



VANDERBILT

Peabody College

Mood, Emotion, and Development Lab

All How You Think About It?

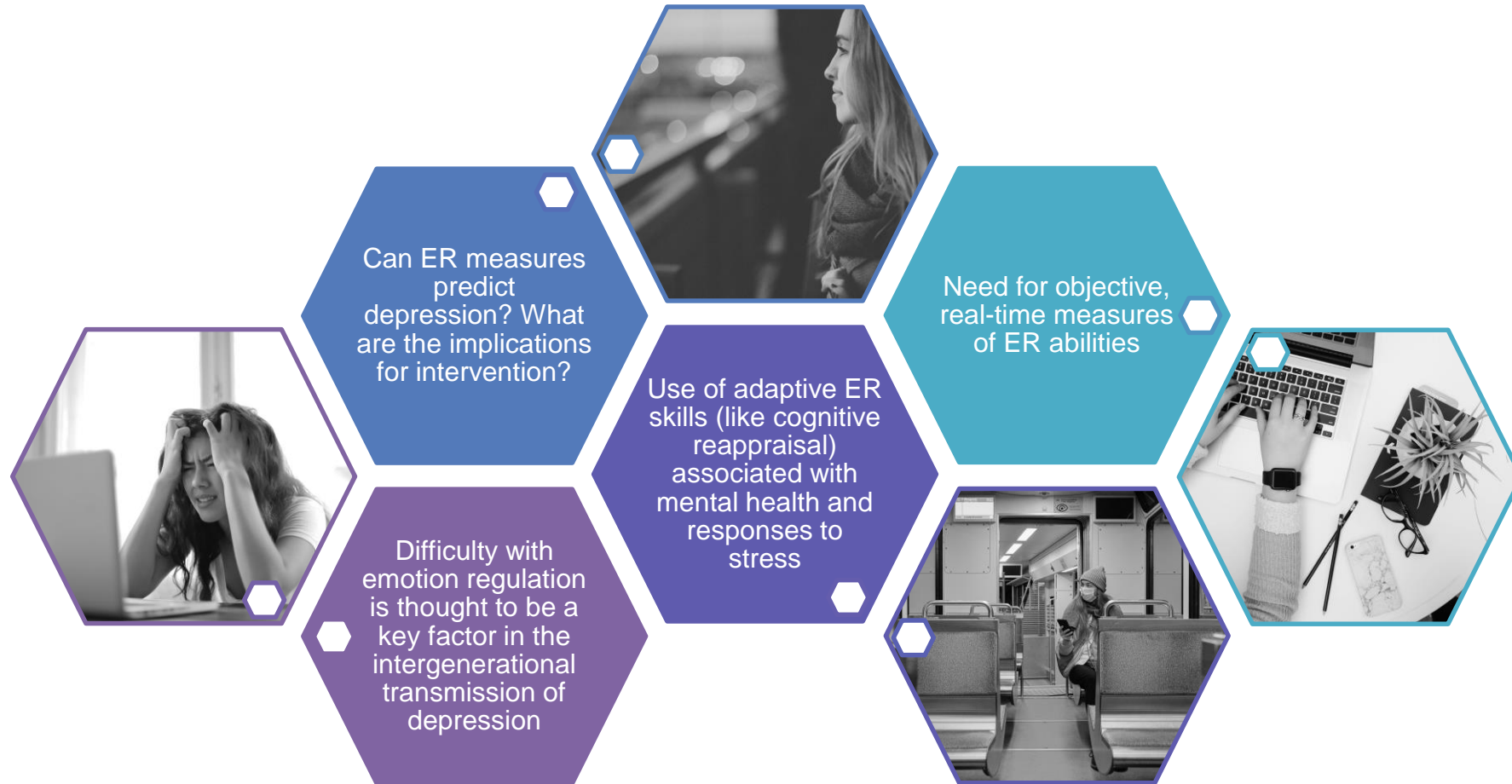
Examining the Temporal Dynamics of Emotion Regulation in Adolescents with Depression and at High and Low Risk Based on Maternal History

Autumn Kujawa, Ph.D.

