A proposed relationship between racial microaggressions, stress susceptibility, and mental health disparities

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Introduction

- Race-based stress and racial microaggression relate to specific mental health disparities like anxiety and social exclusion[1,2]
- Oxytocin is a hormone implicated in social behavior, belonging, and attachment style[3].
- A series of tasks will be given to participants to experimentally manipulate social settings and to measure emotional reactivity.
- I hypothesize that individuals that experience race-based stress will have higher anxiety & slower emotional reactivity. Additionally, they will have lower belonging
- Furthermore, we will explore the relationship between various aspects of negative empathy and race-based stress.

Methodology

Participants:
- Eligible college-aged men and women will be recruited from Psychology Department's SONA mass screening survey
- Subgroup of racial and ethnic minorities pulled from larger study sample.
- Participants fill out a questionnaire at the beginning of the study containing questions about personality traits, life experiences, and mental health.

Measures:
Cognitive, Affective, and Somatic, Empathy Scales (CASES):
- Measures three sub-factors of empathy: cognitive, affective, and somatic

Interpersonal Support Evaluation List (ISEL):
- Measures three sub-factors of interpersonal support: appraisal, self-esteem, and belonging

Triarchic-Psychopathy Measure (Tri-PM):
- Measures aspects of antisocial behavior (i.e. boldness, meanness, and disinhibition)[4].

Inventory of Microaggressions Against Black Individuals (IMABI):
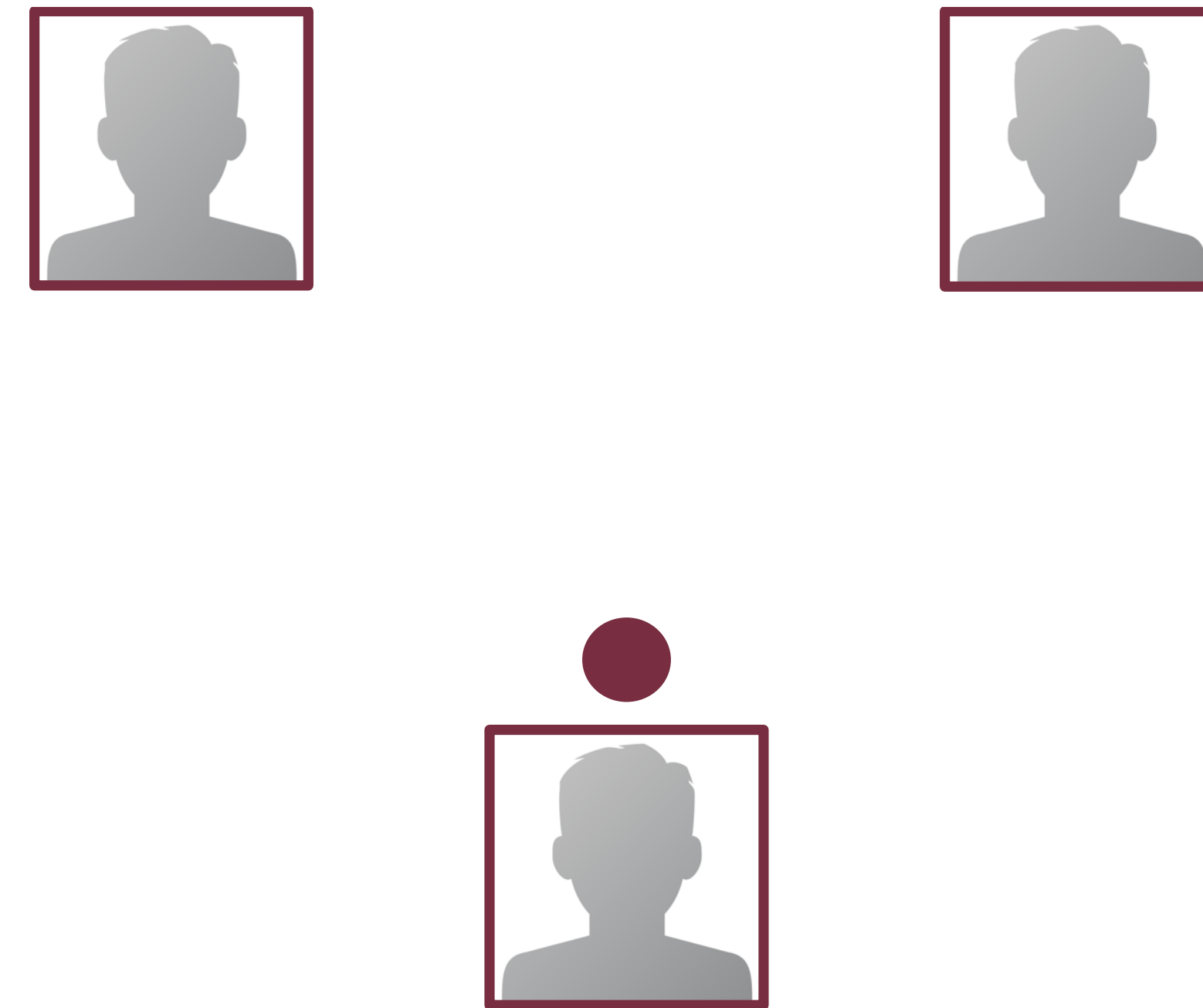- Measures perceived microaggressions against racial and ethnic minorities[5].

