



Seven Hills
Research Center

Office of the President



Seven Hills

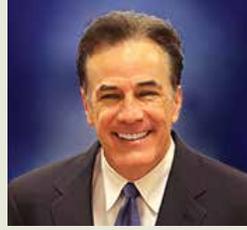
Research

2016-2020 Opportunities for Innovation



Results for Dissemination

The Researchers



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Seven Hills Foundation

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Stetson School

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The Vision



Seven Hills Foundation and Affiliates has a remarkable history of researching and forming best practices for the various populations we support. As a leader in the health and human services sector, our clinical and programs acumen is second to none. Our staff members are experts in their fields, in constant pursuit of professional development and creative strategies to optimally help those they serve.

In March 2015, Seven Hills formalized its longstanding success in producing academic and scientific-quality methods with the inception of the Seven Hills Research Center (SHRC). Through the urging of our staff, we now have a formal research and publishing function concerning the work that promotes the results of our clinical and program outcomes throughout our various affiliates. The purpose of the Center is to:

- 1) Draw together staff from all roles and disciplines around clinical and program aspects for the purpose of scholarly research
- 2) Publish formal research as a means of advancing innovation on a given topic
- 3) Further the brand of Seven Hills Foundation through publication of research
- 4) Promote a disciplined approach to research and scholarship design for our 14 affiliates

The Seven Hills Research Center is led by Dr. Kathee Jordan, Executive Vice President and Chief Executive Officer; and Dr. Joseph Ricciardi, Assistant Vice President and Clinical Director of Seven Hills NeuroCare. Dr. James Luiselli is consulting to Seven Hills, culminating in 60+ years of expertise in research methods and publication. This report highlights the impressive research that has been conducted since the Center's inception, the current projects underway across our affiliates, and the presentations made by our esteemed staff members at regional and national conferences. Most noteworthy is the representation of more than 25 staff members involved in this research process.

The Seven Hills Research Center is another means of advancing the work we deliver to over 45,000 children and adults every year, consistent with our Core Values throughout Seven Hills Foundation and Affiliates—and around the globe.

Dr. David A. Jordan
President
Seven Hills Foundation

The Process

SHRC teams meet monthly in two field locations, Worcester and Middleton. Extended meetings are scheduled periodically at Stetson School and Seven Hills Rhode Island. Attendees have included affiliate staff from Seven Hills Aspire, Seven Hills Community Services, Seven Hills Family Services, Seven Hills NeuroCare, Seven Hills Rhode Island, Stetson School, and Children's Friend.

During meetings, team members discuss ongoing projects, setting "next steps," and identifying new projects, which are discovered in the work we do. For example, what are some of the problems we face providing support, developing staff, managing operations?

Problems become opportunities for innovations when a careful, research-based approach is used.

Sharing findings, which we call dissemination, is the ultimate aim. This takes many forms: internal presentations during meetings, staff training opportunities, conference posters, conference presentations, and publications (peer-reviewed research journals, book chapters, professional newsletters).



The SHRC NE Region Research Group revising a manuscript in preparation, "Data Recording Among Care Providers of Adults with Intellectual Disability: A Social Validity Assessment." The study involved evaluating data collection practices that staff employ in support of individuals with challenging behavior disorders. The research team includes (L-R), Dr. Joseph Ricciardi, Natalie Driscoll, Marianne Thiga, David Fofanah, Joshua Wanganga, Dr. Allison Rothschild, and Dr. James Luiselli.

Project Phases

- 1 Discussion/Exploration:**
Project consideration, brainstorming, literature review
- 2 Planning:**
Project selection; research plan development
- 3 Implementation:**
Project scheduling and rollout
- 4 Data Analysis:**
Results Evaluation
- 5 Dissemination:**
Internal/external sharing of project results through staff and conference presentations
- 6 Manuscript Preparation:**
Explore and secure publishing channels
- 7 Completion:**
Project results disseminated, published, and implemented in real-time

Presentations

Using Participatory Action Research to Increase Job Satisfaction and Decrease Turnover Among Direct Care Staff in Human Services Agencies.