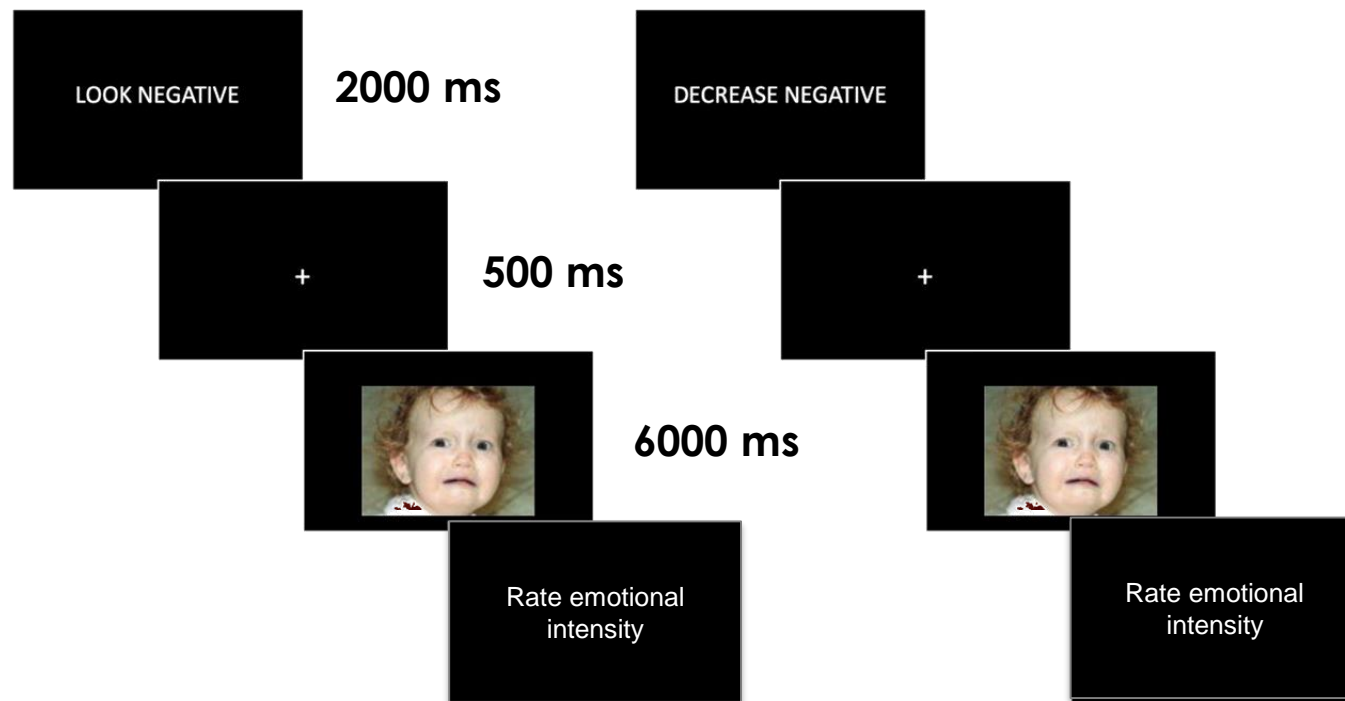
Department of Psychology and Human Development

Vanderbilt University

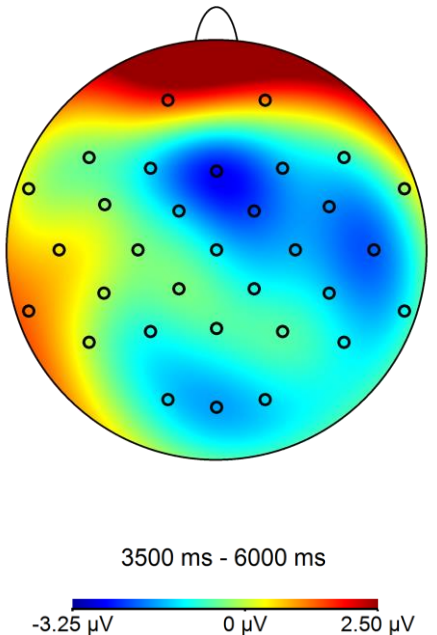
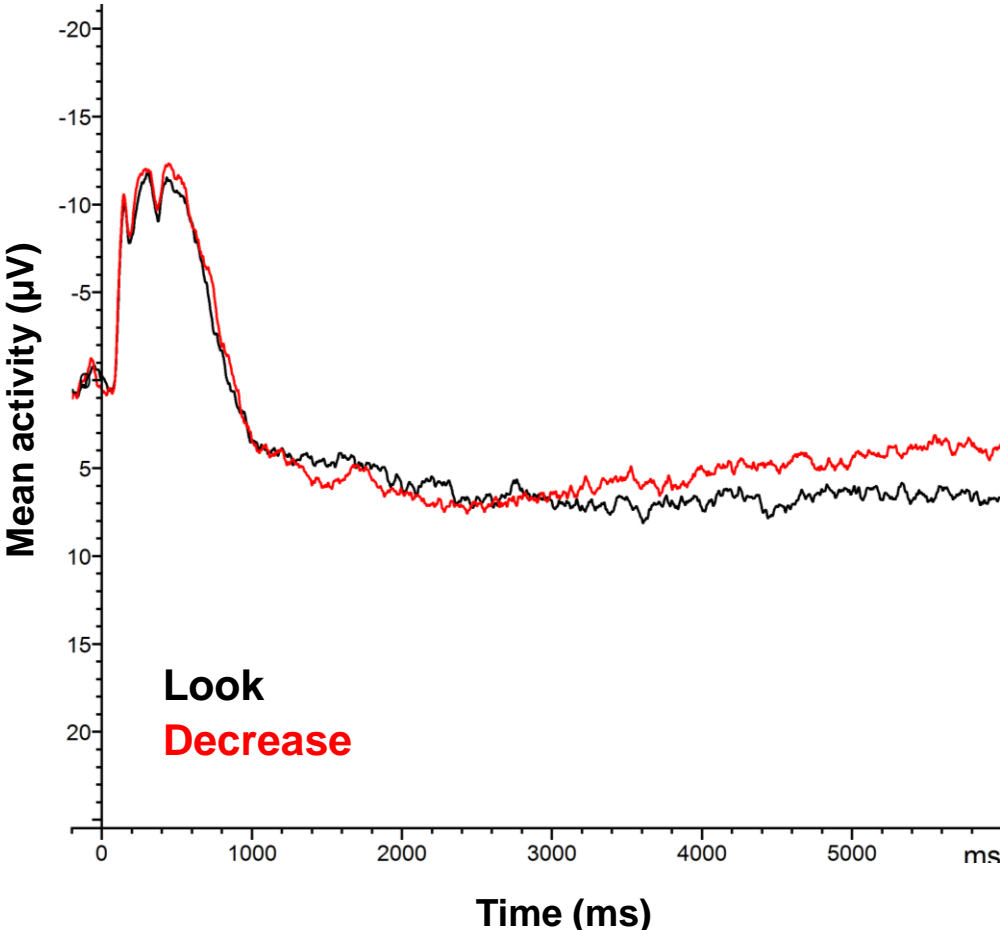
Background & Research Questions



