



Introducing neurocounseling into counseling classes: Getting our feet wet together

Having read the title to this article, hear me out before you flip the page or allow your eyes to glaze over. Anyone who took an introductory psychology class in college (probably everyone reading this) was exposed to the basic structures of the brain — the neurons, with their axons and dendrites, the different lobes of the brain and what they were responsible for, and, most likely, where to find Broca's area, which is responsible for speech production.

Explaining brain functions that are applicable to our clients' struggles provides an opportunity to understand those struggles differently. For example, psychology professor and author Louis Cozolino suggests that during traumatic events, activity in Broca's area slows down, making it more difficult to articulate one's experience. Sharing this information with clients who struggle to speak about their trauma could change how they view that struggle. This might help them recognize where this struggle comes from, therefore making it less *their* problem than *a* problem or, perhaps, not a problem at all.

Integrating this information into our sessions with clients can enable counselors to intervene in ways that would not otherwise be possible. This is the essence of neurocounseling, as explained in the book *Neurocounseling: Brain-Based Clinical Approaches*, edited by Thomas A. Field, Laura K. Jones and Lori A. Russell-Chapin and published by the American Counseling Association in 2017.

Several years ago, my career started me down a path of investigation into trauma and trauma treatment that has continued to expand my interests into symptoms, etiology and treatment options for various types of trauma. According to Bessel van der Kolk, author of *The Body Keeps the Score: Brain, Mind and Body in the Healing of Trauma*, one of the central themes that infiltrates work in this field

is the interaction between biological and psychological processes, also known as mind-body connections. As I began learning more about these connections, I was introduced to the limbic system, the hypothalamic-pituitary-adrenal axis and other important brain structures and functions that fascinated me, not only as they related to trauma work but also as they related to the work of counseling in general. Several wonderful resources surfaced in my reading, so the question came to me: What do I do with this information?

Required reading

As a counselor educator, I believe that lifelong learning is something I should consistently model for my students. In dipping my toes into the realm of neurocounseling as part of my personal study, I have become entranced with both its intricacy and its simplicity. As I read or listen to books and articles on the subject, I frequently find myself exclaiming, "Of course! This stuff makes sense!" How could I, as an educator, not be quick to share this information with my students?

As I discovered new resources, I wanted them to become a part of my students' education. First, I began adding resources to the suggested reading lists in my syllabi for the classes I was teaching. The occasional student may look at such a list with voracious intent, but most who scan it are likely to have some semblance of the following thought: "Uh-huh. Wouldn't it be nice to have time to read *anything* outside of what is required?" So, when I stumbled across some real gems — books I knew my students needed to read *and* would enjoy — I started adding them to my classes as required reading.

The first one I tried, Cozolino's *Why Therapy Works: Using Our Minds to Change Our Brains*, I assigned in my internship class one spring. Then I added another one, the aforementioned *Neurocounseling:*

Brain-Based Clinical Approaches, to my Introduction to Clinical Mental Health class. I also added a module to one of my online trauma classes to help explain the limbic system and its role in triggering long after the traumatic event has passed.

Changes in perspective

The more resources I find, the more fascinated I become. And guess what? It seems like my students are beginning to catch the bug too. In fact, I have asked four of my former students to explain how learning about neurocounseling and then using it in their work has changed their thinking on how counselors do what we do. Two of these students were in the internship class that I just referenced, and two were in the clinical mental health class. I hope you will read and absorb what they have to say.



Lisa Gasper Otten: I was in my first semester of internship at a medical center during my master's-level counseling program when Dr. Ellison assigned *Why Therapy Works* by Louis Cozolino. Although I found the neuroscience somewhat intimidating, I quickly learned that I could use the material with my patients throughout the hospital. Cozolino vividly described how the limbic system, although well-intentioned, can sometimes create conditions that cause emotional pain. However, counseling techniques can stimulate other parts of the brain to treat these wounds.

By studying illustrations of the brain, I was able to visualize the physical mechanisms of change that take place during mental health counseling. For example, I could imagine a patient's amygdala, which activates the complex fight-flight-or-freeze response, as an emergency center complete with alarms screaming "Danger! Danger!" I also

could envision myself as what Cozolino termed an “amygdala whisperer” who uses techniques based in neuroscience to help a patient calm an overly vigilant amygdala.

