

Integrating Left-Brain and Right-Brain: The Neuroscience of Effective Counseling

Thomas A. Field



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Based on emerging findings from neuroscience, the counseling professional can consider a different approach to research-informed practice, by integrating left- and right-brain processing in client care. This new model is commensurate with counseling’s historical lineage of valuing the counseling relationship as the core ingredient of effective counseling.

Keywords: counseling, neuroscience, evidence-based, effectiveness, right-hemisphere, intuition

During the past decade, the field of counseling has considered the notion of identifying effective counseling practices. In 2005, the American Counseling Association’s (ACA) Code of Ethics included a recommendation to use therapies that “have an empirical or scientific foundation” (C.6.e). The *Journal of Counseling & Development* introduced a new journal feature in 2007, entitled “Best Practices.” In 2009, the Council for the Accreditation of Counseling and Related Educational Programs (CACREP) modified their Standards for addiction counseling (I.3., p. 22), clinical mental health counseling (I.3., p. 34), and marriage, couple, and family counseling (I.3., p. 39) to require that the student “knows evidence-based treatments” (EBTs; p. 5). In the September 2012 edition of *Counseling Today*, Dr. Bradley Erford, the current ACA President, asserted the following in his monthly column:

If professional counselors use the best available research-based approaches to help clients and students, then counselor effectiveness, client satisfaction and third-party insurer satisfaction all improve. When professional counselors provide effective services, it also helps our professional advocacy and lobbying efforts with federal, state, and local politicians and bureaucrats, and leads to more counseling jobs and higher pay scales. (p. 5)

Erford argues that counselors must use research to inform practice—the public, insurance companies, and clients demand it. Yet until recently, only one approach to research-informed practice has been available to the counseling profession—namely the EBT movement that originated in the field of psychology. Many techniques and theories exist outside of the EBT movement, in addition to other models for best practices such as the common factors movement (Duncan, Miller, Wampold, & Hubble, 2010). Counselors may feel confused about which model to follow. An approach to research-informed practice that is more commensurate with the counseling profession’s values and identity is the application of research evidence from neuroscience to inform counseling interventions.

Current Direction: The Left-Brain Pathway

The left side of the brain is responsible for rational, logical, and abstract cognition and conscious knowledge. Neuroscientists such as Allan Schore (2012) have suggested that activities associated with the left

Thomas A. Field, M.Ed., NCC, LPC is a Faculty/Program Coordinator for the Masters of Arts in Counseling program at City University of Seattle and Ph.D. candidate in the counseling and supervision program at James Madison University. Correspondence can be addressed to Thomas A. Field, City University of Seattle, 521 Wall Street, Seattle, WA 98121, tfield@cityu.edu.

hemisphere (LH) currently dominate mental health services. This is evidenced by the current reliance upon psychopharmacology over counseling services, the manualization of counseling, a reductionist and idealistic view of “evidence-based practice,” and a lack of respect for the counseling relationship in client outcomes despite a large body of evidence. McGilchrist (2009) takes this argument further: if left unchecked, the modern world will increase its reliance upon the LH compared to the than right hemisphere (RH), with disastrous consequences. A “left-brain world” would lead to increased bureaucracy, a focus on quantity and efficiency over quality, and a valuing of technology over human interaction, and uniformity over individualization. While this dystopia has not been fully realized yet, one could argue that the field’s current reductionist and cookie-cutter approach to mental health services and reliance on quantitative over qualitative research all point in one direction.

To understand the importance of the association between the LH and the current mental health system, the author reviews the history of the counseling effectiveness movement, along with the counseling profession’s gradual adherence to this left-brain movement.