■ Allison Rothschild, October 2019

44th Annual Providers Council Convention and Expo, Boston, MA

Collaborating with Schools to Support Students with Problem Sexual Behaviors.

■ Sally Gulmi, J. Grady-Lindquist; April 2019

Annual Conference for the Massachusetts Society for a World Free of Sexual Harm by Youth (MASOC)

Functional Assessment, Differential Reinforcement, and a Person-Centered Therapy Approach in Addressing Severe Challenging Behaviors and Teaching Safe, Functional Alternatives for a Person with Acquired Brain Injury.

■ Sonya Bouchard, Trudy Dould, Joseph Ricciardi; March 2019

Poster presented at Annual Conference of the Brain Injury Association of Massachusetts, Marlborough, MA

A Rapid Staff Preparation Method to Support Community Placement of a Person with ABI.

■ Natalie Driscoll, David Fofanah, Joseph Ricciardi; March 2019

Poster presented at the Annual Conference of the Brain Injury Association of Massachusetts, Marlborough, MA

Assessment and Behavioral Intervention for Neurobehavioral Challenges Following Brain Injury.

■ Joseph Ricciardi, March 2019

Annual Conference of the Brain Injury Association of Massachusetts, Marlborough, MA

Completed Projects

Assessing Pain in Adults with Intellectual Disability: A Descriptive and Qualitative Evaluation of Ratings and Impressions among Care Providers. (2019)

Journal of Developmental and Physical Disabilities, 31 (2), 219-230.

■ Allison Weiss Rothschild, Joseph N. Ricciardi, and James K. Luiselli

Research documents that pain and physical discomfort commonly occur in persons with intellectual and developmental disabilities (IDD), who are often unable to communicate their distress and achieve symptom relief. This qualitative evaluation describes how Seven Hills Community Services care providers detect pain in the adults they support. The study combined quantitative and qualitative ratings within a cross-validation descriptive methodology that also elicited care provider recommendations for improving pain assessment. Care providers report learning to identify unique sounds, gestures, and behavioral changes as indications of pain—providing 28 observable behaviors indicating pain in people with limited ability to communicate.

Integrated Behavioral Intervention and Person-Centered Therapy within Community-Based Treatment of an Adult with Acquired Brain Injury. (2019)

Clinical Case Studies, 19, 133-144.

■ Joseph N. Ricciardi, Sonya W. Bouchard, James K. Luiselli, and Trudy Dould

This single-case behavioral intervention study of a 30-year-old woman who had acquired brain injury demonstrated significant challenging behaviors within her community-based group home. Following a baseline evaluation phase, the woman, clinicians, and care providers collaborated to develop a treatment that included personal goals, differential token reinforcement, communication training, graphic performance feedback, and reinforcement fading. During 10 months of intervention, challenging behaviors steadily decreased from baseline levels, and low-frequency occurrence was maintained at 3-, 6-, and 9-month follow-up assessments. As a result, the woman's lifestyle markedly improved. The study illustrates innovation in behavior support planning: a person-centered therapy approach combined with behavioral intervention for persons who have ABI and experience community-living adjustment difficulties.

Using Sexual Script Theory to Examine Portuguese Gay Men in Southeastern Massachusetts

Culture, Health & Sexuality

■ Kathleen M. Jordan

This study examined Portuguese American gay men within the context of sexual script theory. Recruitment was conducted in two well-known HIV education and prevention outreach centers in southeastern Massachusetts. A phenomenological study design was employed with eight men to provide a more in-depth analysis of their sociocultural sexual behaviors. The sexual scripts of the participants were conceptualized within the three domains of cultural, interpersonal, and intrapsychic. Findings suggest the three scripts are

constantly interacting and informing one another. This ongoing negotiation influences the participants' positioning of their sexuality within the broader context of their everyday life within the Portuguese community. Participants script their sexuality while navigating multiple but separate entities within their culture, their religion, and their families. Learning from these experiences could help develop HIV prevention programs for specific subgroups of men who have sex with men.

