



Research paper

Effect of EMG biofeedback compared to applied relaxation training with chronic, upper extremity cumulative trauma disorders

Susan H. Spence ^a ... David Champion ^d

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Abstract

This study examined the relative effectiveness of EMG biofeedback, applied relaxation training and a combined procedure in the management of chronic, upper extremity cumulative trauma disorder. Forty-eight patients with a history of about 5–6 years of upper extremity pain were randomly assigned to 1 of 4 treatment conditions, namely applied relaxation training, EMG biofeedback, a combined approach or a wait-list control. Treatments were conducted on an individual basis, twice per week for 4 weeks. Patients in all 3 treatment conditions showed significant short-term reductions in pain and psychopathology in comparison to the wait-list group who showed minimal change. Six-month follow-up data were obtained for patients in the treatment conditions, but not

the wait-list group. There was some evidence of relapse on measures Of depression, anxiety and pain beliefs for treated patients during the 6-month follow-up period, although measures remained significantly below pre-treatment levels for most outcome indices. Self-monitored pain continued to decrease for the treatment groups through follow-up. Contrary to predictions, however, the strongest short-term treatment benefits were shown by patients receiving applied relaxation training on measures of pain, distress, interference in daily living, depression and anxiety. By 6-month follow-up, differences between treatment groups were no longer evident.



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Keywords

Biofeedback; Relaxation training; Cumulative trauma disorder; Repetition strain injury; Upper extremity pain; Cervicobrachial pain

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