The History of “Effectiveness”

It is hard to know when the term *effectiveness* was first used in counseling circles. A long history of competition exists between different theoretical schools that sought to find evidence for the efficacy of their theory and discredit (or at least, disprove) all pretenders. Eventually, in 1995, the American Psychological Association (APA) defined *effectiveness* by identifying counseling interventions that were considered to have adequate research support (Task Force for Promotion and Dissemination of Psychological Procedures, 1995). The criteria for delineation were narrow: at least two randomized controlled studies or multiple pre-and post-individual studies, and the existence of a treatment manual. This model of efficacy was based on the Federal Drug Administration’s (FDA) criteria for what constituted acceptable research evidence for a new medication’s efficacy. The field of psychology was concerned at the time about medications being considered the “first line of treatment” for mental disorders instead of counseling and psychotherapy, thus wanting to provide empirical evidence for counseling efficacy that could be used for political and financial leverage in the marketplace (LaRoche & Christopher, 2009). Various terms were used for this movement: *psychological treatments*, *empirically validated treatments*, *empirically supported treatments*, and *EBT*. This movement soon became synonymous with the definition of *effectiveness* in counseling and psychotherapy.

Criticisms abounded throughout the mental health services community. It became apparent that these interventions were difficult to implement, or else that practitioners were resistant (Becker, Stice, Shaw, & Woda, 2009). Criticisms focused on the inadequate representation of certain demographic and minority groups, the disregard for the predominance of co-occurring disorders within client populations, the exclusionary definition of “research evidence,” and the lack of consideration for clinical expertise and judgment (Bernal & Scharró-del-Río, 2001; LaRoche & Christopher, 2009).

Training programs in the mental health services field have also been resistant to training students in EBTs. Weissman et al. (2006) found that only 28.1% of psychiatry preparation programs and 9.8% of social work preparation programs required both didactic instruction and clinical supervision in EBT use. In clinical psychology preparation programs, 16.5% (PhD) and 11.5% (PsyD) required didactic instruction and clinical supervision in EBTs. This is a low rate, considering that the inclusion of training in psychological treatments is required for APA doctoral program accreditation (Chambless, 1999). No data are currently available on the percentage of counselor education programs that require both didactic instruction and clinical supervision in EBT use. However, one could argue that the 2009 CACREP Standards mandate instruction and supervision in the use of EBTs. If counselors do not find another path, counselor education may adhere to the training model

of psychology, requiring a greater emphasis on teaching techniques rather than relational skills, and inflexibly following standards of practice rather than individualized instruction. Counselor education may become a left-brain discipline.

Counseling Approaches and the Left-Brain

Counselors are already using EBTs in practice settings. Field, Farnsworth, and Nielsen (2011) conducted a small unpublished national pilot study in the use of EBTs by National Certified Counselors (NCCs; $n = 76$). Demographics were consistent with the most recent demographical survey of NCCs (National Board of Certified Counselors, 2000). The majority of participants reported utilizing EBTs within the past year (69.4%), and the number of EBTs utilized was surprisingly high ($M = 9.17$, $SD = 6.94$, $SEM = 0.97$) for those who utilized EBTs. Furthermore, of those who used EBTs, only 6% ($n = 3$) did not report using a form of cognitive-behavioral therapy (CBT). Although this was a small pilot study, and thus results cannot be wholly generalized to the counselor population, initial findings seem to indicate that EBT utilization may be practically synonymous with CBT utilization. This is alarming, since research has shown that when psychotherapies are directly compared to one another, studies in which CBT is claimed to be more beneficial than other treatments subsequently achieved comparative outcomes (e.g., Wampold, Minami, Baskin, & Tierney, 2002). The apparent “fit” between CBT and the EBT movement can be elucidated when considering that following a manualized protocol and using conscious verbal analysis (CBT) are both LH functions, and studies have found a link between CBT and activation in the dorsolateral prefrontal cortex of the LH (Siegle, Steinhauer, Friedman, Thompson, & Thase, 2011). Put simply, CBT activates the LH, and the EBT movement values LH over RH processing.

It could be argued that the emergence of the EBT movement has propelled CBT into first place among interventions used in practice settings. Structured interventions that can be easily manualized and measured such as CBT seem to correspond with strict and rigid guidelines for empiricism compared to therapies that are more abstract and unstructured (e.g., humanistic-existential and relational forms of counseling). The dominance of CBT may only solidify following the initiation of EBT training within graduate programs. Yet even Aaron T. Beck, the founder of cognitive therapy, asserted that “you can’t do cognitive therapy from a manual any more than you can do surgery from a manual” (Carey, 2004, p. F06). In other words, the purely LH approach of rigidly following a treatment manual is not sufficient for effective counseling practice.

