Recent Funding Recipient, Virginia Little, PT, MSPT, NCS, Investigates Interventions to Improve Walking Function in Stroke Patients

Patients who have suffered a severe stroke often feel fearful and hopeless of losing their ability to walk. Virginia Little, PT, MSPT, NCS, of the University of Florida, is dedicating her research career to serving the large cohort of stroke survivors by investigating interventions to better serve these individuals and offer them hope.

As a clinician, Little lives for “that moment when you can see in a patient’s eyes that they have realized, for the first time after their stroke, that they’re going to be able to walk again and continue living their life as they want to.”

In addition to the 2008 Florence Kendall Doctoral Scholarship, Little was recently awarded with her second Promotion of Doctoral Studies (PODS) I Scholarship, the Barnes-Leahy Award for post-professional studies in neurology. Her research is focused on understanding the interaction between biomechanical and neurophysiological factors and how this interaction contributes to walking dysfunction in persons post-stroke. Little uses 3-D motion analysis to study kinematics, which include motion patterns such as joint position and joint angles; kinetics, which include the forces produced during movement; and concurrent muscle activation patterns. In future work, she intends to include reflex modulation during walking and transcranial magnetic stimulation as approaches that will allow her to directly probe how neural control mechanisms influence walking dysfunction.

Family played a significant role in inspiring Little to pursue physical therapy as a career. During her childhood, she and her family lived in a household with her grandparents, both of whom had survived strokes. She observed their daily struggles and knew from an early age that she wanted to play a role in the process of recovery from stroke. Although sports medicine and athletic training had initially caught her interest, over time, she felt that she was best suited for physical therapy. “I recognized how much physical therapists can impact the daily lives of people affected by injury and illness and I wanted to be a part of that process.”

After working as a clinician for eight years, she decided to pursue a PhD, but wasn’t sure where she would be able to find the right opportunities. It wasn’t until she attended a continuing education course and met Andrea Behrman, PT, PhD, FAPTA, of the University of Florida, also a recipient of a 1998 New Investigator Fellowship Training Initiative (NIFTI) from the Foundation, that she realized the University of Florida was the right school for her. Little always thought that she would thrive in a smaller school environment, but after learning of the opportunities that the University of Florida had to offer,
and that she and Carolynn Patten, PT, PhD, had similar research interests, she found herself at the university.

Little believes that she wouldn’t have succeeded as much as she has in her career without the guidance of her mentor. Patten, a University of Florida Associate Professor, was a 1998 and 1999 New Investigator Fellowship Training Initiative (NIFTI) recipient and received Foundation support for her doctoral studies between 1995 and 1998. Little describes Patten as being supportive, but also as a leader who encourages her to become more of an independent thinker: “I’m becoming more and more confident to try things out. I can start to see the evolution in my thinking and I don’t always ask for help first because I know there are things I can figure out on my own.”

As a researcher, Little is fascinated by the “untapped potential” of research, but also finds this to be a challenge. Her initial frustrations were rooted in the fact that there was a need for more substantial evidence. The literature didn’t explain what factors affected recovery of walking function or the rate at which it was happening. Little believes that more thorough research is the key to discovering better interventions for post-stroke patients: “If we learn how to better understand the factors affecting them, we can produce better treatments to help them more effectively.” She enjoys being a researcher because it allows her to “ask interesting questions and dedicate the time to discovering those answers.” She found it difficult to be fully engaged in both the researcher and full-time clinician roles.

Little feels she owes a great deal of gratitude to the Foundation for the scholarships that helped her start her career in physical therapy research. The funding she received eased the transition, financially, from full-time clinician to full-time PhD student. Foundation funding enabled her to network with other professionals and take advantage of additional continuing education opportunities.

She feels that the Foundation has played a large part in her career as well as the physical therapy profession by easing the transition and making it easier for individuals to become involved in research. It was a difficult adjustment to leave the security of a full-time job as a clinician, but Little believes that this move can be worth it, especially because it can lead to greater contributions to the profession. “Clinicians should be proponents and seek out conversations with people, that is researchers, with whom they wish to be involved. If they have any interest in research they should find a way to involve themselves in the process.”

Little thanks the Foundation for its support, which has allowed her to participate whole-heartedly in the endeavor of becoming a full-time graduate student. She also can’t forget the group of people that play a major role in advancing physical therapy research: the donors. “Without their support, I wouldn’t be able to realize my dreams. I hope that through my dedication and the quality of work that I hope to produce, I’ll be able to give back to the
profession as at least a small sign of appreciation for their generous donations.”

Photo taken by Maria Belen Farias.