Behavioral Risk Assessment. (2017)

Applied Behavior Analysis Advanced Guidebook: A Manual for Professional Practice (J. Luiselli, Editor; pp. 93-116). Academic Press.

■ **Joseph N. Ricciardi and Allison Weiss Rothschild**

Behavioral Risk Assessment of Violence-Aggression. (2020)

Applied Behavior Analysis Treatment of Violence and Aggression in Persons with Intellectual Disability and Neurodevelopmental Disabilities (J. Luiselli, Editor). Springer Publishing.

■ **Joseph N. Ricciardi**

The two book chapters evolved from a comprehensive risk assessment method developed by Dr. Ricciardi, then refined by Dr. Rothschild. Individuals with intellectual and developmental disabilities (IDD) are at high risk for problematic behaviors, which can lead to self-harm or harm to others. Implications can extend to legal problems, secondary health complications, property damage, and loss of placement. The topography-based Screening Tool for Behaviors of Concern is unique to the evaluation of clinical-behavioral risk specific for individuals with IDD. The practice was implemented at Seven Hills and the assessment strategy can be used to develop a risk mitigation plan. The approach to violence-aggression is narrowed in the second book.

Re-establishing Solid Food Consumption Following Traumatic Brain Injury with Extended Food Refusal Using a Multi-Component Behavioral Intervention. (2019)

Presented at the Annual Conference of the Berkshire Association for Behavior Analysis and Therapy, Amherst MA. Manuscript in preparation.

■ **Joseph N. Ricciardi, James K. Luiselli, and Jodi Tretheway**

This single-case behavioral intervention uses a multi-component approach for re-establishing solid food consumption in a 26-year-old woman with prolonged food rejection secondary to traumatic brain injury. Implementation occurred during daily meals and was evaluated by direct measurement of consumption over several months. Extended follow-up showed that results were maintained and generalized, and a complicating oral dyskinesia was resolved. Decrease from baseline levels and low-frequency occurrence was maintained at 3-, 6-, and 9-month follow-up assessments. The study is the first to address parietal rejection-behavior syndrome with a behavioral intervention.

Presentations

The Core Components of Effective Settings for Individuals with Complex Behavioral Presentations.

■ **Joseph Ricciardi, March 2019**

Annual Conference of the Connecticut Association for Behavior Analysis, Cromwell, CT

The Effective Milieu for People with Complex Behavioral Presentations.

■ **Joseph Ricciardi, Invited Speaker; October 2018**

American Healthcare Association Annual Conference, San Diego, CA

Assessing Pain in Adults with Developmental Disabilities: Ratings and Impressions Among Care-Providers.

■ **Allison Rothschild, Joseph Ricciardi, James K. Luiselli; October 2018**

Annual Conference of the Berkshire Association for Behavior Analysis and Therapy, Amherst, MA

Introduction to Acquired Brain Injury for Behavior Analysts: Clinical-Behavior Analysis in Neurorehabilitation.

■ **Joseph Ricciardi, May 2018**

Annual Conference of the Association for Behavior Analysis International, San Diego, CA

How to Improve Long-Term Treatment Outcomes through the Use of Recidivism Studies.

■ **Joseph Allred, Sally Gulmi, Peter Gow; April 2018**

Annual Conference of the Massachusetts Society for a World Free of Sexual Harm by Youth (MASOC)

Case Study #1

Carrie O'Shea: Traumatic Brain Injury: Automobile Accident, 2013

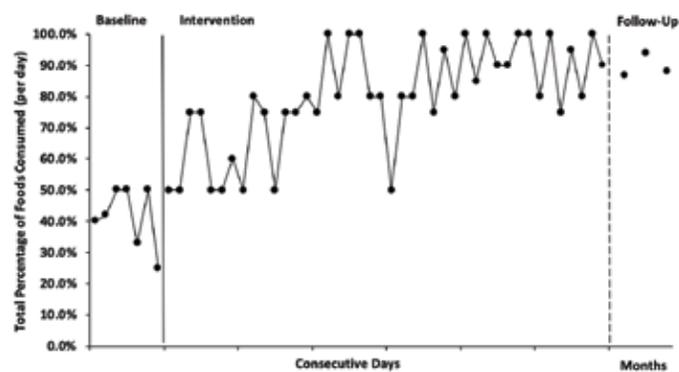
When Seven Hills NeuroCare staff spoke with Carrie's family, they asked what could be worked on that would help her and her family most. Her father, a professional chef, said "It would be great if she could eat meals with us." Over two years after her traumatic brain injury, Carrie continued to be fed through a gastronomy tube. Although she had an intact swallow ability, she rejected all solid foods. Sometimes she did this politely, "No thank you," and "I don't like it."