Tasks:
Cyberball: Experimentally creates a feeling of social exclusion.
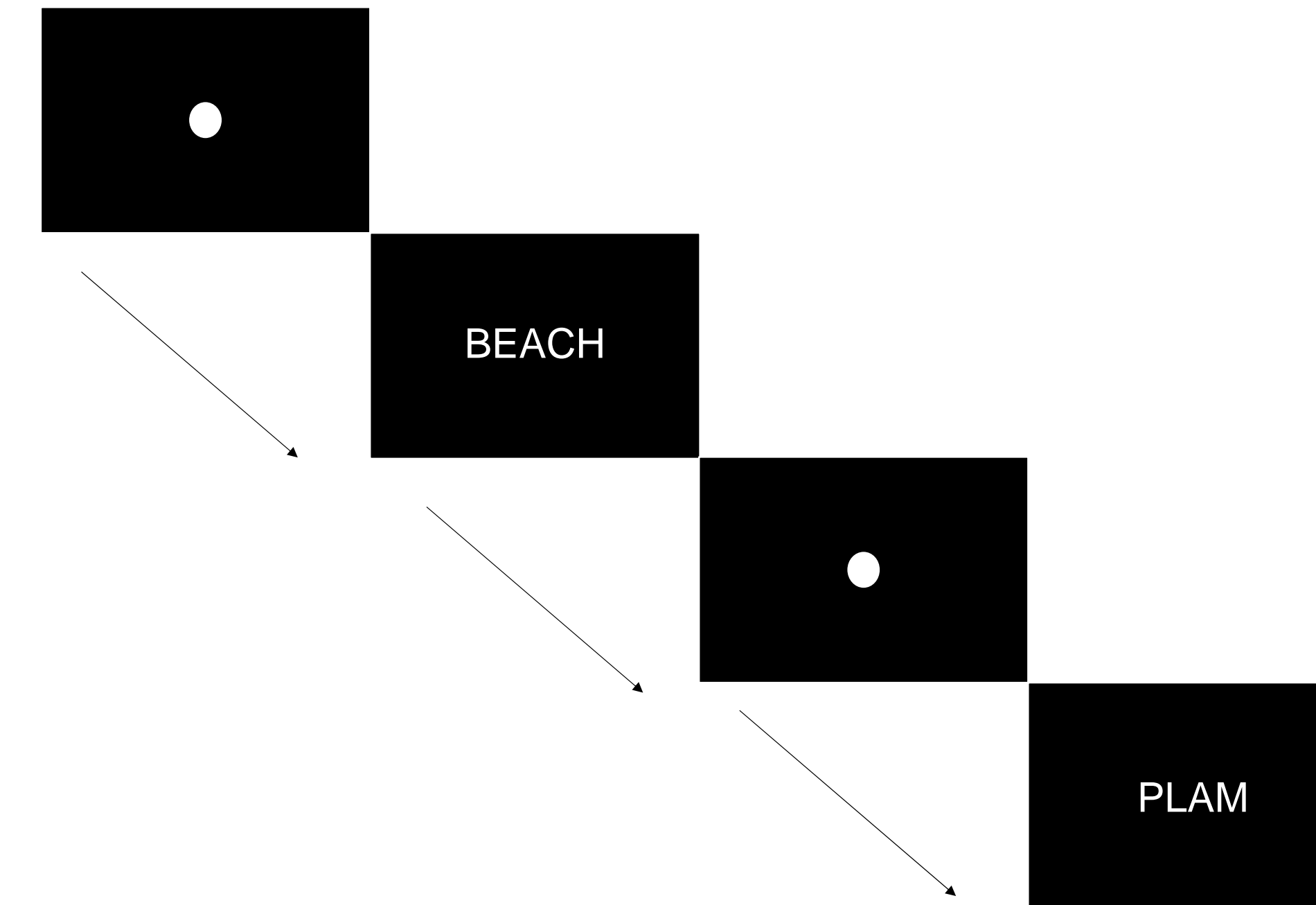- Oxytocin measure: plasma oxytocin levels before and after Cyberball