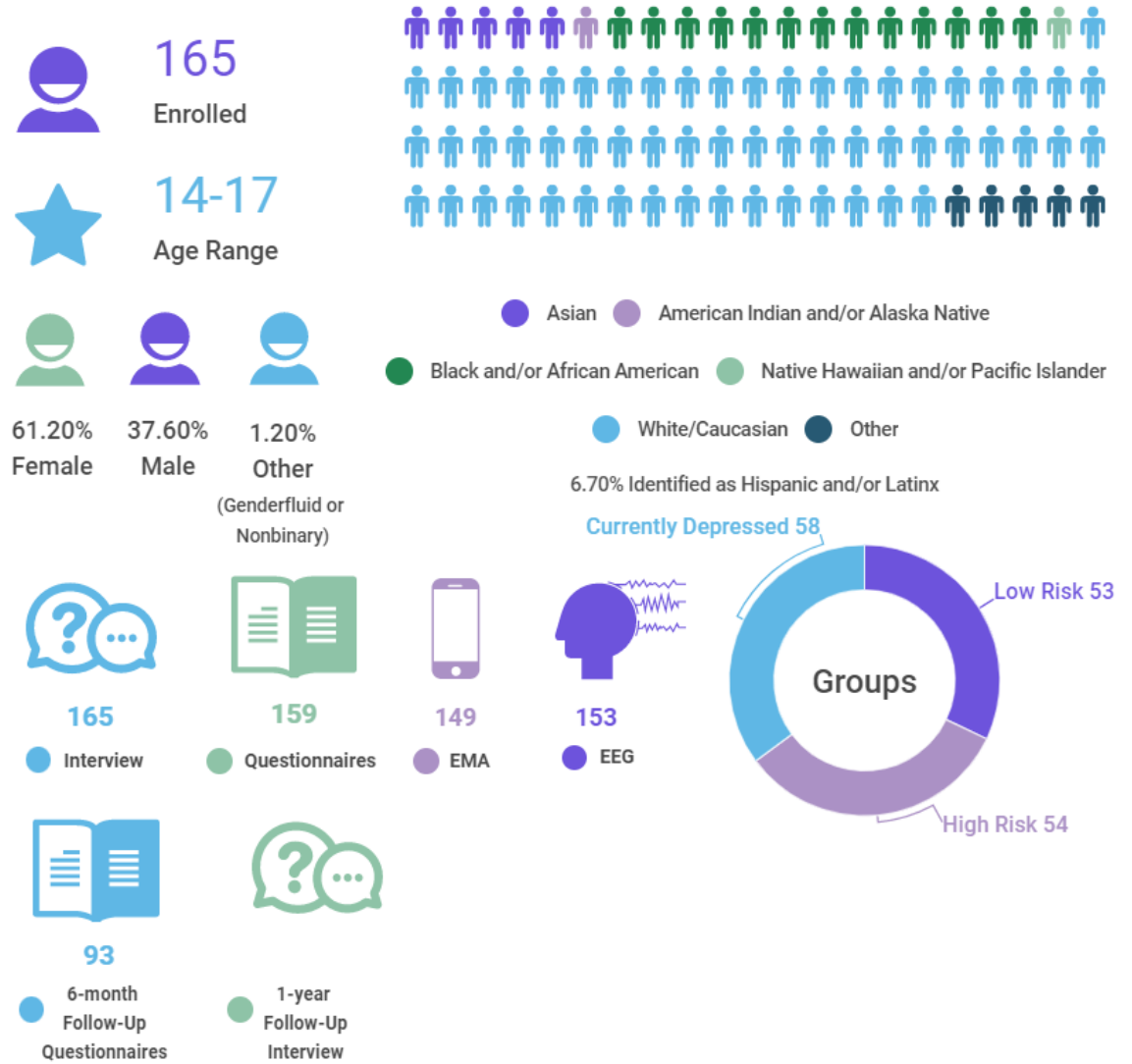
Measuring the temporal dynamics of emotion regulation using event-related potentials



