FROM THE EDITOR

Fall 2014 Special Issue: The Integration of Biofeedback and Neurofeedback into Comprehensive Treatment Programs

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The photo on the cover of this special issue shows multidisciplinary treatment at the Cleveland Clinic Children’s Hospital for Rehabilitation. A physical therapist is guiding a patient through a stretching maneuver, while the biofeedback practitioner monitors and supports the patient’s self-regulation using HRV biofeedback. (Our thanks to the Cleveland Clinic Children’s Hospital for Rehabilitation for the photograph.)

Professional Issues

David Hagedorn provides an important article in a long-neglected area of biofeedback and neurofeedback practice standards: the issue of infection risk. Biofeedback and neurofeedback practitioners regularly apply sensors to the skin of multiple patients in the course of a day. In some cases, abrading the skin elicits bleeding and opens the risk of blood-borne pathogens. Clear standards of practice have not yet been established in the biofeedback and neurofeedback world for infection risk management. Hagedorn discusses reasonable clinical practices to mitigate the risk of transmitting disease and includes many practical suggestions that should become part of daily practice.

Special Issue Articles: The Integration of Biofeedback and Neurofeedback into Comprehensive Treatment Programs

The integration of biofeedback, neurofeedback, and other self-regulation approaches into comprehensive medical/health care programs has been a priority for the Association for Applied Psychophysiology and Biofeedback and this publication for many years. Medical settings offer one of the richest opportunities for biofeedback, neurofeedback, and other psychophysiological approaches. Patients suffer medical disorders whose mechanisms transcend simple biomedical models, and psychosocial stress and lifestyle variables exacerbate many medical symptoms and conditions. Other patients’ disorders are biomedical in origin yet they produce physiological, cognitive, and affective changes that are amenable to biofeedback intervention.

The Biofeedback magazine has dedicated several special issues to the integration of biofeedback care into primary care, pediatrics, and rehabilitation treatment. Specific issues have included “Applied Psychophysiology and Family Medicine” in spring 1996, the “Marriage of Clinical Psychophysiology and Primary Care” in spring 1999, “Complementary and Alternative Medicine and Integrative Medicine” in fall 2003, “Pediatric Integrative Medicine” in spring 2003, “Hypnosis and Biofeedback in Pediatrics” in fall 2005, “The Integration of Biofeedback and Behavioral Health Services into Primary Care” in winter 2006, and “Applications of Biofeedback and Self-Regulation in Medical Settings” in winter 2009. Many other articles have featured the use of biofeedback within an overall context of multidisciplinary care in rehabilitation, cardiology, and mental health.

This special issue opens with a report on the use of biofeedback in pediatric pain management in two settings: the Cleveland Clinic and Alberta Children’s Hospital. Authors Ethan Benore, Gerard A. Banez, Tyson Sawchuk, and Jeffrey Bolek provide a discussion of approaches to interprofessional care in both settings and illustrate the approaches practically with three case studies of adolescents seeking help for chronic pain. The authors promote the advantages of integrated care yet acknowledge the challenges or hurdles facing such efforts at integration.

A second report from Jeffrey Bolek describes the interdisciplinary team approach at the Motor Control Program at the Cleveland Clinic Children’s Hospital for Rehabilitation. This article focuses on an 8-year-old boy who underwent a hemispherectomy for chronic intractable epilepsy. A collaborative treatment plan for this child
included physicians, physical/occupational/speech therapists, social workers, and psychologists, to address a variety of cognitive, language, motor, and other symptoms produced by the removal of one half of the child’s brain. Bolek used quantitative surface electromyographic biofeedback to assist this child in restoring the use of the right arm while sustaining a sitting position. This case study provides an encouraging look at how biofeedback can restore motor function in very challenging medical situations.

Paula Grayson, Madonna Ozman, and Elly Welchert provide a report on the integration of clinical biofeedback into pediatric multidisciplinary programs at the Children’s Mercy Hospital in Kansas City. Biofeedback is used for persisting abdominal pain, general pain management, and chronic gastrointestinal problems. Their report highlights the use of biofeedback-assisted relaxation training in the Abdominal Pain Program, for children from 8 to 18 years old with abdominal pain persisting for at least 2 months. The biofeedback practitioners teach these children how to balance their autonomic nervous systems, reduce the physical effects of stress, improve their emotional coping, build pain management skills, improve sleep, and reduce overall symptoms.

Eric Willmarth, Fred Davis, and Kevin Fitzgerald report on the integration of biofeedback into the pain management services in an outpatient, multi-site chronic pain program in Michigan. They emphasize some of the orientation provided to patients with chronic pain, especially the guideline that “The problem is not all in your head, but the answer may be.” Their programs include therapeutic groups that serve to empower patients and reinforce reports of constructive activity by the patients. The authors emphasize that self-reported physical pain levels often remain high, while indices of quality of life and joy in living show improvement.

Finally, Antoinette Giedzinska-Simons provides a report on the use of biofeedback in an integrative mental health setting at Sierra Tucson in Tucson, Arizona. Sierra Tucson is a licensed inpatient rehabilitation hospital assisting patients suffering with chemical dependency, trauma, mood disorders, chronic pain, and eating disorders. The hospital is integrative, providing a mixture of traditional and alternative therapies including equine-assisted therapy, adventure therapy, yoga, acupuncture, somatic experiencing, and both biofeedback and neurofeedback. This article introduces the R^4 model of Recovery, a unique framework that addresses four levels in the biofeedback treatment: rehabilitation, reintegration, rehabilitation, and resiliency.

**Feature Article**

In fall 2013, Jaclene Zauszniewski and colleagues provided an interesting report on a pilot study using heart rate variability biofeedback with 20 grandmothers serving as caregivers for their grandchildren. In this issue, Jaclene Zauszniewski and Carol Musil revisit the caregiving grandmother population and compare a cognitive behavioral intervention (resourcefulness training) and a journaling intervention to an intervention with heart rate variability biofeedback. All three interventions reduced perceived stress in the grandmothers and produced lower scores on depressive symptoms over time, whereas only the resourcefulness training and biofeedback groups showed an enhanced quality of life.

**Book Review**


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