

BIOGRAPHICAL SKETCH

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NAME: Darragh, Amy Rowntree

eRA COMMONS USER NAME (credential, e.g., agency login): ADARRAGH06

POSITION TITLE: Associate Professor; Division Director

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Barnard College of Columbia University	B.A.	10/1988	Psychology Program in the Arts
Colorado State University	M.S.	08/1995	Occupational Therapy
Colorado State University	Ph.D.	05/2001	Environmental Health- Epidemiology

A. Personal Statement

I am well-suited for the role senior team member (Co-I) on this infrastructure grant, given my current collaborations with Virginia Tech on three pediatric randomized controlled trials: A Multi-site RCT of pediatric constraint-induced movement therapy (CIMT); Multisite RCT of 3 neurorehabilitation therapies for infants with asymmetrical CP; and Perinatal Arterial Stroke(PAS): A Multi-site RCT of Intensive Infant Rehabilitation (I-ACQUIRE). As such, I am fully engaged in all aspects of those projects, including recruitment, assessment, assignment, intervention fidelity, data collection, analysis, and dissemination. As both an epidemiologist and occupational therapist I possess the methodological and clinical training necessary for successful mentoring and training of others as they embark on clinical trial development and implementation. My contributions in this area will center on fidelity of therapeutic efforts, training of therapists, fidelity of assessments, and engagement of parents/advocates in clinical rehabilitation research. I have been very involved with areas surrounding fidelity in my role as an educator but also in the ongoing NIH funded clinical trials of CIMT with pediatrics. I am also very interested in family caregivers, and studies of the burden associated with caring for a child with disability. This has been critical to the success of our own RCTs focused on infant neurorehabilitation where we have our "Parent as Partner" approach requiring parents to participate in the neurorehabilitation intervention to which their child has been assigned. The feasibility of intensive parent participation, the effects of such participation on the stress of the parent and family, and the characterization of the interactive components of parent and family participation with treatment processes add a level of rich information to intervention practices. We are increasingly learning these interactions have the potential to affect intended therapeutic outcomes and the long-term maintenance of therapy-induced behavioral change. This area of study and the knowledge we are gaining from current studies will help guide future clinical trials, and my area of expertise will highlight the importance of studying these items in future clinical trials. I look forward to contributing to all aspects of the proposed National Pediatric Rehabilitation Resource Center. I also will serve as Core Lead for Pilot Studies, which relates to my role on the Research Committee of the American Academy of Cerebral Palsy and Developmental Medicine (AACPD).

B. Positions and Honors

Positions and Employment

1988-1990	Client Coordinator, United Cerebral Palsy of New York State, NY, NY
1990-1995	Research Associate, Department of Occupational Therapy, Colorado State University, Fort Collins, CO
1995-2000	Research Associate, Department of Environmental Health, Colorado State University, Fort Collins, CO
1995-1999	Occupational Therapist, Community Rehabilitation Services, Fort Collins, CO
1995-1997	Occupational Therapist (per diem), Denver area acute care hospitals: University Hospital, Rose Medical Center, Presbyterian-St. Luke's
1997-2000	Occupational Therapist, Maxim Healthcare, Ft. Collins, CO
1998-2000	Occupational Therapist, Interim/Alexander's Home Health, Ft Collins, CO.
2000-2006	Assistant Professor, Program in Occupational Therapy, Sacred Heart University, Fairfield, CT
2006-2008	Assistant Professor, Department of Occupational Therapy, University of Wisconsin-Milwaukee Milwaukee, WI
2008-2015	Assistant Professor, Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH
2010-	Affiliate Faculty, Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, OH
2015 – pres	Associate Professor and Division Director, Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH

Honors

1988	Departmental Honors, Program in the Arts, Barnard College of Columbia University
1994	Elnora Gilfoyle Thesis Award, Department of Occupational Therapy, Colorado State University
2009	Virginia Scardina Lectureship Award, Ohio Occupational Therapy Association, Ohio
2012	Bernice Owen Award for Research in Safe patient Handling and Movement, Patient Safety Center, VA- VISN 8, Tampa, Florida
2013	Fellow of the American Occupational Therapy Association, AOTA, Bethesda, MD

C. Contribution to Science

1. My research has examined *Caregiver Burden*, including the mental and physical health parents and family caregivers as they deliver and coordinate care for their family members with disabilities. Stress and strain in parents of children with disabilities is well-established, and my work sought to identify how this affects health-related quality of life and which aspects of care are perceived as most difficult. My initial work established that parents who coordinate complex medical care for their children experience high levels of stress and lower mental health, are required to understand and synthesize complex and highly specialized medical information, and must make decisions about the child's care in the absence of medical consultation in order to function as a family unit. These important findings resulted in being invited to write the societal statement on health literacy for the American Occupational Therapy Association. At present, to better understand the impact of delivery of complex care by caregivers of children with disabilities, *I am currently investigating the impact of parent participation in ACQUIRE therapy on their stress and mental health through both self-report and salivary cortisol measures*. In addition, *I am co-chair of the Parent Council for IACQUIRE, and am working with parent advocates to develop and implement sensitivity training and feedback to trial performance sites regarding working with families*.

