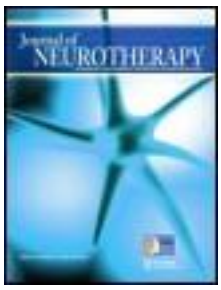

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Clinical Corner

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CLINICAL CORNER

D. Corydon Hammond, PhD, Associate Editor

The purpose of the Clinical Corner is to provide responses to clinically oriented questions that may not, in many cases, have been evaluated yet by research. Therefore, the personal opinions expressed in the column are exactly that, the opinions of the individual authors, often based on their clinical experience. The opinions shared belong to the authors and are not necessarily those of the International Society for Neurofeedback and Research or the Journal of Neurotherapy. Nonetheless, it is hoped that the diversity of opinion expressed in this column will stimulate thought and the further exchange of ideas. Readers are invited to send clinically oriented articles or questions for consideration to D. Corydon Hammond, PhD, University of Utah School of Medicine, PM&R, Salt Lake City, UT 84132. E-mail: D.C.Hammond@utah.edu

The Clinical Corner in this issue is focused on case reports from treatment with the Low Energy Neurofeedback System (LENS). Previously published outcome studies with the LENS have focused on symptomatic improvements but either have not reported changes in the EEG or have only reported EEG changes that were based on 4 sec of data obtained at single electrode sites with the LENS system. The first article in this section presents a case where a pre- and posttreatment quantitative EEG (QEEG) was also used to evaluate outcome changes in a case involving a serious traumatic brain injury. The second article presents two case studies of LENS treatment in which one of the most serious presenting problems was anger and explosiveness. In both cases the outcome measure was a validated psychological test measuring different aspects of state anger, trait anger, anger expression, and anger control. This is the first article to present objective outcome findings on the neurofeedback treatment of anger.

It is hoped that these case reports will encourage several things. First, that further studies will be conducted of LENS neurofeedback using QEEG evaluations as one of the outcome measures. Second, it is hoped that the anger paper will encourage clinicians and researchers to further evaluate the ability of neurofeedback to improve anger control, which has major implications in society as well as being a potentially very fruitful area for grant applications.

Finally, it is my hope that the publication of the second article will also demonstrate the desirability for clinical researchers to use brief validated outcomes measures that focus on specific symptom changes. It is not necessary to rely exclusively on lengthy psychological measures such as the Minnesota Multiphasic Personality Inventory-2 or the Millon Clinical Multiaxial Inventory. Many psychological tests exist that practitioners can readily use in clinical practice that are reliable, validated, and yet relatively brief to administer to patients. Some of the measures of this kind with which the author is familiar include the State-Trait Anger Expression Inventory-2, the State-Trait Anxiety Inventory II, the Beck Depression Inventory II, the Beck Anxiety Inventory, the Beck Hopelessness Scale, the Moves

Self-Rating Scale for Tourette's Syndrome, the Yale Global Tic Severity Scale, the Dissociative Experiences Scale, the Penn State Worry Questionnaire, the Epworth Sleepiness Scale, the Pittsburgh Sleep Quality Index, and the Profile of Mood States (which includes scales for evaluating changes in tension–anxiety, anger–hostility, fatigue–inertia, depression–dejection, vigor–activity, and confusion–bewilderment). All of these outcomes measures require only 5 to 15 min for patients to complete. For the field of neurofeedback to advance it is vitally important for therapists to begin routinely gathering objective outcome data that facilitate publication.