

## **ABSTRACT**

**DIPLOMA THESIS:** The impact of acupuncture on heart rate variability in patients with migraine

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**INTRODUCTION:** Migraine is one of the most common diseases that affects up to 25% of human adult worldwide. The popularity of alternative therapeutic method is increasing, in this case namely acupuncture, currently between 11-46% globally, 4-9,9% respectively.

**OBJECTIVE:** The primary goal of this work is to evaluate if acupuncture has any effect on HRV in patients with migraine. Secondary goal is to find out which psychosocial factors may influence HRV parameter changes.

**METHODOLOGY:** HRV measurement was performed before acupuncture and after 12 weeks of acupuncture therapy. At first, results were processed in KUBIOS software which is specially designed for the study of heart rate variability and the needed parameters. Then the statistical analysis of a paired t-test ( $p=0,05$ ) and linear regression ( $p=0,1$ ) were done in SPSS software. MIDAS questionnaire (quality of life in patients with migraine), life satisfaction questionnaire (Satisfaction with Life Scale, SWLS) and The Symptom Checklist (SCL-90) were used to determine factors

**RESULTS:** No significant difference between HRV value before and after acupuncture was discovered. The most significant factor lnLFHF ( $p=0,115$ ) suggested connection with higher parasympathetic activity.

On the other hand significant value was found in factors predict changes, including age ( $p=0,051$ ) and life satisfaction ( $p=0,086$ ).

**CONCLUSION:** There were found slight changes in HRV parameters, although it didn't come close to significance. Results suggest that acupuncture had slight influence on increase of parasympathetic activity and decrease sympathetic activity. Life satisfaction had a little influence on HRV changes. The recommendation is to apply this study on larger sample of patients.

**KEY WORDS:** Acupuncture, Heart rate variability, Migraine, Patients, Prophylaxis