

## **Abstract**

**Title of thesis:** Clinical Effectiveness of the Schultz Autogenic Training on the Electrical Activity of the Brain

**Objectives:** The thesis aims to analyze the impact of Schultz autogenic training on brain activity evaluated using EEG

**Course of action:** To obtain the data, an experimental group containing 11 participants aged 20-30, disregarding gender, was created. Participants practiced Schultz autogenic training using the identical audio record once a day during the course of nine weeks. Upon completion of the training, all participants were subjected to one-off measurement by the Nicolet EEG instrument. Brain activity was measured before, during and after the training. Obtained EEG data were processed with NeuroGuide software using coherence analysis and fast Fourier transform. Coherence analysis provided charts mapping the electrical activity of Brodmann areas during the course of all three stages and fast Fourier transform yielded data of performance ratio between theta and alpha frequencies, so called T/A index. Performance ratio of the T/A index was subject to Student's paired t-test in order to draw final conclusion. T/A results show changes in the representation of alpha and theta waves during all measurements.

**Results:** The results of the thesis were used to verify the veracity of stated hypotheses and provided with answers to research questions. Gathered statistical data failed to demonstrate that the chosen method could systematically alter the test parameters. Brain electrical activity remained either unchanged or changed in random, unpredictable direction. The change of performance ratio of the T/A index did occur but this change showed statistically insignificant using the t-test. An important finding of this work is the aforementioned assertion that the chosen method failed to alter the activity of Brodmann areas in one direction. Due to this finding, new research questions regarding whether relaxation audio recordings have generally desired and expected effect on human body are formed.

**Key words:** electroencephalography, frequency, coherence, T/A index, meditation, somatovegetative reactions