ABSTRACT

Background: Mobile phone induced electromagnetic field (MPEMF) as well as chanting of Vedic mantra 'OM' has been shown to affect cognition and brain hemodynamics, but findings are still inconclusive. MPEMF has been found to affect subtle energy levels of adults through electrophotonic imaging (EPI) technique in a previous pilot study.

Materials and Methods: We enrolled 120 healthy right-handed teenagers (60 males and 60 females) in the age range of 14.14 ± 0.83 years from various schools in Bengaluru city. Subjects were randomly divided into four groups with 30 subjects (15 males and 15 females) in each: (1) MPONOM (mobile phone 'ON' followed by 'OM' chanting) (2) MPOFOM (mobile phone 'OFF' followed by 'OM' chanting) (3) MPONSS (mobile phone 'ON' followed by 'SS' chanting) and (4) MPOFSS (mobile phone 'OFF' followed by 'SS' chanting). Brain hemodynamics during Stroop task were recorded using a 64-channel fNIRS device and subtle energy levels of various organs were measured using Electro photonic Imaging, also known as Gas Discharge Visualization (GDV) Camera Pro device at three points of time: (1) baseline, (2) after 30 min of MPON/OF exposure and (3) after 5 min of OM/SS chanting. RM-ANOVA was applied to perform within and between-group comparisons, respectively.

Results: Between-group analysis revealed that the total scores on incongruent Stroop task were significantly better after OM chanting as compared to SS chanting. There was no significant difference between MPON and MPOF conditions for Stroop performance as well as brain hemodynamics. Thirty minutes of MP-EMF exposure increased overall stress and reduced subtle energy levels of endocrine glands, brain, liver, kidney, spleen and immune system of healthy teenagers. Following MP-EMF exposure, 5 minutes of OM chanting led to better reduction in overall stress levels as compared to chanting SS.

Conclusion: MPEMF exposure of 30 minutes did not affect Stroop Performance and brain hemodynamics in teenagers but had subtle energy reducing effects on several important organs. MPEMF exposure also increased overall stress levels as measured by EPI. OM chanting for 5 minutes enhanced cognition with consumption of lesser resources (deactivation of pre-frontal cortices); it also resisted stress inducing effects of MPEMF on subtle energy.

Key words: Electromagnetic field, brain hemodynamics, stroop task, electrophotonic imaging, gas discharge visualizer, mobile phone.