Lexical Decision Making: measures response to emotional stimuli (positive, negative, & neutral words)

Methodology

Cyberball Task

Lexical Decision-Making Task
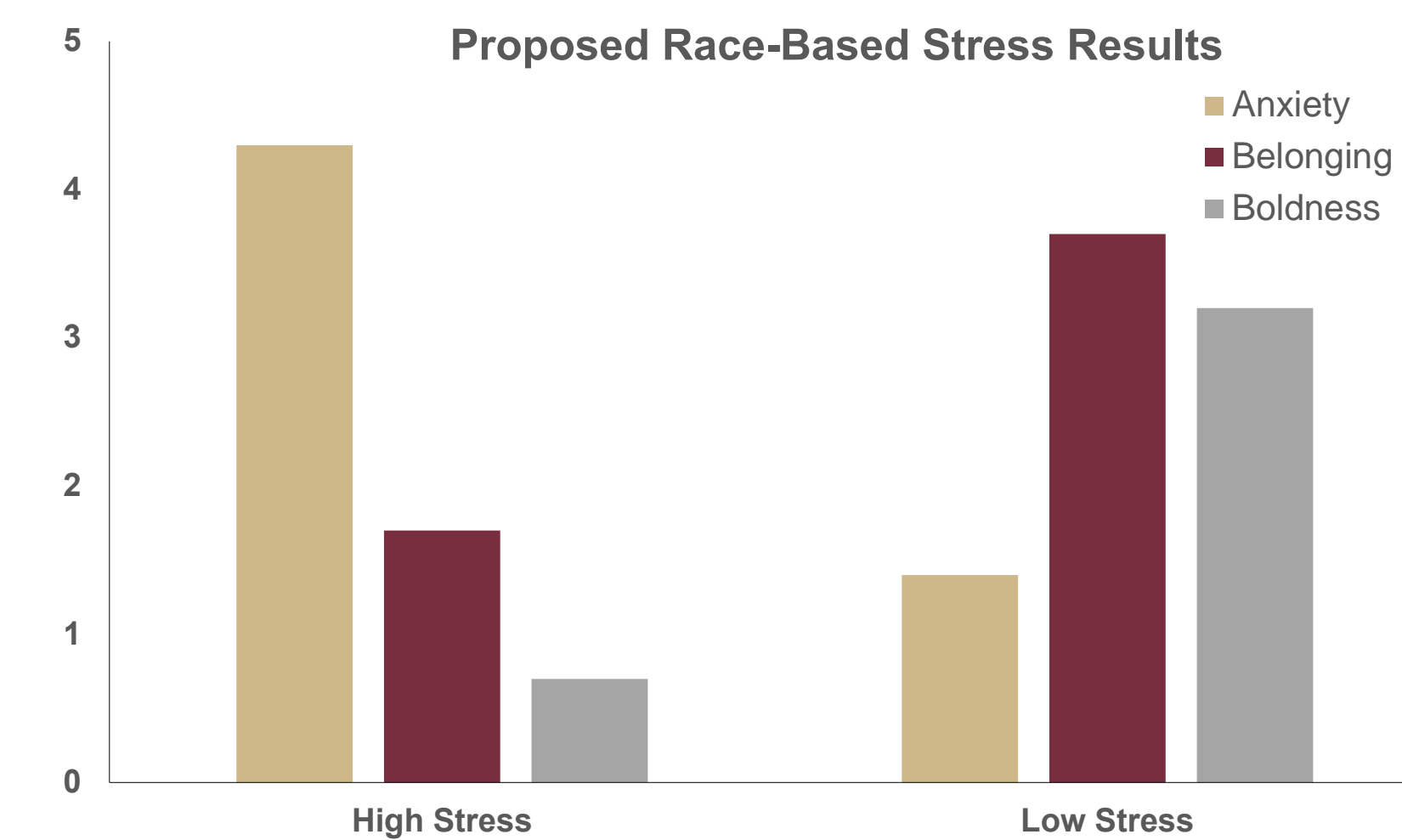

Anticipated Results

Figure 1: This figure represents the proposed results for the self-report measure on racial microaggressions (race-based stress proxy). We anticipate that the participants would score higher on anxiety when their race-based stress is high and lower when the stress is low. We also anticipate