Frontal Alpha Asymmetry and Theta/Beta Ratio Predict Self-Reported Drug Use in College Students

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FRONTAL ALPHA ASYMMETRY AND THETA/BETA RATIO PREDICT SELF-REPORTED DRUG USE IN COLLEGE STUDENTS

This research explored the ability of brain waves to predict substance use in young adults. The sample consisted of 45 participants who were between the ages of 18 and 34. Participants either consisted of young adults who are in recovery from alcohol & other addictive behaviors or were recruited from various psychology classes. The electroencephalogram (EEG) recorded brain waves of participants with eyes open and eyes closed. With the data collected from the EEG, we used Fourier analysis to estimate spectral power, and computed frontal alpha asymmetry (FAA) and theta/beta ratio (TBR) before and after an oddball task. We ran a backward regression approach in order to see which variables are significant predictors for the brain waves. We found that both FAA and TBR predicted self-reported drug use using the ASSIST scale developed by the World Health Organization.