

Myofascial Self-help Therapy with a Mini Foot Roller: A Plantar Fascia Study with a 3 Week Follow Up

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BACKGROUND: Self-help therapy with a mini foot roller was performed on the foot fascia. The aim of this pilot-study was to explore the outcome of the self-therapy effectivity on psycho-physiological states through a tool assisted tissue manipulation.

METHODS: 38 post office workers were recruited at random, to perform a self-help therapy trial for three weeks with a small foam roller, the BLACKROLL® MINI . The mini foot roller was used to work on the plantar fascia using body weight and leverage. All participants treated the plantar fascia of each foot for five minutes twice a day for three weeks. Parameters of momentary psychological and physiological states, using a modified mind-body questionnaire including the Proof of Mood States (POMS), were selected before and after the three weeks of self-treatment. The questionnaire collects states of life quality, pain, stiffness, mobility, flexibility, coordination, stress behaviour and changes in mood. A follow-up questionnaire was conducted four weeks after the intervention period. The objectives of the retrospective questionnaire were to evaluate and to determine a change in psycho-physiological states of the participants in the parameters physical condition, general pain, feelings of stress, circulation, metabolism, mood change, as well as feelings of general energy. Statistical analysis included the paired t-test, Wilcoxon signed rank test and Cohen's d-test. This study was undertaken in accordance with the Declaration of Helsinki.

RESULTS: A significant reduction ($p < 0.05$) in the psychological states of dizziness, sorrow and in the physical states of restriction of life quality, as well as the feeling of stiffness and physical suffering were indicated. The parameters of the follow-up questionnaire relating to physical condition, general pain, feelings of stress, metabolism, mood change and feelings of general energy improved and stabilised to the average of 40% to 60% four weeks after the self-treatment.

CONCLUSIONS: A self-help therapy with a mini foot roller, if applied for ten minutes twice a day, may positively affect physiological and psychological states and can remain stable for a period of four weeks after the self-treatment.