The Right-Brain Pathway

The right side of the brain is associated with unconscious social and emotional learning, and includes intuition, empathy, creativity, and flexibility. Some may argue that counseling has always been associated with RH processes (J. Presbury, personal communication, November 25, 2012). There are signs that the field of counseling is moving toward the valuing of RH processes during interventions, evidenced by the empirical respect attributed to the therapeutic relationship (e.g., Magnavita, 2006; Norcross & Wampold, 2011; Orlinsky, Ronnestad, & Willutzki, 2004), and the admission that EBTs are unsuccessful if applied rigidly. The APA Task Force on Evidence-Based Practice (2006) intoned that “sensitivity and flexibility in the administration of therapeutic interventions produces better outcomes than rigid application of...principles” (p. 278). A purely LH counseling approach may be overly rigid, problematic since counselor rigidity has been found to impair the counselor-client relationship (Ackerman & Hilsenroth, 2001).

Clinical Judgment vs. Intuition

In 2006, the APA issued a new definition of evidence-based practice, derived largely from the definition provided in 2001 by the Institute of Medicine (APA, 2006). Evidence-based practice was redefined as

consisting of three elements: research evidence, clinical judgment, and client contextual variables (APA, 2006; Institute of Medicine, 2001). Yet the APA's revised definition of evidence-based practice still privileged LH processing. Whereas *clinical judgment* can be defined as the application of rational and analytical reasoning when working with clients (LH function), *clinical intuition* can be described as the attunement to unconscious and implicit knowledge when working with clients, and has been associated with activation in areas of the RH (Bolte & Goschke, 2005). Often difficult to articulate, intuition has been commonly described as “the unthought known,” a “gut feeling,” and “a working hypothesis” (Bollas, 1987). Lieberman (2000) defined clinical intuition as “the subjective experience associated with the use of knowledge gained through implicit learning” (p. 109). It is now known that effective counseling requires *both* conscious reasoning and unconscious intuition—in other words, the integration of the LH and RH of the brain. As the famous attachment theorist John Bowlby (1991) once wrote, “clearly the best therapy is done by the therapist who is naturally intuitive and also guided by the appropriate theory” (p. 16).

Studies on counselor development have found that experienced counselors tend to rely more on intuition than manualized protocols (Rønnestad & Skovolt, 2003; Stoltenberg, McNeill, & Delworth, 1998). As any experienced practitioner can attest, counselors tend to learn intuitive skills such as timing and word choice with experience. Welling (2005) wrote, “no therapist can reasonably deny following hunches, experiencing sudden insights, choosing directions without really knowing why, or having uncanny feelings that turn out to be of great importance for therapy” (p. 19). Volz and von Cramon (2008) concluded that the counselor's intuition is often reliable and accurate during the counseling process. The difference between novice and experienced counselors can be understood as a difference in amount of accumulated experiences from prior client encounters within the unconscious, which informs intuitive clinical judgments (Schore, 2012). Less-experienced counselors are prone to make more inaccurate intuitive clinical decisions given their lesser clinical experience and, therefore, their less sculpted unconscious intuition.

Creativity vs. Replication

Creativity in the counseling process allows clinicians to individualize treatment, and consider the client's contextual values during decision making (APA, 2006). This is the third part of the APA's definition of evidence-based practice. Creativity has also been associated with the RH (Grabner, Fink, & Neubauer, 2007), and occurs when counselors are attuned to implicit memories. Creativity occurs when counselors trust their unconscious, where novel ideas are generated, based on environmental cues. Creativity is typically an emergent and unconscious process, unfolding in the immediacy of the counseling room. Counselors often cannot fully prepare for what the client brings to the session. Every session therefore requires some degree of creativity by the counselor, whose flexible response to the interpersonal contact with the client is crucial to establishing a deep and sustained therapeutic bond. For this reason, there is no existing evidence-based protocol for nonverbal body language or affective response by the counselor; these behaviors and responses are highly individualized and contextual, and thus cannot be manualized. Without creativity, the counselor is reduced to the role of technician, administering treatments in a consistent yet rote and rigid manner. The manualization of counseling naturally limits the creative process and RH processing for both counselor and client. While studies are needed, it is possible that a rigid LH approach to the counseling process would restrict rather than enhance the creative capacities of counselor and client, and neglect the client's natural problem-solving ability (Bohart & Tallman, 2010).

