



Journal of Neurotherapy: Investigations in Neuromodulation, Neurofeedback and Applied Neuroscience

The Empirical Support of Neurotherapy

David L. Trudeau MD
Published online: 08 Sep 2008.

To cite this article: David L. Trudeau MD (2001) The Empirical Support of Neurotherapy, Journal of Neurotherapy: Investigations in Neuromodulation, Neurofeedback and Applied Neuroscience, 5:4, 1-3, DOI: [10.1300/J184v05n04_01](https://doi.org/10.1300/J184v05n04_01)

To link to this article: http://dx.doi.org/10.1300/J184v05n04_01

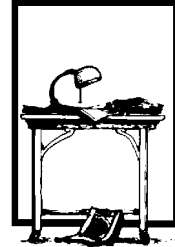
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EDITORIAL



The Empirical Support of Neurotherapy

In a challenging paper published in *the Behavior Therapist*, Lohr, Meunier, Parker, and Kline (2001) apply standards for assessing the efficacy of neurotherapy for psychological disorders to studies published prior to 1999. These authors find that there is evidence that EEG biofeedback alters electrophysiology and is promising for seizure disorder. However, they dispute that neurotherapy, which they define as “a form of behavior modification that uses electroencephalographic biofeedback technology to increase voluntary control over the amplitude and frequency of various brain wave frequencies” has been shown to be efficacious for ADHD, substance dependence, anxiety disorders, mood disorders and dissociative disorder. They conclude that the studies they have reviewed are generally “limited by the use of outcome measures that have questionable psychological and ecological validity,” and more importantly, “the experimental control conditions are sufficiently weak that criteria for efficacious treatment” are not met.

Not a peer-reviewed publication, *the Behavior Therapist* (it is spelled with the lower case “t”) is an Association for the Advancement of Behavioral Therapy (AABT) newsmagazine. Much of the same critique

was published on their website at www.pseudoscience.org, titled "Science and Pseudoscience Review in Mental Health," and was presented as a paper at the AABT meeting.

The authors preface their paper with the statement that, "the adherence to methodological rigor in the development of psychosocial intervention procedures has distinguished behavioral therapy from other treatment modalities for over 40 years." Thus, they announce the superiority of behavioral therapy over any other "psychosocial intervention." The impetus for their paper was the inclusion of material promoting neurotherapy in a registration packet for the 1999 and 2000 annual conventions of the AABT, which claimed "salubrious effects on a wide range of psychological disorders and their symptoms." Responding to marketing material that may have been hyperbole, the authors are taking to task what they perceive as the broad, sweeping claims of neurotherapists. By narrowly defining neurotherapy as behavior modification, and by applying debatable criteria to outcome measures and control conditions, the authors might be accused of stacking the cards in favor of their foregone conclusions. Their final conclusion is that AABT "should be more circumspect about participation in the dissemination and promotion of Neurotherapy."

Nevertheless, this paper contains many important points that neurotherapists need to take to heart in considering research design. Particularly pertinent are suggestions for future research, which include discussion of controls, wait list controls, and component comparisons such as comparison of augmentation feedback with suppression feedback. In response to this paper and other concerns that raise important issues regarding neurotherapy and biofeedback research, the Association for Applied Psychophysiology and Biofeedback (AAPB) President Don Moss and The Society for Neuronal Regulation (SNR) President Jay Gunkelman have appointed a new Task Force to develop standards on research methodology and on the empirical validation of treatments. Ted La Vaque and Cory Hammond have agreed to be co-chairs, with Cory representing SNR and Ted representing AAPB. Additionally, the Electroencephalographic and Clinical Neurosciences Society (ECNS) has been approached with an invitation to participate. The AAPB Neurofeedback and sEMG Divisions support the Task Force and have agreed to name delegates.

According to SNR President, Jay Gunkelman, "the Task Force is designed not to judge specific applications, but to identify standards for making these judgments validly; not necessarily merely adopting standards promulgated by APA or AABT. We need to make our own stan-

dards and then use them to evaluate our field in an objective way. The field needs a strong set of methodological standards, by which we can discriminate among applications: Best Validated, Well Validated, Some Validation, Experimental, and Discredited. This will give credence to our effective treatment protocols.”

The Task Force will report back to the Boards of Directors of SNR and AAPB for their comments and possible adoption of the proposed standards. More details on this Task Force and its objectives will be available on the AAPB and SNR websites as well as in the *Biofeedback Newsmagazine* and SNR newsletter.

Needless to say, the *Journal of Neurotherapy* strongly endorses this continuing development of research standards. This effort will aid authors in research design and reporting, and provide improved criteria for peer review and constructive criticism of submitted manuscripts.

David L. Trudeau, MD
Editor

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- Lohr, J. M., Meunier, S. A., Parker, L. M., & Kline, J. P. (2001). Neurotherapy does not qualify as an empirically supported behavior treatment for psychological disorders. *the Behavior Therapist*, 24 (5), 97-104.