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Abstracts of Presented Papers

Experiments on Brainwave Therapy for Alcoholism

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In 1989, E.G. Peniston and P.J. Kulkosky published an innovative therapy for the treatment of alcoholism and prevention of its relapse. This therapy combined systematic desensitization, temperature biofeedback, guided imagery, constructed visualizations, rhythmic breathing, autogenic training, alpha theta brainwave biofeedback, and booster sessions to treat chronic alcoholism in male inpatients. This Peniston & Kulkosky Brainwave Neurofeedback Therapy increased alpha and theta brainwave production; normalized personality measures, prevented a rise in beta endorphin-levels; and produced a prolonged prevention of relapse, in comparison with traditionally treated and nonalcoholic controls. Subsequent internal replications demonstrated this therapy's effectiveness in treatment of inpatients symptoms of PTSD in association with alcohol abuse.

Although there have been several external case studies supportive of this novel therapeutic approach, there have been few controlled experiments published. To convince a skeptical general scientific and clinical audience to accept this alternative therapy, a large scale, external, direct replication must be published in a mainstream journal. Deviation from original procedures of Peniston and Kulkosky may preclude similar results. However, future research designs could also address the following: 1) the external, systematic replicability of the method results in diverse populations with traditionally treated matched control groups; 2) the essential components and durations in this multiple stage therapy required for therapeutic advantage; 3) extension via conceptual replication beyond alcoholism and PTSD to the treatment of other psychopathology and 4) the physiological and psychological processes of the therapeutic effects. For example, extensive research confirms that endogenous neuropeptides are physiological stimuli for the initiation and termination of alcohol ingestion. Newly approved pharmacological therapy for alcoholism is based on the neuropeptide control of alcohol intake. Future research on brainwave therapy for alcoholism can address how regulatory neuropeptides are affected by the procedures of biofeedback. Only carefully controlled experimentation can advance wide acceptance of brainwave therapy for alcoholism and related-disorders.