Emotion regulation effects on the late positive potential (LPP) component



Sample 1: Adolescents selected based on maternal history of depression or current depression



Supported by the Katherine Deschner Family Young Investigator Grant from the Brain and Behavior Research Foundation

Sample 2: Adolescents with depression for CBT study (completed ERT pre-treatment)

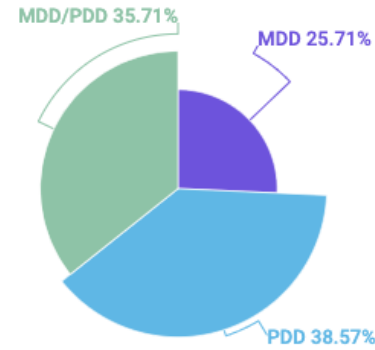
70
Enrolled

14-18 years
Age range

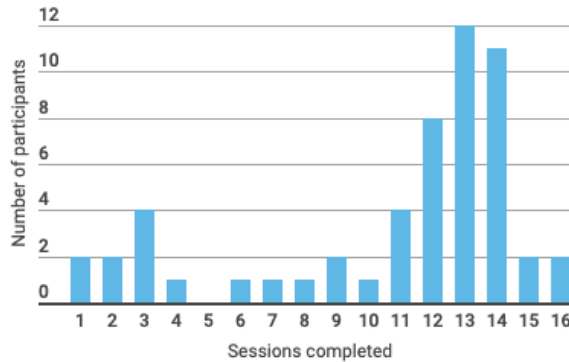
34.3% Male
65.7% Female



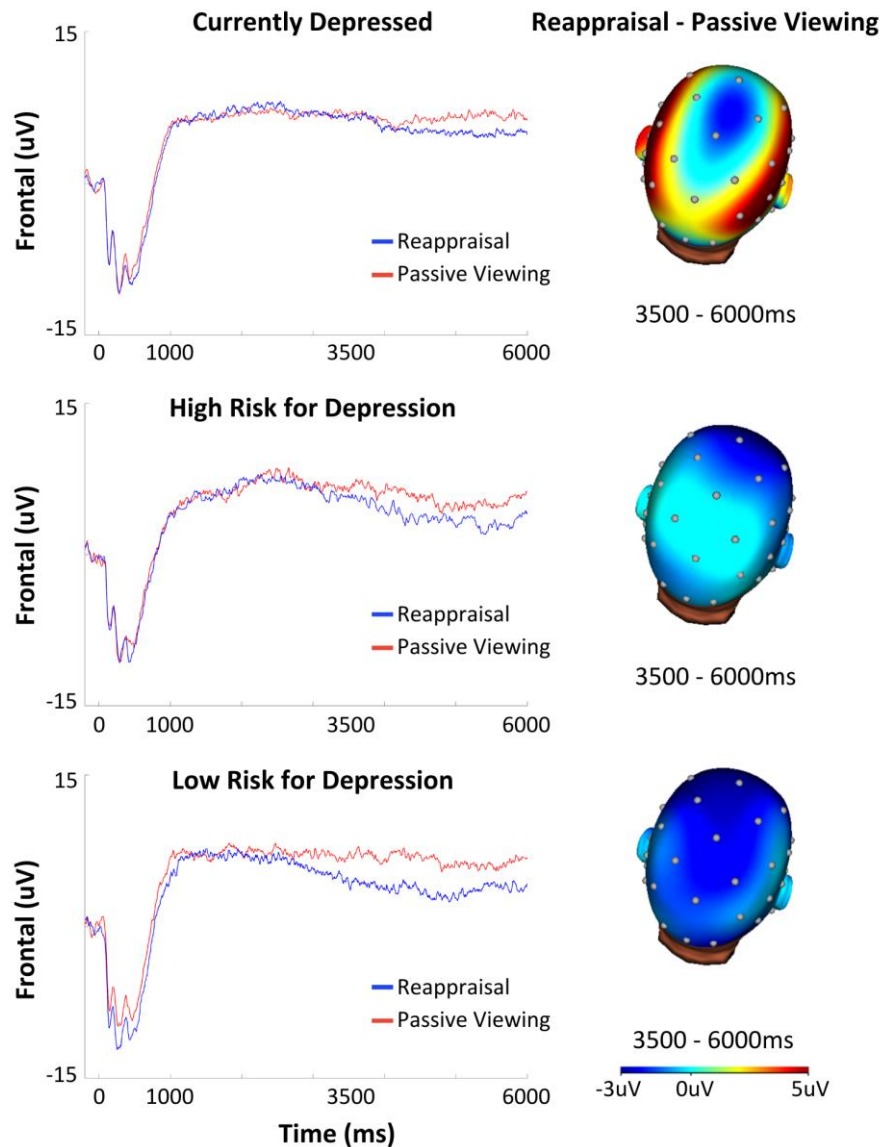
● Asian ● Black/African American
● Hispanic/Latinx ● Mixed race
● White/Caucasian