"Who doesn't love to eat? I didn't, after my accident! At first, I was fed through a G-tube. When it was time to eat solid food, I couldn't tolerate the flavors, the texture, the chewing. It took a long time and many bites of encouragement before I loved to eat again!" —Carrie O'Shea

Sometimes, she reacted more vigorously, pushing foods away, spitting them out, and even throwing them. The problem appeared related to her brain injury, which disrupted normal sensory processing in her right parietal lobe. Indeed, the "rejection behavior" had been reported in the research literature in animals with parietal lesions and in a few clinical case studies of human parietal stroke. In Carrie's case, she also exhibited a severe reaction to the presence of food in her mouth: a profound involuntary movement—oral-dyskinesia—that she described as painful or very uncomfortable. There were no published strategies to directly approach this problem. Because of the complexity, multiple behavioral strategies had to be identified and combined into a single intervention that could be done by direct support staff. Working daily, her staff gently supported each bite she took, providing small bites, encouragements, reminders, and reassurance. In time, each session became easier, with her painful involuntary movements becoming less frequent, and her sensory processing normalizing. After several months of steady gains, she no longer required these supports, and is now able to eat foods independently. In fact, that very year, she enjoyed Thanksgiving dinner with her family for the first time since her accident.

"During this long process of rehabilitation while acclimating to her challenges, it was Carrie's persistent engagement and drive that pushed her to make amazing gains. She formed an incredible partnership with her clinical team and caregivers, as they worked together to achieve and celebrate even the smallest milestones. It was inspiring to all of us to watch her tackle new things and take great pride in the positive feedback from her team, which made her want to excel even more!" —Joseph Ricciardi, PsyD, Clinical Director

Figure 1: Daily Food Consumption



Carrie in photos, Top left: Receiving a G-tube feeding prior to entering SHNC; Top right: During follow-up, after treatment; Above: During a photo shoot for her modeling portfolio, 2019