To take a purely LH approach to counseling is to negate the importance of unconscious intuition and clinical experience in counselor effectiveness. Shrinking clinical expertise to merely conscious decision making is reductionist and misses a large body of evidence suggesting that unconscious information also guides clinical decisions. It is entirely possible that many clinical decisions are based more on RH than LH processes. For

example, some counselors have experienced moments with clients when they instinctively know the diagnosis or what problem a client is experiencing, without formally checking off symptoms from diagnostic criteria. Counselor educators and supervisors can help trainees to hone unconscious intuition by asking questions such as the following: What is your gut feeling about this client? What prior clinical experiences may have led you to that conclusion? What unconscious decisions have you made that you were satisfied with? What unconscious information are you ignoring or suppressing?

The Centrality of the Counseling Relationship

The importance of RH processing extends to the counseling relationship, which is considered to have a central role in client outcomes. In 2001, the APA formed a Task Force on Evidence-Based Therapy Relationships, concluding in 2011 that the counseling relationship was central to client outcomes to an equivalent or greater extent as the treatment method, and “efforts to promulgate best practices or evidence-based practices (EBPs) without including the relationship are seriously incomplete and potentially misleading” (Norcross & Wampold, 2011, p. 98). Fifty years of research support the centrality of the counseling relationship in client outcomes (Orlinsky et al., 2004). Magnavita (2006) concluded, “the quality of the therapeutic relationship is probably the most robust aspect of therapeutic outcome” (p. 888). By the end of the 1990s, counseling was beginning to move toward a two-person interpersonal model in place of a one-person intrapersonal model for conceptualizing client problems and planning treatment (Cozolino, 2010). Some have argued that identifying and utilizing specialized treatments for certain disorders is therefore misleading, since research studies have consistently found that the “confounding variable” of the therapeutic relationship is the primary factor for counseling efficacy (Norcross & Wampold, 2011).

During counselor-client interactions, the level of intersubjective attunement and engagement strongly influences the quality of this interpersonal contact. As Bromberg (2006) wrote, when counselors try to “know” their clients instead of “understand” their clients through their engagement in the shared intersubjective field of the here and now, “an act of recognition (not understanding) takes place in which words and thoughts come to symbolize experience instead of substitute for it” (p. 11). When this moment of meeting occurs, the client can safely contact, describe, and regulate inner experience. During the client’s heightened emotional states, the counselor can model healthy emotional regulation for the client. This secure holding environment enables clients to experience and cope with their own dysregulated emotions and thus serves as a corrective emotional experience. Because the LH is specialized to manage “ordinary and familiar circumstances” while the RH is specialized to manage emotional arousal and interpersonal interactions (MacNeilage, Rogers, & Vallortigara, 2009), many if not most counseling interventions enhance RH processing for both counselor and client.

Neuroscience supports the integration of both the LH and RH in interactions between counselor and client. The counseling relationship is informed by linguistic content and auditory input (LH function), in addition to visual-facial input, tactile input, proprioceptive input (the body’s movement in space), nonverbal gestures, and body language (RH function). Whereas the LH is involved in conscious processing of language, the RH is responsible for a large amount of social and emotional behavior that occurs during the counseling relationship, such as the moment of contact between counselor and client (Stern, 2004), attention to the external environment (Raz, 2004), empathic resonance of both linguistic content and nonverbal behavior (Keenan, Rubio, Racioppi, Johnson, & Barnacz, 2005), mental creativity (Asari, Konishi, Jimura, Chikazoe, Nakamura, & Miyashita, 2008), social learning (Cozolino, 2010), emotional words (Kuchinke, Jacobs, Vö, Conrad, Grubich, & Herrmann, 2006), and emotional arousal (MacNeilage et al., 2009). Clearly, all of these RH functions are crucial to the development of a strong counseling relationship. One cannot establish an effective counseling relationship by merely attending to verbal content (LH); a strong counseling relationship requires the integration of both LH and RH processes. Approximately 60% of communication is nonverbal (Burgoon,