● Eligible ● EEG 1 ● CBT ● Completed CBT ● EEG 2

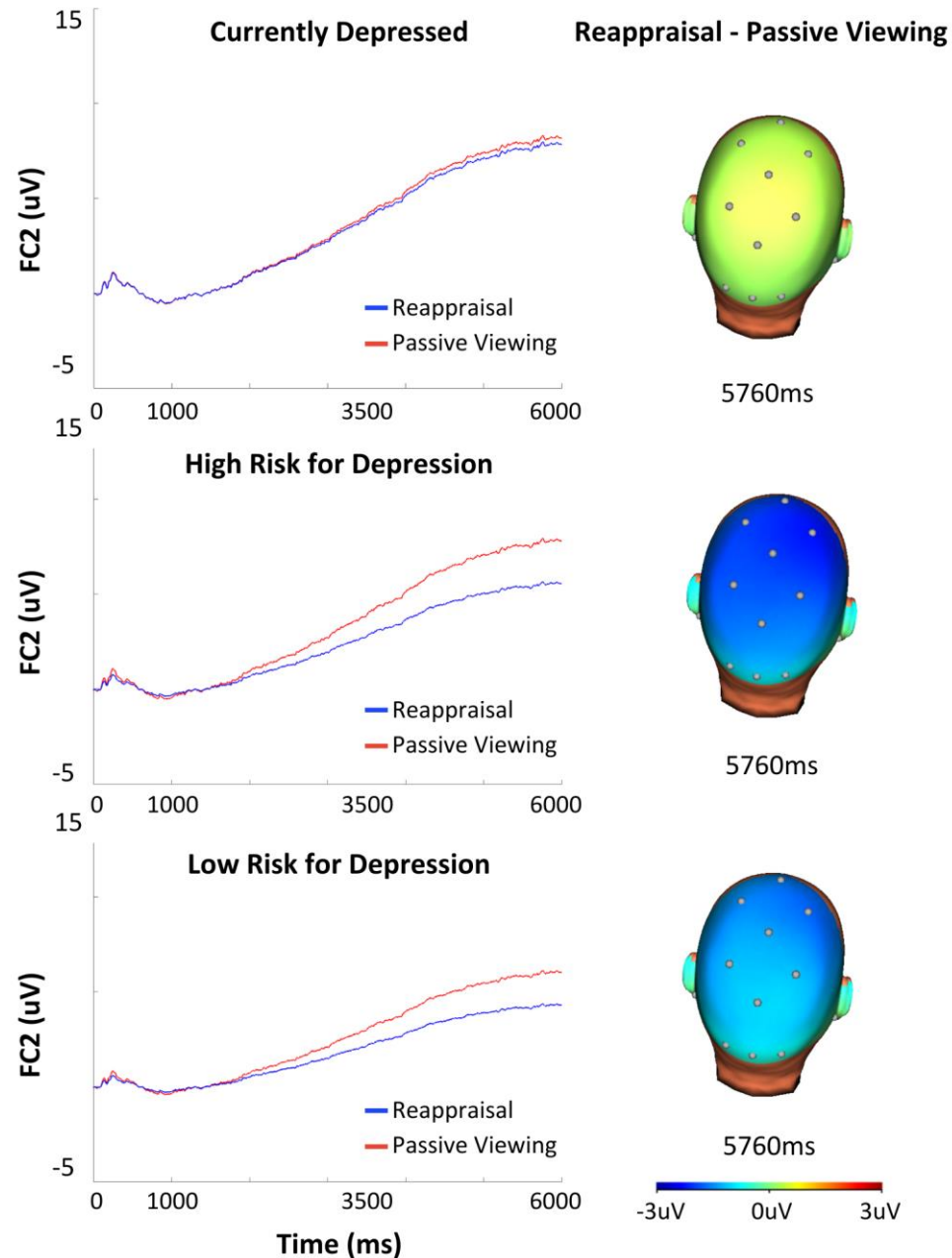


Supported by a Klingenstein
Third Generation Foundation
Fellowship



Do neural markers of ER abilities differentiate clinically depressed vs. non-depressed adolescents and high vs. low risk?