Case Study #2

Bringing Research into Practice: The Scientist-Practitioner

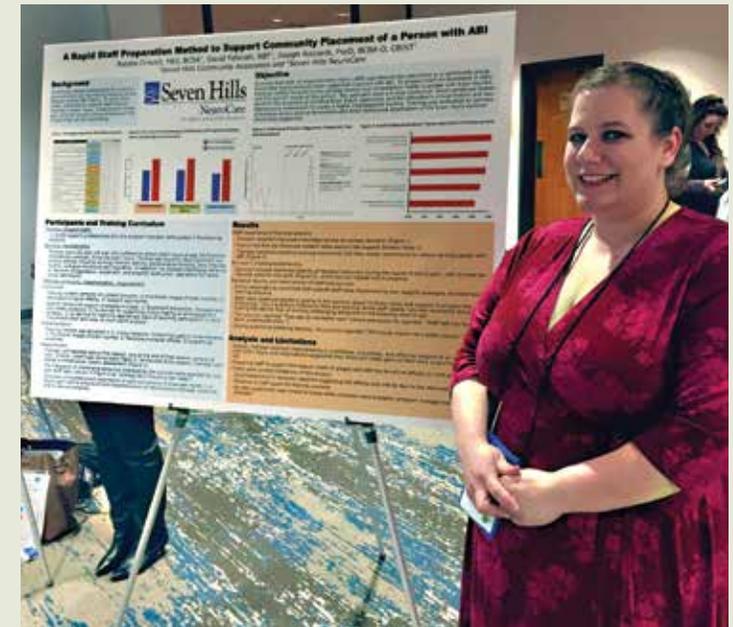
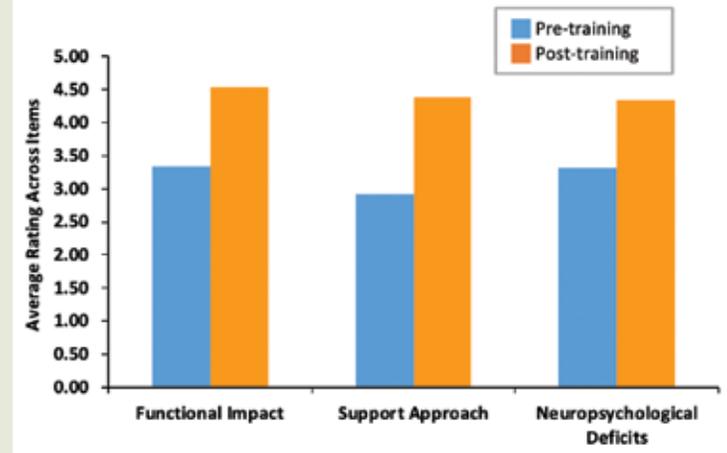
Clinical case work can be improved by taking a careful approach known as “The Scientist-Practitioner.” In this model, clinicians apply the findings, processes, and principles of science and scientific investigations to their professional practice. Combined with their knowledge of the individual case and their clinical judgment, this represents the highest application of evidence-based practice. In addition to quality work, a careful scientist-practitioner approach can yield important data and innovations worth sharing with other practitioners and researchers.

Natalie Driscoll, MEd, BCBA, LABA was a clinician with Seven Hills Community Services faced with the challenge of helping staff support a young man with brain injury. The support staff had no training in the specialized approaches used with this population, and the individual was struggling with adjusting to his brain injury, sometimes reacting violently when others tried to discuss his injury with him. Natalie began with a careful, comprehensive assessment, reviewing all medical records to understand the cause and the effects of the young man’s anoxic brain injury. Based on this assessment, she developed a behavior support plan reflecting the neuropsychological underpinnings of his challenges, and how to best teach him to solve his challenges with support staff. She began speaking with him directly about his brain injury, effectively reducing his reactivity toward support staff. Supported by Seven Hills NeuroCare professionals, Natalie developed a training that included basic information about brain injury and neurorehabilitation, the specific injuries of this person, his personal life history, and his neurobehavioral support plan. As a scientist-practitioner, she took data during the process, surveying staff about their understanding of the functional impact, neuropsychological deficits, and support needs of the individual pre- and post-training. The results indicated that her rapid method for preparing staff to work effectively positively impacted their understanding of his brain injury and support needs. In addition, when asked in another survey, “Would you recommend this training to others working with someone with brain injury?” 100% of support staff indicated they would recommend the training “Very Strongly.”

Natalie has since shared her results with the Massachusetts brain injury community, presenting her findings as a research poster at the 2019 Annual Conference of the Brain Injury Association of Massachusetts. Some of the material included in the training on “frontal lobe dysfunction” have since been incorporated into the pre-service training for all Seven Hills NeuroCare staff.

“By beginning a training with the basics of brain injury, staff and participants all start on the same step and build knowledge and expectations from the ground up.”
—Natalie Driscoll

Figure 1: Pre- Post-Training Ratings by Participants:
Self-reported improvement in knowledge across domains



Natalie presenting her results as a research poster at the 2019 Annual Conference of the Brain Injury Association of Massachusetts

MISSION

The Mission of the Seven Hills Research Center is to support staff engagement with clinical and organizational research activities and share our results with others. Working together and supporting one another's projects, we apply research methods to develop innovations in clinical practice and healthcare management.

We share findings within Seven Hills and throughout the professional community through presentations, conferences, and professional publication. Our Mission directly supports the Seven Hills Core Values.



CORE VALUES

Respect & Kindness | Integrity | Teamwork
Innovation | Service to Others