Cozolino described storytelling as a powerful technique that can increase feelings of efficacy in people who have experienced trauma. Cozolino explained, “Within the brain, the cognitive processes involved in creating a narrative activate frontal functioning that downregulates amygdala activation.”

As I read this, I thought of patients in cardiac rehabilitation. The trauma symptoms described by Cozolino corresponded to those I had read about during my practicum by Alia I. Sheikh and Sylvia A. Marotta (“Best Practices for Counseling in Cardiac Rehabilitation Settings,” *Journal of Counseling & Development*, Winter 2008). For instance, some patients reported posttraumatic stress disorder symptoms, including intrusive thoughts about the cardiac event that threatened their lives and left them feeling helpless. I considered that patients might gain a greater sense of control in their lives by creating narratives about the resources and skills they possessed or could develop to cope with their illnesses. In effect, the patient’s own storytelling would promote healthy thinking, feeling and behaving and, in turn, improve their physical health.

(Lisa recently relocated to Tennessee and is beginning the process of pursuing her license.)

Lori Ellison: So, the deeper understanding of what Lisa knew to be true from her practicum became available when she learned about the amygdala mitigating functions of creative cognitive processes. Suddenly, the reason narrative therapy can be so successful made sense.

If patients are resistant to creating a narrative, perhaps this explanation might allow them to recognize the benefits and offer them encouragement to try it.

Kelley Sills: For me, the question was not so much feeling intimidated about concepts as being concerned about finding approaches that work and are genuinely effective. I encountered neuroscience concepts early on in my counseling training as I was trying to figure out what worked. I think I had a lot of skepticism that some forms of traditional therapy were not all that helpful to some clients — especially those suffering from the aftermath of various traumas.

Reading Cozolino’s book helped me understand more about how many of the body-based/somatic therapy approaches I was drawn to could be very effective and helped me understand this from a neuroscience perspective. It really connected with many other things I was reading in the area of trauma treatment and gave me greater confidence that I was finding the therapeutic tools I needed to become an effective therapist.

The concepts of neuroscience have been very helpful to me as a counselor of families and young people. Understanding, even in a general way, how the brain, neural pathways and neurotransmitters interact as a measurable, physiological aspect of our experience has been illuminating to me and to my clients. Hearing about the neurological aspect of many unconscious processes helps clients to understand why change can take time; why it often isn’t an all-or-nothing, overnight-change experience; and why they may need to work with processes that are not a part of

ordinary, everyday consciousness. It also helps to make the unconscious less of a mysterious psychological construct and more of a concrete and understandable reality that has a physiological aspect that can be explored.

Neuroscience research has helped many of my parent clients understand and have patience with their children who may show signs of significant change and then suddenly experience a return to an old pattern. It helps them to have patience and understand that their child may be willing and trying to change, but that it can take significant effort to change habitual emotional and behavioral responses — and why they may always have to maintain mindful awareness around certain emotional “triggers.”

(Kelley is working toward her professional counseling license in West Virginia at a therapeutic boarding school.)

Lori Ellison: That, to me, is the sound of a giant “bug” being caught!

Amy Bragg: I caught the neuroscience bug in a clinical mental health class. My classmates and I were introduced to the seemingly difficult topic of neuroscience by reading texts and completing brain-based assignments. An assignment that was particularly helpful in understanding the complex concepts of neuroscience involved the creation of a brain diorama. Creating a tangible brain aids in the understanding of the multiple parts of the brain and how those parts affect mental health. In my experience, using a hands-on activity makes the learning process easier and more enjoyable.



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Lori Ellison: That hands-on visual experience can also be helpful in showing clients how the brain structures interact with their mental health concerns, which is the basis for that assignment.

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Amy Bragg: Although learning about the brain can be complicated and technical, it becomes easier by breaking down the brain into parts. *Neurocounseling: Brain-Based Clinical Approaches* by Field, Jones and Russell-Chapin, and *The Everything Guide to the Human Brain* by Rudolph C. Hatfield are both excellent resources when trying to understand how the brain and its various parts are connected to our mental health.

