SPECIAL ISSUE

Integrating Mindfulness and Heart Rate Variability Biofeedback Therapies to Foster Courage, Confidence, and Resilience

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Field studies and laboratory research have documented that resilient individuals employ positive emotions to reduce their physiological arousal and bounce back from negative experiences. In the present article, we present a protocol for integrating mindfulness and heart rate variability biofeedback to increase an individual's ability to identify as well as access resonance-producing emotions, increase low frequency heart rhythms, and improve cardiovascular recovery from stressful situations. The proposed training approach introduces mindfulness-based strategies to help individuals amplify their abilities to flexibly alter affective as well as physiological responses and match the demands of frequently changing environmental stressors. Participants will learn to develop somatic awareness, connect to physiological experiences, and train the heart to access courage and confidence on demand.

Introduction

The broaden-and-build theory highlights how an individual's ability to employ positive emotions to bounce back from stress is critical for optimal functioning (Fredrickson, 1998, 2000, 2004). The theory suggests that positive emotions (a) broaden people's attention and thinking, (b) undo lingering cardiovascular reactivity, (c) fuel psychological resilience, (d) trigger upward spirals toward greater wellbeing in the future, and (e) seed human connection and flourishing. The theory also conveys an important message about the relationships between positive thinking, negative physiological arousal, and resilience. People who cultivate positive emotions show faster cardiovascular recovery following a stressor, and hence, a heightened propensity to return to baseline functioning (Tugade & Fredrickson, 2004). When positive emotions are in short supply, however, people can get stuck. They lose their emotional flexibility and become myopic in their negative thinking process. Their heart rhythms decrease in variability as well

as congruence. Heart rate variability (HRV) may provide a promising index for both physical and emotional stress. Improvements in mental processing (Vaschillo, Lehrer, Rishe, & Konstantinov, 2002) and emotional stability (Applehans & Leucken, 2006) have been demonstrated as a result of HRV training.

When the heart rhythm pattern is erratic and disordered, the corresponding pattern of neural signals traveling from the heart to the brain inhibit higher cognitive function. This impedes the ability to think clearly, remember, learn, reason, and make effective decisions. In contrast, the more ordered and stable pattern of the heart's input to the brain, referred to as congruence, facilitates cognitive function and reinforces positive feelings as well as emotional regulation (McCraty, 2003). Given the parallel between psychological and physiological resilience, an important question emerges. To what extent can we physiologically train individuals to employ positive emotions like courage and confidence during times of stress?

The answer to this question depends largely on the ability to identify somatic states, stay focused on the present, and shift one's physiology without judgment. As such, mindfulness-based interventions occur in conjunction with physiological training to enhance physiological as well as cognitive control. This paper provides a framework for incorporating mindfulness into an HRV biofeedback protocol to develop courage, confidence, and resilience. The framework includes several necessary steps, each aimed toward building the ability to access positive emotions and simultaneously decrease time necessary for cardiovascular recovery following a stressor.

The steps are as follows:

1. Increasing somatic awareness
2. Connecting to resonance experiences and desired emotional states to increase low frequency heart rate