

Chandra, S., Sharma, G., Sharma, M., Jha, D., Mittal, A.P. (2016). Workload regulation by Sudarshan Kriya: an EEG and ECG perspective. Brain Inform. [Epub ahead of print]

Sudarshan Kriya Yoga (SKY) is a type of rhythmic breathing activity, trivially a form of Pranayama that stimulates physical, mental, emotional, and social well-being. The objective of the present work is to verify the effect of meditation in optimizing task efficiency and regulating stress. It builds on to quantitatively answer if SKY will increase workload tolerance for divided attention tasks in the people sank in it. EEG and ECG recordings were taken from a total of twenty-five subjects who had volunteered for the experiment. Subjects were randomly assigned to two groups of 'control' and 'experimental.' Their objective scores were collected from the experiment based on NASA's multi-attribute task battery II and was utilized for workload assessment. Both the groups had no prior experience of SKY. The experimental group was provided with an intervention of SKY for a duration of 30 min everyday. Pre- and post-meditation data were acquired from both groups over a period of 30 and 90 days. It was observed that subjective score of workload (WL) was significantly reduced in the experimental group and performance of the subject increased in terms of task performance. Another astute observation included a considerable increase and decrease in the alpha and beta energies and root mean square of the EEG signal for the experimental group and control group, respectively. In addition to this sympathovagal balance index also decreased in experimental group which indicated reduction in stress. SKY had an effect on stress regulation which in turn enhanced their WL tolerance capacity for a particular multitask activity.