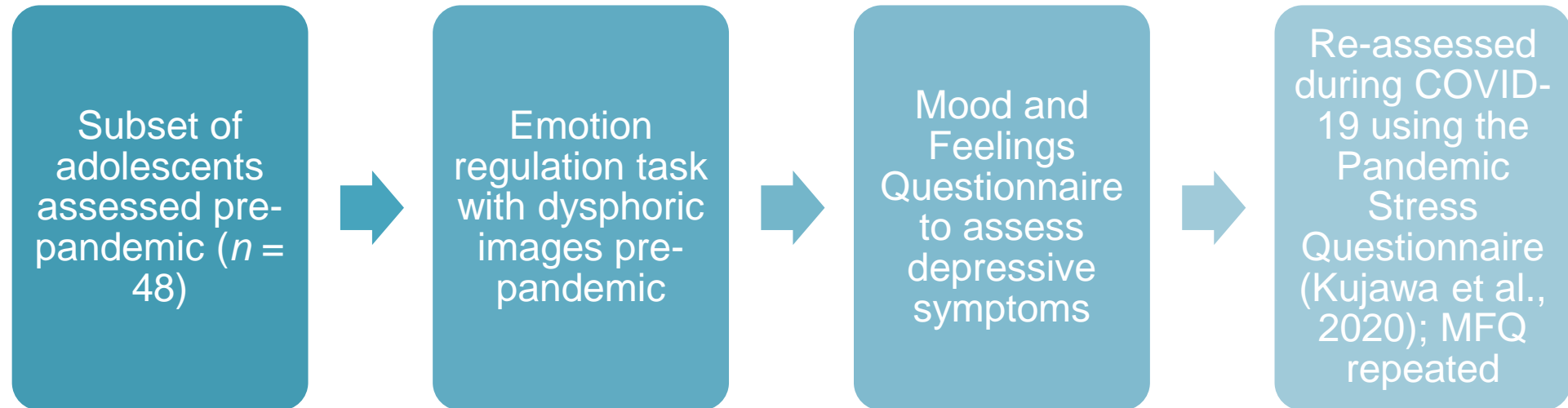
- At later stages of processing, LPP amplitudes were significantly reduced for the reappraisal condition relative to the passive viewing condition for never-depressed adolescents, $F(1, 84) = 11.43, p < .001, \eta_p^2 = .12$, but not currently depressed adolescents, $F(1, 70) = 1.83, p = .181, \eta_p^2 = .03$
- Effect of reappraisal on the late LPP was relatively stronger among the low-risk adolescents, $F(1, 44) = 6.60, p = .014, \eta_p^2 = .13$, compared to the high-risk adolescents, $F(1, 39) = 4.72, p = .036, \eta_p^2 = .11$



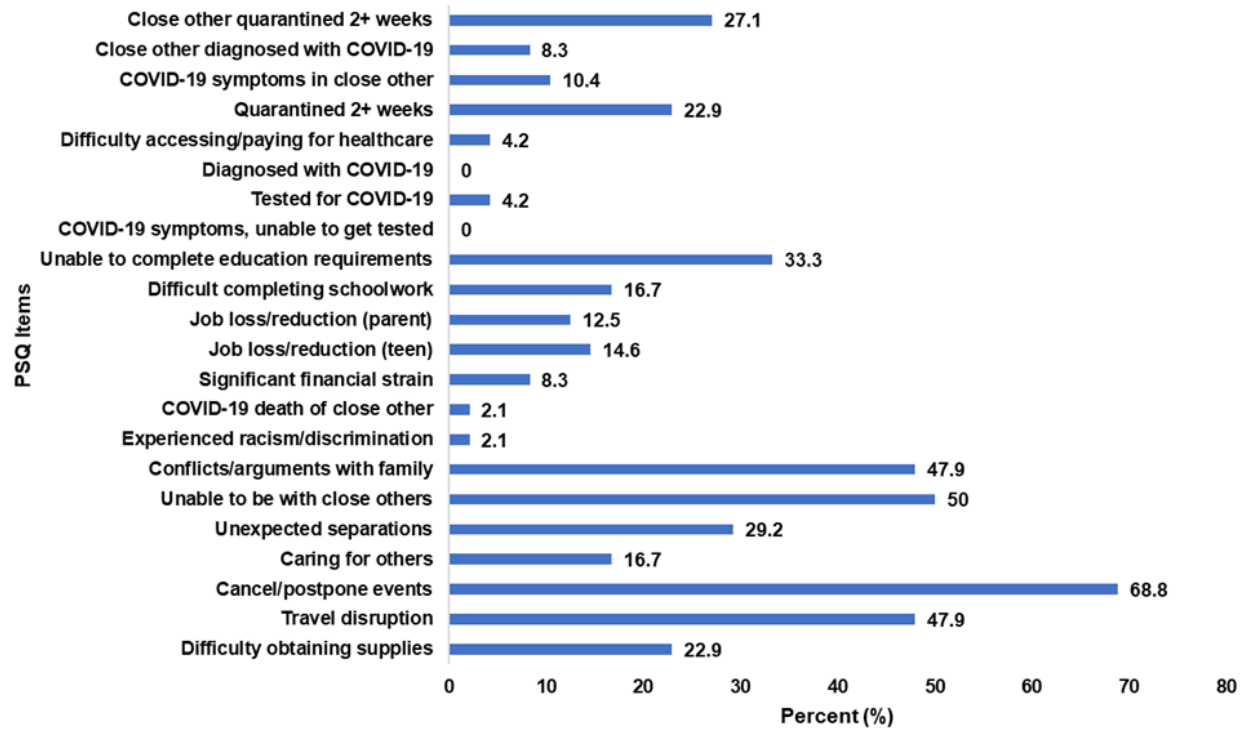
Do neural markers of ER abilities differentiate clinically depressed vs. non-depressed adolescents and high vs. low risk?

