

Cognitive Rehabilitation and Neuroimaging: Examining the Evidence from Brain to Behavior

*** Originally recorded on October 5, 2020. *** [Listen to it here.](#)

- JOAN BANKS-SMITH: 00:04 [music] This is Joan Banks-Smith for Kessler Foundation's Fast Takes, rehabilitation research that changes lives. Today, I'm with Dr. John DeLuca, senior vice president of research and training at Kessler Foundation, to talk about his latest book, *Cognitive Rehabilitation and Neuroimaging: Examining the Evidence from Brain to Behavior*. Funding sources for this study are Kessler Foundation and the National Multiple Sclerosis Society. Dr. DeLuca, can you share with us the main takeaways of this publication?
- JOHN DELUCA: 00:36 So this book is really designed to look at the current evidence of cognitive rehabilitation approaches to help persons with cognitive impairment and the use of neuroimaging and understanding what's going on in the brain with cognitive rehabilitation. The good thing about this book is that it has a variety of chapters and doesn't just talk about-- it doesn't talk about one area like multiple sclerosis or traumatic brain injury. The book looks at a host of different populations in terms of cognitive rehabilitation and the literature on neuroimaging, how neuroimaging has been used to show that changes in cognition, not only change in behavior but what's going on in the brain. So the nice thing about this book, again, is that we find some areas where there's a significant amount of research, for example, on multiple sclerosis or on schizophrenia. But there are other areas where there's really scant data on looking at what's going on in the brain using neuroimaging and for cognitive rehabilitation and, for example, in cancer or in pediatrics, pediatric brain injury. So there's a lot of work that needs to be done here. The book is really designed to show us where we are today and where we need to go in the future. And while, again, some areas show pretty good evidence, other areas need a lot of work to do. And it's really important to understand not only can we change behavior that is cognitive functioning, does it do so by changing the brain through neuroplasticity, and how does it do that? So the book is designed to provide a framework for where we are today and where we want to go in the future.
- BANKS-SMITH: 02:32 For more information about this book, check out the press release on our website, kesslerfoundation.org, or at Springer Publishing. Links can be found in the program notes. Tuned into our podcast series lately? Join our listeners in 90 countries who enjoy learning about the work of Kessler Foundation. Follow us on Facebook, Twitter, and Instagram. Listen to us on Apple Podcasts, Spotify, Soundcloud, or wherever you get your podcasts. [music]