third-year physical therapy students from various programs across the United States in the clinical setting
- Provided one-on-one, hands-on clinical instruction for a period of 8 – 16 weeks
- Performed mid-term and final written evaluations on all students.

PUBLICATIONS

2020 Gena Henderson, PT, DPT, PCS; Diego Ferreira; Jianhua Wu, PhD. *The effects of direction and speed on treadmill walking in typically developing children.* Submitted to Gait & Posture.

2020 Huaqing Liang, PhD; Gena Henderson, PT, DPT, PCC; Jianhua Wu, PhD. *Neuromuscular response to a single session of whole-body vibration in children with cerebral palsy: A pilot study.* Submitted to Clinical Biomechanics.

2020 Gena Henderson, PT, DPT, PCS; Matthew Beerse, PhD; Huaqing Liang, PhD; Diego Ferreira; Jianhua Wu, PhD. *Improvement in Overground Walking After Treadmill-Based Gait Training in a Child with Agenesis of the Corpus Callosum.* Physical Therapy. 2020. 100(1): 157-167.

2019 Matthew Beerse, PhD; Gena Henderson, PT, DPT, PCS; Huaqing Liang, PhD; Toyin Ajisafe, PhD; Jianhua Wu, PhD. *Variability of spatiotemporal gait parameters in children with and without Down syndrome during treadmill walking.* Gait & Posture. 2019 68: 207-212.

2014 Nathalie Maitre, MD, PhD; Gena Henderson, DPT; Shirley Gogliotti, PT; Jennifer Pearson, OTR/L; Ashley Simmons, BS; Lu Wang; James C Slaughter, PhD; Alexandra Key, PhD. *Feasibility of Event-related Potential Methodology to Evaluate Changes in Cortical Processing After Rehabilitation in Children with Cerebral Palsy: A Pilot Study.* J Clin Exp Neuropsychol. 2014 Jun 23:1-11.

PRESENTATIONS AND POSTERS

2019 Gena Henderson, PT, DPT, PCS; Diego Ferreira; Jianhua Wu, PhD. *The effects of direction and speed on treadmill walking in typically developing children.*
- Verbal presentation at the North American Society for the Psychology of Sport and Physical Activity Annual Conference (Baltimore, MD), June 2019.

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2018 Gena Henderson, PT, DPT, PCS; Matthew Beerse, MS; Jianhua Wu, PhD. *Changes in gait kinematics after treadmill training in a child with agenesis of the corpus callosum: A case study*

- Poster presented at the American Physical Therapy Association Combined Sections Meeting (New Orleans, LA), February 2018.

- Poster presented at the Georgia State University Kinesiology and Health Research Symposium (Atlanta, GA), April 2018.

2017 Gena Henderson, PT, DPT, PCS; Matthew Beerse, MS; Jianhua Wu, PhD. *Changes in gait parameters following treadmill training in a child with agenesis of the corpus callosum: A case study.*

- Presented at the Georgia State University Kinesiology and Health Annual Research Symposium (Atlanta, GA), April 2017.

- Poster presented at the Southeastern Pediatric Research Conference (Atlanta, GA), June 2017.

- Poster presented at the American Congress of Rehabilitation Medicine Annual Conference (Atlanta, GA), October 2017.

- Poster presented at the American Physical Therapy Association's Section on Pediatrics Annual Conference (Cincinnati, OH), November 2017.

2017 Jianhua Wu, PhD; Gena Henderson, PT, DPT, PCS; Matthew Beerse, MS.

Spatiotemporal gait parameters in children with fragile X syndrome compared to children with and without Down syndrome: Case studies.

- Poster presented at the Southeastern Pediatric Research Conference (Atlanta, GA), June 2017.

2016 Gena Henderson, PT, DPT, PCS; Matthew Beerse, MS; Toysin Ajisafe, PhD; Jianhua Wu, PhD. *Variability of Foot Rotation Angle During Treadmill Walking in Children with and Without Down Syndrome.*

- Poster presented at the American Physical Therapy Association's Section on Pediatrics Annual Conference (Keystone, CO), November 2016.