When a person experiences a traumatic event, he or she is likely to experience a physiological change, including changes in the hippocampus, prefrontal cortex and the hypothalamic-pituitary-adrenal axis (part of the fight-or-flight response). These changes only scratch the surface of what traumatic experiences can do to the brain. To give the best care and support to those who have suffered trauma, it is important for counselors to gain a basic understanding of how the brain works and the connection it has to one's mental health.

(Amy works in Huntington, West Virginia, and is working toward her professional counseling license.)

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Kimberly Vance: During the last semester of preparation for my master's in counseling, I was enrolled in a clinical mental health counseling class. I remember looking at the required textbooks in the syllabus and feeling horrified upon seeing a neuroscience book. Much to my surprise, in delving into this textbook, the information was presented in a manner that was easy to understand while providing insightful, crucial information to the practice of counseling. For example, I was enlightened by the notion that the counseling process could have neurological effects on all parties involved in the therapeutic relationship. Field, Jones and Russell-Chapin (2017) wrote, "When learning a new skill, repeatedly practicing a new behavior, or accessing

memories, neural networks fire in concert, creating electrochemical routes that shape themselves into long-term memories and possible new patterns of behavior; this process, known as neuroplasticity, changes the brains of both the client and counselor."

Moving forward, this impacted the manner in which I practiced my role as a counselor. Fortunately, I was lucky enough to have a professor dare to use a textbook on a seemingly intimidating subject because I use tidbits of neuroscience in my everyday counseling practice. I believe that by getting my feet wet, I "caught the bug" and still find myself searching out resources on this topic.

(Kimberly lives in the Washington, D.C., area and is working toward obtaining her counseling license.)

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Lori Ellison: That phenomenon of the application of basic knowledge budding into a thirst for more mirrors my experience. Some readers may be saying to themselves (just as some of my students acknowledged thinking initially), "Neuroscience is so technical and complicated. I will never understand it." I won't deny that neuroscience is technical, but the wonderful thing is that so many resources are available that make this field of study much more accessible than people may think.

I am not a neurobiologist by a long shot, and science was never my best subject. When first approaching the resources on this subject, I was expecting technical "science speak" textbooks or articles that I would struggle to understand. Numerous authors have made this information both readable and applicable, however, blowing that excuse right out of the water for me. The same holds true for some of my students.

I encourage educators, practitioners and students not to let fear of the unknown hold them back from learning about neurocounseling. The resources are there for any counselor who wants to use them and for clients who might need them. So, how does the person who is intimidated, slightly interested but also very busy, or perhaps simply unaware of the value of neurocounseling become attracted to such resources? Ideally, through the trusted recommendations of a friend or colleague.

That is the purpose of this article. As I continue to delve deeper and uncover more resources, I find myself acclimating to the "water" and feeling more comfortable with the terms, the structures, the functions and even a little bit of the chemistry (gulp). You have read how several of my former students continue to seek out new neurocounseling and neuroscience resources too. So, like those friends who jumped in the pool ahead of you, my former students and I turn back to you and say, "Now it's your turn. Come on in. The water is fine."

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In addition to the resources mentioned throughout this article by me or my former students, I recommend the following books:

- ❖ *The Neuroscience of Psychotherapy: Healing the Social Brain* by Louis Cozolino
- ❖ *Neurobiology Essentials for Clinicians: What Every Therapist Needs to Know* by Arlene Montgomery
- ❖ *How to Explain a Brain: An Educator's Handbook of Brain Terms and Cognitive Processes* by Robert Sylwester ❖

Lori Ellison is a counselor educator at Marshall University in West Virginia where she has been on faculty since 2009. She has been practicing or teaching in the field for close to 30 years. She currently serves as program director and CACREP liaison for the counseling program at Marshall and as chair of the West Virginia Board of Examiners in Counseling. She is also co-coordinator of Marshall's online certificate program in violence, loss and trauma. Contact her at ellisonl@marshall.edu.

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