

Kennesaw State University

DigitalCommons@Kennesaw State University

Symposium of Student Scholars

Waveform Analysis of the Stop Task

Bryant Giles

Kennesaw State University

Makayla Mcginnis

Kennesaw State University

Follow this and additional works at: <https://digitalcommons.kennesaw.edu/undergradsymposiumksu>

Giles, Bryant and Mcginnis, Makayla, "Waveform Analysis of the Stop Task" (2022). *Symposium of Student Scholars*. 261.

<https://digitalcommons.kennesaw.edu/undergradsymposiumksu/Fall2022/presentations/261>

This Poster is brought to you for free and open access by the Office of Undergraduate Research at DigitalCommons@Kennesaw State University. It has been accepted for inclusion in Symposium of Student Scholars by an authorized administrator of DigitalCommons@Kennesaw State University. For more information, please contact digitalcommons@kennesaw.edu.

Waveform Analysis of the Stop Task

In the stop-signal paradigm, subjects click the mouse button when a particular stimulus is seen. However, an occasional stop signal is shown on the screen in increasing amounts of delay from the target stimulus creating a race between responding to the target stimuli/go signal and obeying the stop command. This task is a measure of inhibitory control which is a key component of executive function. Executive function is positively related to a variety of outcomes including educational level and financial outcomes. EF is protective against a variety of mental illnesses because greater inhibition allows a person to avoid rumination by shifting their attention to other things. With a sample of $n = 25$ Kennesaw State University undergraduate students a 64-channel electroencephalogram was used to find a waveform that peaks at about 500ms after the go signal was shown and followed by a stop signal. This demonstrates that greater activity is required to inhibit a response than to emit a response once it has started.