- Reduced during reappraisal relative to passive viewing among never-depressed adolescents, $F(1, 75) = 5.47, p = .02, \eta_p^2 = .07$, but not currently depressed adolescents, $F(1, 57) = 0.10, p = .75, \eta_p^2 < .01$
- Comparison between reappraisal and passive viewing did not reach significance for either the high-risk or low-risk groups when examined separately, $ps > .08$

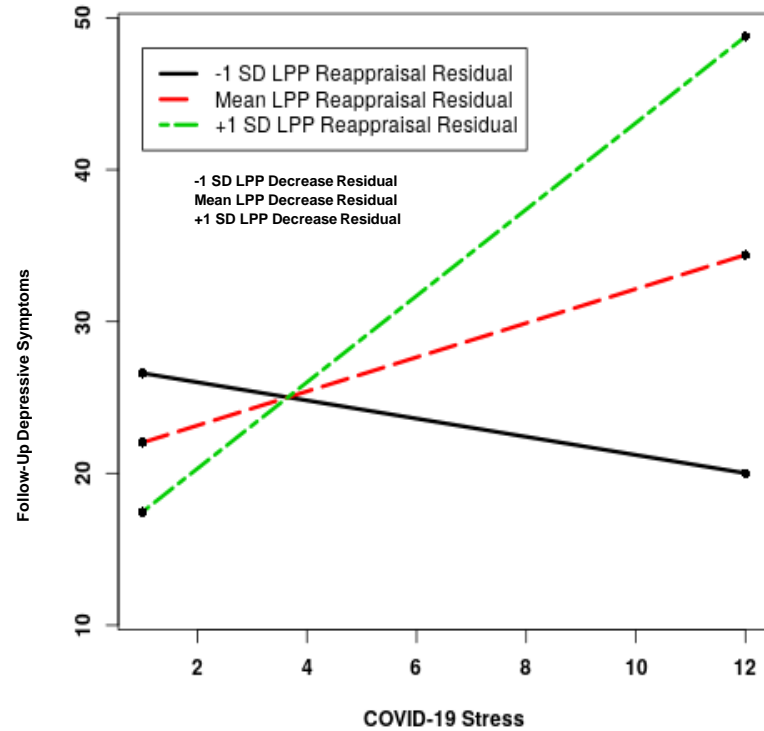
Do neural markers of emotion regulation prospectively predict responses to stress?



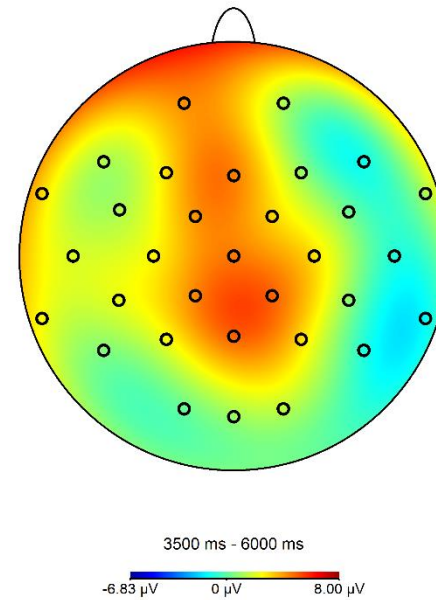
Pandemic-related stressful events endorsed by adolescents in April 2020



