10-23-2013

OT Students Present Brain Injury Retraining Study

Sarah Gardner
Dominican University of California, sarah.gardner@dominican.edu

Dave Albee
Dominican University of California, david.albee@dominican.edu

OT Students Present Brain Injury Retraining Study

With the guidance of Li in Dominican's Department of Occupational Therapy, OT graduate students Jonathan Alonso, Nisha Chadha and Jennifer Pulido have taken that study one step further. On October 26 at the 37th annual Occupational Therapy Association of California conference in Sacramento, they gave a poster presentation entitled "Skill Generalization in Individuals with Acquired Brain Injury."
The ultimate goal with the study is to design a transfer package using a systematic therapy curriculum that will help people with ABI perform better in every-day life after using computer-based cognitive retraining.

The process to research is helping Dominican graduate students such as Alonso become better every-day Occupational Therapists.

"With the knowledge I have received at Dominican and the quality of research, I feel like I can go into the field and contribute pretty significantly," Alonso says. "I almost feel like, as an entry level OT, I will have an advantage over an OT who has been practicing in the same facility for 10-15 years."

The 37-year-old Alonso, a former semi-pro soccer player, trainer, coach and director, has discovered that Dominican was the best path for him to reach his goals. Accepted at the University of Southern California and San Jose State University, Alonso chose Dominican mostly because of its small class sizes, financial aid package and personal attention from its professors.

"I liked the idea of having a thesis adviser who didn't have 200 other students," he says. "In terms of working with Kitsum, she's become a mentor to me. I really admire and respect her. She guided us in the direction that she wanted the research to go, but she made us feel like we were the ones coming up with the decisions."

Li, who paired Alonso together with Chadha and Pulido for their thesis project last fall, presented them with the challenge of advancing her pilot study, which started in the spring of 2012 at the Brain Injury Network of the Bay Area in Larkspur.

"Being in a group was beneficial because it helped teach us a process of utilizing each other's strengths," Alonso says. "It is important to collaborate with different people who have varying skill sets and life experiences. Our team worked great together and took this underlying component of the education process to a higher level."

They utilized a Parrot software program to evaluate the effectiveness on improving 12 individuals with chronic ABI demonstrating deficits in memory and attention. Using an assessment kit, Cognistat, Li reported "significant" improvements, leading to further studies.

She handed the study off to Alonso, Chadha and Pulido.

"This time the focus was to see if the adults who had improvement in attention and memory, does that mean they can improve their performance in everyday tasks like learning a new skill,"

Li says. “We know that they have improvement in attention and memory, but how can they apply it?”

Dominican’s team of grad student researchers decided that the study needed to be very task specific in order to measure computer-based cognitive retraining improvements in cognition and transfer to performance and skills. They concluded that Parrot software improved the participants’ overall cognition, as measured by Montreal Cognitive Assessment (MoCA). But the improvement in overall cognition was unable to generalize to a performance, as measured by a medication box task. CBCR programs, as a stand-alone rehabilitation method, may not be adequate in improving performances in everyday life tasks.

“For a graduate thesis coming out of a small, private university this is a good study,” Alonso says.

Li will pass the study onto another group of four Dominican graduate students. Her goal by the spring of 2014 is to achieve a therapy curriculum that will help people with chronic ABI perform better in every-day life. She will also test the effectiveness of the new therapy curriculum, yet, with another group of Dominican graduate students in 2015.

Alonso is finishing up the manuscript. He intends to pursue his doctorate and apply to the U.S. Army Doctor of Science Program in Occupational Therapy at Baylor University.

“I always had a fascination with the military and to serve the men and women of our country coming back from Afghanistan and Iraq,” he says.

Alonso’s research at Dominican has prepared him for his goal of someday working in a fast-paced and challenging hospital setting.

“The training and the education I have received here at Dominican has been beneficial … I’ve learned a ton,” Alonso says. “The research put me in a position that it’s something I can add, having that extra skill set. The research process will always be a part of my practice.”

October, 28, 2013