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## Comparing Brain Waves Before and After a Simple Task

Lamar LaTella

Alexis Newman

*Kennesaw State University*

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## **Comparing Brain Waves Before and After a Simple Task**

This research explored the effects and interactions of the alpha, beta, and theta waves in young adults who are in recovery from substance use versus those who are not in recovery. The sample size consisted of 25 participants. The five participants in the recovery group were recruited from the KSU Center for Young Adult Addiction and Recovery. These consisted of young adults who are in recovery from alcohol or substance abuse, as well as other addictive behaviors. The other 20 participants in the control group were recruited from various psychology classes at the university. Resting state EEG was measured for eight minutes before and eight minutes after completing a simple task where participants monitored ongoing stimuli for a rare target stimulus. There was an interaction between groups and timepoints in the amplitude of the alpha wave. Participants in recovery had lower alpha than the control group before the task, but after the task their alpha power had increased while the control group did not change significantly. Additionally, beta waves when eyes were closed also had a significant interaction between groups and timepoints. Control participants decreased in beta power after the task, whereas beta power increased in participants in recovery.