



7-Week Mindfulness and Biofeedback Training Improved Self-reported Symptoms of Anxiety, Stress, Insomnia, Perfectionism, Depression, Mindfulness, Dysfunctional Breathing, and Somatic Dysfunction.

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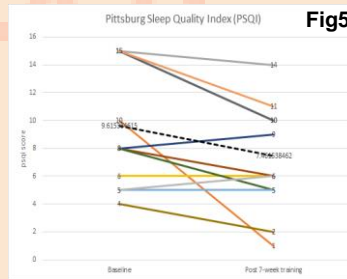
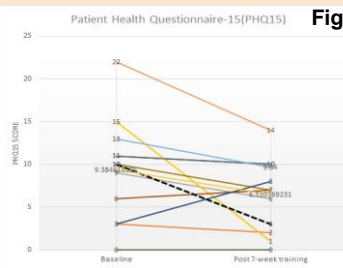
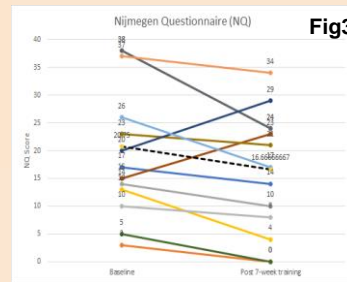
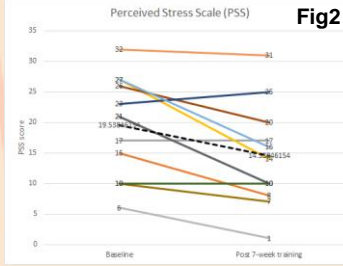
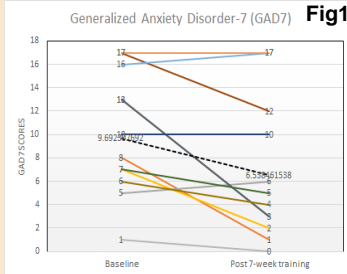
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Background and purpose

Biofeedback and Mindfulness are mind-body training methods in physiological and psychological self-regulation. Mindfulness is a mental training technique to increase awareness of and learn skillful response to stress. Biofeedback is a training method to increase awareness of and learn to modify and generalize physiological and psychological responses to stress. Biofeedback utilizes consequences as a means to modify behavior based on operant conditioning and feedback learning model, and stress management based on psychophysiological and psychotherapy model.² The purpose of our work is to summarize outcomes of stress management and resiliency shift at Bastyr University Clinic.

Methods and Design

Thirteen participants were referred to Stress Management and Resiliency shift at Bastyr University Clinic for adjunctive care of psychosocial stress. Participants were asked to fill out validated symptom questionnaires at the start and completion of their 7 weekly training sessions and were given instructions for 20-minutes twice daily home-practice. The training protocol consisted of seven 1-hour sessions.



Figures 1-5: Demonstrating the self-reported questionnaire scores at baseline and post 7-week training in Mindfulness and Biofeedback. The research participants are designated by a number from 1-13 on the x-axis; the scores appear on the y-axis. Statistically significant decreased Scores are seen for GAD7, PSS, NQ, PHQ 15 and statistically significant increased scores are noted for PSQI.

Results

Compared with baseline, after 7 weeks of Mindfulness and Biofeedback training, the self-reported questionnaires showed statistically significant decreased scores on: Generalized Anxiety Disorder-7 (GAD7) **Fig1**, (P-value <0.02); Perceived Stress Scale (PSS) **Fig2**, (P-value <0.005); Nijmegen Questionnaire (NQ) **Fig3**, (P-value <0.04); Almost Perfect Scale (APS-R), (P-value <0.04); Patient Health Questionnaire-15 (PHQ15) **Fig4**, (P-value <0.05); and Pittsburg Sleep Quality Index (PSQI) **Fig5**, (P-value (0.02). While the scores on the the Patient Health Questionnaire-9 (PHQ9), Multidimensional Scale of Perceived Social Support (MSPSS), Five Facet Mindfulness Questionnaire (FFM), and Almost Perfect Scale-Order and Standards (APS-R) improved, the improvement was not statistically significant.

Conclusions

Mindfulness and Biofeedback were successfully utilized to help participants generate awareness of, modify and generalize their stress response, and improve symptoms of anxiety, stress, insomnia, perfectionism, depression, mindfulness, dysfunctional breathing, and somatic dysfunction. The implication of our findings is that a Randomized Control Trial (RCT) is needed to confirm our clinical outcomes.^{1,2}

Acknowledgement

The biofeedback protocol is based on 8-Week Resiliency Protocol Transforming Health through Breathing, Posture & HRV by Brad S. Lichtenstein, ND BCB BCB-HRV of The Breath Space Breathspace.com.

Contact

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