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The effect of Far-Infrared radiation on low back pain and skin surface temperature

Abstract:

Lower Back Pain (LBP) has been one of the leading causes of disability and remains a significant global public health concern. The discomfort of the waist often due to lower back pain. Far-Infrared Radiation (FIR) is a low-energy therapy, where the Infrared Radiation (IR) is an invisible electromagnetic wave with a defined wavelength region of 0.75-1000µm on the light spectrum. This study investigates the effects of FIR on the Waist Skin Surface Temperature (WSST), and Autonomic Nervous System (ANS) activity to evaluate its effectiveness in reducing LBP. A single group pre and posttest study was designed. Subjects (n=30) over 20 years of age and satisfying the inclusion criteria were selected. Subjects received 40 minutes far-infrared radiation on their backs. The WSST, autonomic nervous activity, and pain intensity were assessed. The results showed skin surface temperature at the waist increased from 34.33 ± 0.19 °C to 39.03 ± 0.11 °C (P=.001). The ANS Low-Frequency (LF) activity showed a statistically significant decrease (P=.001) and the LF/HF ratio showed a statistically significant increase (P=.002). FIR significantly increased the WSST after 40 minutes' irradiation, which showed regulation of ANS activity and it has been shown to positively effect on pain control.

Biography

Chi has completed her PhD at the age of 55 years from Institute of Medical Sciences, Tzu Chi University. She is dedicated to developing complementary therapies for pain relief.