

Personalized assessment of high-definition slow-oscillatory transcranial direct current stimulation (so-tDCS) in older adults with subjective cognitive and sleep complaints

Statistical Analyses

Analyses will be on an intention-to-treat basis. Linear mixed models will be used to assess the differences between different time points on the primary and secondary outcome measures at each time point. This statistical method will facilitate inclusion of participants with missing data. Time (i.e., follow-up period) will be modelled as fixed effects. Participants will be modelled as random effects at different time points. Score changes of subjective cognitive complaints, neurophysiological features, sleep quality, cognition and plasma A β and tau levels from baseline to follow-up time points will be tested with occasions (i.e., time points) at level one and participants at level two. For better controlling the practice effects, generalized estimating equations will be used in the analysis of repeated measurements of treatment outcomes. Covariates identified from baseline differences will be entered in the regression model. Secondary analyses of the predictive relationships between cognitive complaints, sleep quality, β -amyloid levels and neurophysiological features will be performed. Statistical significance will be set at 2-sided $p < 0.05$. Computations will be performed using R Studio (version 1.1.456).