

Effect of Heart Rate Variability Biofeedback as an Adjunctive Therapy to Self-help Cognitive Behavioral Therapy for Insomnia: A Pilot Randomized Controlled Trial

Abstract

Conventional psychotherapy like Cognitive Behavioral Therapy for Insomnia (CBT-I) appears to underemphasize the physiological domain, reflected by the absence of improvement of Heart Rate Variability (HRV) indices in insomniacs, which are the indicators of physiological hyperarousal and autonomic dysfunction related to insomnia. HRV biofeedback training is found to target physiological domain and improve HRV indices. Addition of HRV biofeedback to CBT-I may enhance HRV indices, interoceptive awareness and sleep locus of control. The current study compared the effect of standalone CBT-I and the combination of self-help CBT-I and HRV biofeedback on insomnia. The effect of HRV indices, interoceptive awareness and sleep locus of control on insomnia severity was also examined. A randomized controlled trial was conducted to randomly assign 40 participants with insomnia into either a group with both self-help CBT-I and HRV biofeedback training (combined group) or a group with standalone self-help CBT-I (standalone CBT-I group). After 6-week self-help intervention, there was no significant Group x Time interaction in insomnia severity, interoceptive awareness and sleep locus of control. Both groups significantly improved the insomnia severity and interoceptive awareness. However, the