1. Hand, B., Lane, A., DeBoeck, P., Basso, D.M., Larsen, D., **Darragh, A.D.** (October, 2017). Caregiver burden varies by sensory subtypes and sensory dimension scores of children with autism. *Journal of Autism and Developmental Disorders*, 48(4), 1133-1146. 1-14. DOI 10.1007/s10803-017-3348-1.
2. Rizk, S., Pizur-Barnekow, K., **Darragh, A.R.** (Jan 2014). Quality of life in caregivers of children with autism spectrum disorders. In *The Comprehensive Guide to Autism*. Edited by: Patel, VB, Preedy, VR, Martin, CR. New York: Springer.
3. **Darragh, A.R.**, Sommerich, C.M., Lavender, S.A., Tanner, K.J., Vogel, K., Campo, M. (Sept 2013).

Musculoskeletal discomfort, physical demand and caregiving activities in informal caregivers. *Journal of Applied Gerontology*, OnlineFirst 9/9/2013.

4. Kuhaneck, H.M., Cianciolo, J., Burroughs, T., Lemanczyk, T., **Darragh, A.R.** (Nov 2010). A qualitative study of coping strategies in mothers of children with an autism spectrum disorder. *Physical and Occupational Therapy in Pediatrics*, 30(4): 340-350.

2. I have studied the effects on caregiving for children with disabilities on family participation in life activities, including parent-provided care coordination and therapy delivery. *Participation* in therapy by families involves adherence to specific active ingredients, or theoretical constructs, that underlie the intervention (fidelity). *Fidelity* as both a measure of intervention integrity and method of therapist training is a major emphasis of our (OSU, VT, UVA) current pCIMT RCTs. As a team we have developed an applied, structured, and comprehensive method for assessing therapist intervention delivery through a process of observation and self-analysis. Our team possesses a unique and deep skill set well suited to training others in these methods. Parents are an integral part of intervention delivery, providing additional opportunities for practice for their children. Compliance with therapist recommendations is only one component of parent delivered practice. Our current PCIMT trials include a standard and comprehensive parent training in the language and approaches critical to success of pCIMT. Parent participation in many life activities may be limited, so concerns about their ability to provide additional therapy practice are valid. However, interim analyses to date (presented at AACPD, Montreal, CA in Autumn, 2017) demonstrates that *parents are able to provide the recommended amount of practice, in general, in the context of recommended activities*, indicating that they are able to adhere to key components of intensive therapy and integrate it into their lives.

1. Hand, B., **Darragh, A.R.**, Persch, A.C. (2018). A systematic review of thoroughness and psychometrics of fidelity measures in occupational and physical therapy. *American Journal of Occupational Therapy*, 72(5). (Published abstract also available: Hand, B.A., Darragh, A.R., Persch, A.C. (August, 2016). Intervention Fidelity Measures in Rehabilitation: A Systematic Review. *American Journal of Occupational Therapy*, 70(4), s1, 1)
2. Hand, BN; **Darragh, AR.** (2016). *Caregiver burden, participation, and sensory subtypes in children with autism*. [Columbus]: Ohio State University. Dissertation. http://rave.ohiolink.edu/etdc/view?acc_num=osu1479891856606551
3. Pizur-Barnekow, K., **Darragh, A.R.**, Johnston, M. (Oct, 2011). "I cried because I didn't know if I could take care of him": Toward a taxonomy of interactive and critical health literacy as portrayed by caregivers of children with special health care needs. *Journal of Health Communication*, 16(S3): 205-211. <http://dx.doi.org/10.1080/10810730.2011.604386>.
4. Rizk, S., Pizur-Barnekow, K., **Darragh, A.R.** (Sept, 2011). Leisure and social participation and health-related quality of life in caregivers of children with autism. *Occupational Therapy Journal of Research*, 31(4): 164-71. <http://www.slackjournals.com/article.aspx?rid=82893>.

