Participants exposed to stress had faster time based prospective memory response times and exhibited lesser frontal activation than participants not exposed to stress.

Methods
• Participants were given questionnaires to rule out previously standing anxiety markers (BDI, BAI, IES-R, DSI-II).
• The socially evaluated cold pressor test (SECPT) (Schwabe & Schächinger, 2018) was administered and three saliva samples were collected (prior, 15 minutes after, & 45 minutes after).
• The behavioral task, modeled after (Cona et al., 2012) contained an ongoing task and a time based PM (TBPM) task (6-5 minute delays & 4-2 minute delays) was coupled with an electrophysiological recording.

Data Analysis
• Electrophysiological data was entered into EEGLAB and filtered, cleaned, and plotted. Automagic, a toolbox within EEGLAB, was used to complete ICA, EOG regression, and channel reinterpolation (Pedroni et al., 2019).
• A one-way ANOVA was completed to rule out anxiety markers among participants.
• A simple t-test was conducted to determine statistical difference within the behavioral task.

Results
• It was found that there was no difference in prospective memory response accuracy (p=0.679), ongoing task accuracy (p=0.548), or previously standing stress markers.
• However, it was found that the nonstress group had a significantly faster TBPM response time.
• Additionally, the physiological data from the stress group revealed lower activation (p<0.05) in electrophysiological correlates speculated to be related to PM processes (i.e. retrieval mode) (Cona et al., 2012).

Conclusion
• Lower activation in TBPM correlates in combination with decreased reaction time within the stress group reflects a sort of mental screen for the ongoing task (i.e. inhibition), allowing for greater allotment of cognitive resources toward the TBPM task.

References