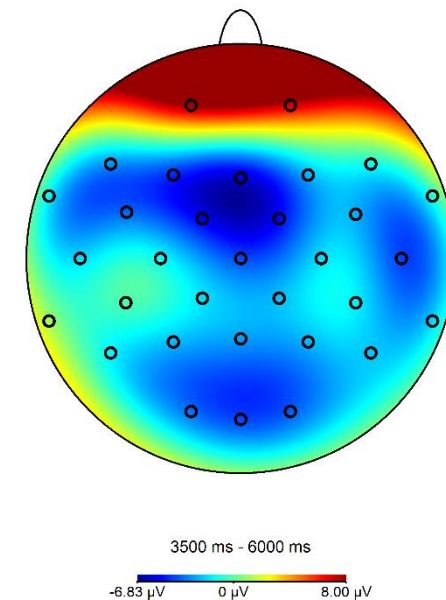
Pre-pandemic neural markers of emotion regulation moderated effects of COVID-19-related stress on depressive symptom change



Interaction $b = .28$, $SE = .11$, $p < .05$

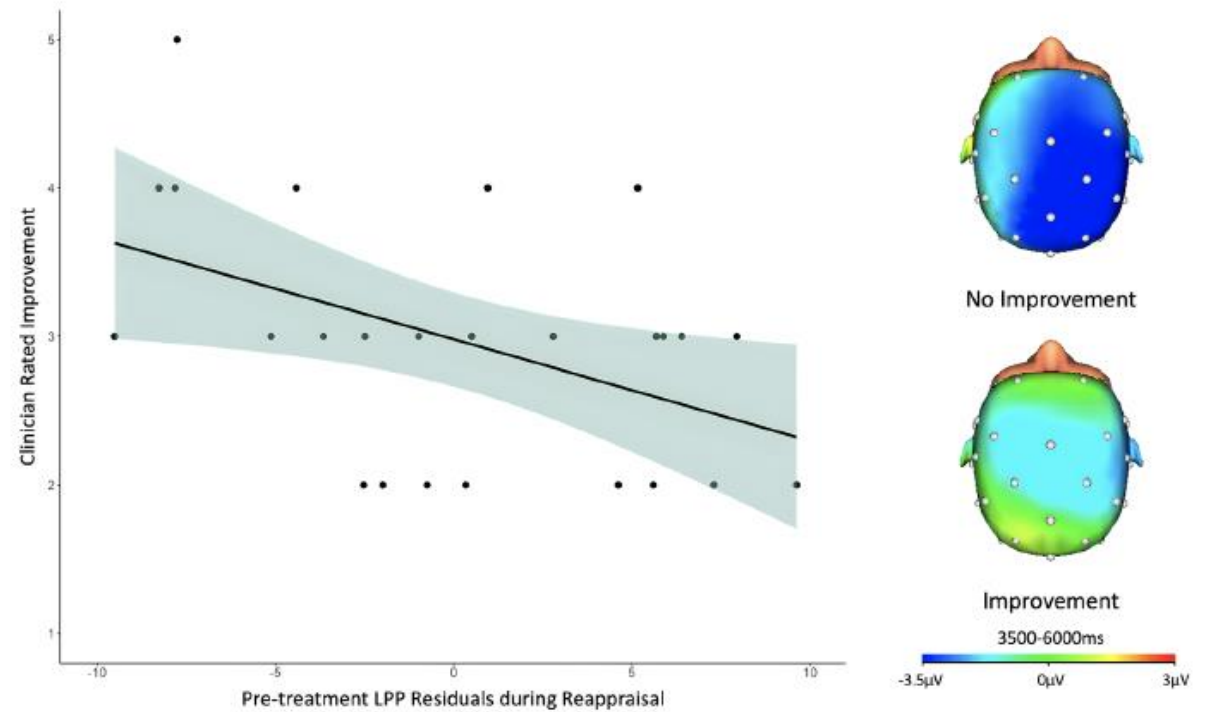


High depressive symptoms



Low depressive symptoms

Difficulties with ER (assessed by ERPs) predict greater improvement with CBT for depression (focused on cognitive restructuring skills)



Dickey et al, 2023 *Research in Child and Adolescent Psychopathology*

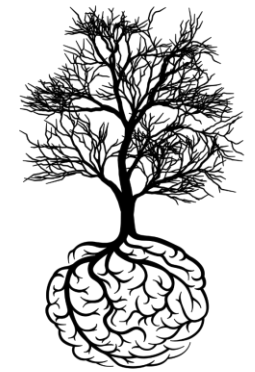
Beta = -0.32, $p = 0.03$ (among treatment completers)

Conclusions





Acknowledgements



mood, emotion, &
development
laboratory

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Collaborators

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