3. Intervention studies require a unique skill set for effective implementation. I have, and am currently, implemented multiple intervention studies with varied designs. Currently, I am site-PI on 2 multi-site comparative efficacy RCT (1R01HD074574-01A1; 5R01HD068345-03) and serve as co-I and Assessment core co-director for IACQUIRE, a newly funded multisite Phase 3 clinical trial. I served as site-PI for a multi-site efficacy study (R01OH010425) completed in December, 2017. I have the experience and skills to coordinate with all sites, ensure the assessment protocols are implemented correctly and in accordance with scientific design and direction, and maintain regulatory compliance documentation as necessary. I serve on the Executive Steering Committees of the 3 studies named above and actively participate in scientific decision making, training and assessment fidelity, compliance and reporting, and data monitoring. As co-director of the assessment core, I am responsible for training blinded assessors and research coordinators for all twelve trial performance sites, and for ensuring continuing fidelity, reliability, and validity of assessment administration.

1. Ramey, S.L., DeLuca, S., Stevenson, R., Case-Smith, J., **Darragh, A.**, & Conaway, M. (Jan 2018). Children with Hemiparesis Arm and Movement Project (CHAMP): Protocol for a multi-site comparative efficacy trial of paediatric Constraint-Induced Movement Therapy (CIMT) testing effects of dosage and type of constraint for children with hemiparetic cerebral palsy. *BMJ Open*, 9, bmjopen-

2018-023285. doi: 10.1136/bmjopen-2018-023285.

2. **Darragh, A.R.**, Lavender, S., Polivka, B., Sommerich, C.M., Wills, C.E., Hittle, B.A., Chen, R. Stredney, D.L. (2016) Gaming simulation as health and safety training for home healthcare workers. *Clinical Simulation in Nursing*, 12(8), 328-335
3. Weaver, L. L., **Darragh, A.**, (2015). OhioLINK Electronic Theses and Dissertations Center. [Columbus]:Ohio State University. *Yoga for anxiety reduction in children and adolescents: A mixed methods effectiveness study*. Dissertation.
4. Campo, M., Shiyko, M.P., Margulis, H., **Darragh, A.R.** (Jan 2013) Effect of a safe patient handling program on rehabilitation outcomes. *Archives of Physical Medicine and Rehabilitation*, 94(1): 17-22.

. Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/amy.darragh.1/bibliography/46236861/public/?sort=date&direction=ascending>

D. Research Support

Project Title: Protecting Home Healthcare Workers: An interactive video-based app to coach workers through challenging health and safety-related situations.

Role: PI

Funding Agency: Ohio Occupational Safety and Health Research Program. (Total Award 249, 958).

Type: Extramural. Funding Period 06/01/2019-06/30/2021.

Purpose: This project will develop an on-demand app that links users to videos providing guidance for handling challenging health and safety situations in home healthcare.

Project Title: Perinatal Arterial Stroke: A Multi-site RCT of Intensive Infant Rehabilitation (I-ACQUIRE).

PI: Ramey, S; Lo, W.

Role: OSU Site-PI- Darragh, AR and Heathcock, J

Funding Agency: National Institutes of Health, National Institute of Neurological Disorders and Stroke (Stroke Net). Grant/Contract Number; 1U01NS106655-01A1

Type: Extramural, Funding Period 02/01/2019 – 1/31/2023

Purpose: This StrokeNet Phase III trial will provide definitive efficacy data from 12 sites (N=240) about an intensive form of infant rehabilitation (Infant ACQUIRE) to transform rehabilitation and improve clinical outcomes.

Project Title: Multisite RCT of 3 Neurorehabilitation Therapies for Infants with Asymmetrical CP.

Role: OSU Site-Principal Investigator (PIs: Ramey; DeLuca)

Agency: NIH-NICHD 1R01HD074574-01A1

Type: Extramural, Funding Period 03/01/2014 – 02/28/2020

Purpose: This multisite randomized controlled trial tests 3 highly-promising new therapies for infants with asymmetrical CP (N=72) and will yield much needed data about the differential impact of these therapies on neuromotor outcomes and brain development up to 12 months post-treatment.

Project Title: Multi-site RCT of Pediatric Constraint-Induced Movement Therapy (CIMT).

Role: OSU Site-Principal Investigator (PI: Ramey, DeLuca, Stevenson)

Agency: NIH-NICHD 5R01HD068345-03

Type: Extramural, Funding Period 09/27/2012 – 07/31/2019

Purpose: This is the first multi-site, randomized controlled trial (RCT) that comprises a comparative efficacy trial of ACQUIREc, a manualized form of pediatric constraint-induced movement therapy (CIMT), for 3 – 6 yr old children with unilateral cerebral palsy. The RCT (N=144) tests the efficacy of 2 different dosage levels and 2 types of constraint compared to a control condition (usual treatment). The study findings are critically needed to establish evidence-based practice standards to improve lifelong neuromotor capacity for >229,000 affected individuals in the U.S.