

## ABSTRACT

**TITLE:** Characterising and Comparing EEG Signatures of Perseverative cognition For Yoga and Non-yoga Practitioners.

**BACKGROUND:** Perseverative cognition has been identified to play an important etiological role in the precipitation of chronic stress into disease. Tools have been created for its subjective identification, only. It is essential to identify the phenomenon objectively. Moreover, it has been shown that the practice of yoga and mindfulness meditation has significant impact on reduction of perseverative cognition. But it is difficult to objectively identify when a practitioner slips into a state of rumination whilst meditating.

**AIM:** To identify EEG signatures for perseverative cognition and compare those of yoga and non-yoga practitioners.

**METHODS:** Through convenience sampling, 38 students of BSc. Yoga Therapy and MSc. Yoga therapy of Swami Vivekananda Yoga Anusandhana Samsthana university were recruited as yoga practitioners and 23 students of BAMS of Sushruta Ayurveda Medical College & Hospital (SAMC&H) were recruited as non-yoga practitioners. Both groups underwent the same assessments of FMI, PTQ, RRS followed by five and a half minutes each of EEG readings: first, for baseline and second, for rumination, followed by RAC.

**RESULTS:** Alpha frequency was found to be dominant across all group both at rest and during rumination. The Yoga group showed significant correlation for all the main scores except trait and state rumination. There were overall more significant correlations between the main scores within the female group as compared to the male group. Almost all the measures showed a considerable effect size but the overall achieved power of the study is not sufficient, possibly due to the low sample size.

**CONCLUSION:** Yoga practitioners may have lower perseverative cognition levels compared to non-yoga practitioners.

**KEY WORDS:** Perseverative cognition, Rumination, Stress, Yoga, EEG, Mindfulness.