

Chandra, S., Sharma, G., Mittal, A.P., Jha, D. (2016). Effect of Sudarshan Kriya (meditation) on gamma, alpha, and theta rhythm during working memory task. Int J Yoga 9(1):72-6.

AIMS:

The present study focuses on analyzing the effects of Sudarshan Kriya yoga (SKY) on brain signals during a working memory (WM) task. To envision the significant effects of SKY on WM capacity (WMC), we chose a control group for contriving a cogent comparison that could be corroborated using statistical tests.

SUBJECTS AND METHODS:

A total of 25 subjects were taken in the study, of which 10 were allotted to a control group and 15 to an experimental group. Electroencephalograph was taken during a WM task, which was an automated operation span test before and after SKY with 90-day intervals. No SKY was given to the control group.

STATISTICAL ANALYSIS USED:

t-test and one-way ANOVA were applied.

RESULTS:

SKY promoted the efficient use of energy and power spectral density (PSD) for different brain rhythms in the desired locations as depicted by the gamma (F8 channel), alpha, and theta 2 (F7 and FC5) bands. It was found that gamma PSD reduced for both phases of memory in the experimental group. Alpha energy increased during the retrieval phase in the experimental group after SKY. Theta 1 rhythm was not affected by SKY, but theta 2 had shown left hemispheric activation. Theta rhythm was associated with memory consolidation.

CONCLUSIONS:

SKY had shown minimized energy losses while performing the task. SKY can improve WMC by changing the brain rhythms such that energy is utilized efficiently in performing the task.