2016 Matthew Beerse, MS; Gena Henderson, PT, DPT, PCS; Toyin Ajisafe, PhD; Jianhua Wu, PhD. *Spatiotemporal Pattern of Treadmill Walking in Children with and Without Down Syndrome.*

- Poster presented at the American Society of Biomechanics Meeting (Raleigh, NC), August 2016

RESEARCH GRANTS

2019 Recipient, Healthcare Innovation Program/Georgia Clinical & Translational Science Alliance Seed Grant Program

Effects of the addition of a single bout of whole-body vibration to a single bout of treadmill training on gait and spasticity in ambulatory children with cerebral palsy

2016

Recipient, Georgia Foundation for Physical Therapy Research Grant

Changes in gait kinematics following treadmill training in children with agenesis of the corpus callosum

RELEVANT WORK EXPERIENCE

Inclusive Pediatric Therapy; Atlanta, Georgia; 2020 - present.

Owner / Pediatric Physical Therapist

- Provided evidence-based patient care in a school-based setting with a high incidence of the following diagnoses: cerebral palsy and cortical visual impairment.
- Served as the primary physical therapist to the Ellis Center of Atlanta, a specialized school serving children with multiple disabilities, deafblindness, and complex communication needs

Sunshine Pediatric Therapy; Atlanta, Georgia; 2014 - 2019.

Staff Pediatric Physical Therapist

- Provided evidence-based patient care in the home, school and preschool settings and orthotic consultations to developmental and neurological patients with a high incidence of the following diagnoses: cerebral palsy, torticollis, traumatic brain injury, and Down Syndrome
- Served as the primary physical therapist to the Ellis Center of Atlanta, a specialized school serving children with multiple disabilities, deafblindness, and complex communication needs

Children's Healthcare of Atlanta; Atlanta, Georgia; 2014 - 2016.

Staff Pediatric Physical Therapist

- Provided evidence-based patient care in the outpatient setting to developmental, neurological and orthopedic patients, with a high incidence of the following diagnoses: torticollis, cerebral palsy, traumatic brain injury and orthopedic injuries in typically developing patients
- Participate in monthly "journal club" meetings to present and discuss the latest available research relating to the practice of pediatric physical therapy

Monroe Carell Jr. Children's Hospital at Vanderbilt; Nashville, Tennessee; 2008 - 2014.

Senior-Level Staff Pediatric Physical Therapist

- Provided patient care in both inpatient and outpatient settings to a caseload which included a wide variety of developmental, neurological and orthopedic/sports medicine patients

GENA M. HENDERSON, PT, DPT, PCS

- Member of specialty teams for orthotic evaluation, orthopedic injuries, oncology patients and trauma/sub-acute patients
- Led development of a constraint-induced movement therapy day camp program
- Participated in clinical research related to constraint-induced movement therapy in children with hemiplegia and gait-activated neuromuscular stimulation devices in children with hemiplegia

PROFESSIONAL ORGANIZATION MEMBERSHIPS

Member, American Physical Therapy Association (2005 - present)

Member, Academy of Pediatric Physical Therapy (2007 - present)

Member, Academy of Physical Therapy Education (2016 - present)

Member, American Physical Therapy Association Section on Research (2016 - present)

Member, American Physical Therapy Association Biomechanics SIG (2017-present)

HONORS / AWARDS / RECOGNITIONS

2019-2020 Provost's Dissertation Fellowship, Georgia State University

2015-2019 Dean's Research Fellow, Georgia State University

2008 Award for Academic Excellence, Belmont University School of Physical Therapy

SERVICE EXPERIENCE / RELEVANT VOLUNTEER EXPERIENCE

2015 – 2019 Camp ImpAACt volunteer

- Volunteered skilled physical therapy services to Camp ImpAACt, a program that provides a summer camp experience for children who have multiple disabilities and utilize augmentative or alternative communication
- Developed gross motor activities for children with a wide range of motor impairments and assisted with training staff in a variety of safe transfer techniques

2010 – 2013 “Music City Trykes” Chapter Secretary and member of Executive Board

- Coordinated fundraisers that raised over \$100,000 and allowed the purchase of over 200 adaptive tricycles for local children with special needs
- Performed evaluations and fittings of adaptive tricycles to children and adolescents with varying degrees of disability
- Managed wait list for services and coordinated local give-away events
- Provided educational presentations on the benefits of adaptive cycling for children with special needs to pediatric therapists and early intervention providers in the middle Tennessee area

2010 Charter Member of the “Music City Trykes” AMBUCS chapter based in Nashville, TN

- Founded chapter of the national AMBUCS organization
- Registered as a corporate non-profit organization with the State of Tennessee