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Watsu body work therapy enhances cardiac locomotor synchronization

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Purpose: Aquatic therapies have been shown to be beneficial for a variety of physical and psychological disorders emerging in a various nursing settings. However, there is a lack of research in terms of novel water based therapies especially concerning Watsu® Therapy. In our study, effects of Watsu® on cardiac locomotor synchronization (CLS) indicating autonomic nervous system (ANS) modulation of obese male subjects during different movements were analyzed.

Methods: Subjects included 26 volunteer obese male (average age of 19.5 years $\pm$ 0.8 and body mass index (BMI) of 36 $\pm$ 3.7) who were assigned randomly. Watsu therapy were applied 2 times per week to the subjects during the 12 week period. HRV was recorded using Polar H7 heart rate sensor and HRV+ (signal processing software). Collection of data was 5 minutes in walking and 5 minutes in cycling indicating cardiac locomotor and non locomotor synchronization respectively, before and after the study. The significance of the results was investigated via the paired t-test.

Results: There were significant improvement in all CLS parameters ($p < 0.05$). Locomotion and non-locomotion improvement in different CLS values are as followed: RMSSD from 0.03 $\pm$ 0.02 to 0.04 $\pm$ 0.03 and from 0.02 $\pm$ 0.01 to 0.03 $\pm$ 0.01, pNN50 from 13.03 $\pm$ 11.60 to 19.04 $\pm$ 19.22 and from 3.23 $\pm$ 6.17 to 5.47 $\pm$ 6.96, HF from 7.12 $\pm$ 4.39 to 11.87 $\pm$ 8.55 and from 7.45 $\pm$ 7.06 to 7.44 $\pm$ 5.06, respectively.

Conclusion: Watsu therapy improves the autonomic nervous system modulation during locomotor and non locomotor movements indicated by heart rate variability parameters.

Biography

Ertan Tufekcioglu has completed his PhD from the Institute of Health Sciences at Marmara University. He was the Director of ASFA and OKYANUS sports and cultural complexes, before he started his academic studies in rehabilitation and recovery methods at King Fahad University of Petroleum and Minerals. He has published many papers in reputed journals and has been serving as an Scientific and Curriculum Committee and as Editorial Board Member of an international journal.

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