1985), which is a RH function (Benowitz, Bear, Rosenthal, Mesulam, Zaidel, & Sperry, 1983). Since so much of counseling is nonverbal and unspoken, yet “known” to the counselor, the practice can be better understood as a communication cure rather than a talking cure (Schore, 2012).

Proposed Direction: Integration of Left- and Right-Brain Pathways

A balance needs to be struck between the extreme polarities of creative vs. structured and repetitive approaches, individualization vs. fidelity to manuals, flexibility vs. rigidity, unconscious vs. conscious, emotions vs. cognitions, and RH vs. LH. Radical adherence to either polarity is less effective. At one polarity, fidelity to a structured, rigid, conscious, LH-activating manualized treatment would lack the flexibility and individualization necessary to establish a strong counseling relationship. At the other extreme, fidelity to a purely spontaneous, flexible, unconscious and RH-activating individualized approach would result in the impossibility of research evidence and thus be unproven. This has been a criticism of some theoretical approaches, such as psychoanalysis (Modell, 2012). Counselors can avoid rigidly following treatment manuals, *and* avoid completely spontaneous approaches that lack research evidence. According to emerging evidence from neuroscience, an integrated approach to client care seems necessary for effective counseling practice (Schore, 2012). The RH and LH seem equally important to human functioning and survival. These often function in tandem with one another. For example, both hemispheres are integral to problem solving; the RH generates solutions, while the LH decides on a single solution to best fit a problem (Cozolino, 2010).

Conclusion

Counseling effectiveness requires the integration of both right- and left-brain processing. Effective counseling is determined not only by what the counselor does or says; it is determined also by the quality of the counselor’s interaction with the client (Bromberg, 2006). In a two-person relational system, the interaction between counselor and client is at the core of effective counseling. The neuroscience literature suggests that hemispheric processing for both counselor and client is bidirectional. The counselor’s RH-to-RH attunement to the client’s subjective experience in the here-and-now encounter of the counseling room informs unconscious intuition and creativity for both counselor and client.

The counselor develops an implicit understanding of the client’s inner world and generates clinical intuitions that guide the counselor’s decision making. The client is provided with a RH-to-RH holding environment from which deep emotions and sectioned-off past experiences can be explored, and creativity is sparked by the need to respond to the uniqueness of the counseling environment. In cases when clients seem to benefit from interventions that target LH processing, the counselor’s often intuitive and unconscious adjustment is a result of the RH-to-RH interaction between counselor and client. Integrating LH interventions may provide a helpful structure to address client problems and facilitate RH processing when the counselor and client both expect change to occur and demonstrate belief in the chosen intervention, which further strengthens the therapeutic bond (Frank & Frank, 1991).

Prior to incorporating a manualized protocol, counselors can therefore establish rapport and attend to the therapeutic alliance and counseling relationship. This attention to RH processing provides a foundation from which the structure of a LH-activating, manualized treatment can be provided, thus mitigating potential ruptures to the therapeutic relationship that occur when counselors abruptly or rigidly apply treatment manuals in a rote fashion. In this manner, both LH and RH processing is enhanced, which is crucial to successful counseling outcomes.

Taking such an approach would integrate the left and right brain in counselor practice. By incorporating research evidence from neuroscience, counselors have a new model for research-informed counseling practice that fits the historical lineage of prizing the counseling relationship as the core ingredient in therapeutic change. While it is not easy to value both structure and spontaneity, or uniformity and individuality, achieving this balance will result in practice behaviors that are more commensurate with the counseling profession's values and identity.

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