that participants score lower on (sense of) belonging when their stress is high and higher when their stress is low. Lastly, we anticipate that racial and ethnic minority participants would score lower on boldness (stress susceptibility) when they are under higher stress and higher when they are under low stress.
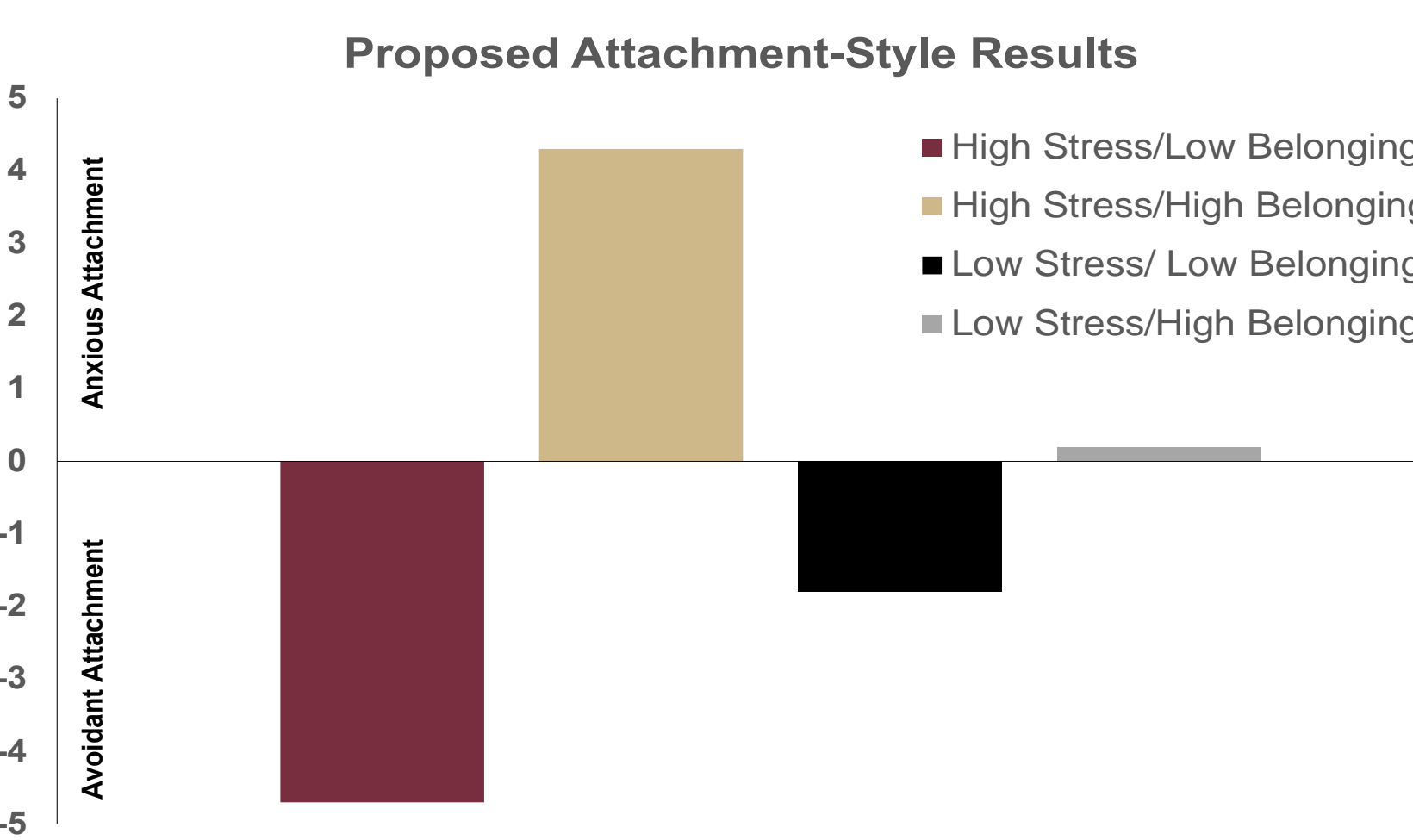
Figure 2: This figure represents the proposed results for the self-report measure on attachment style. We anticipated that those with high stress and low belonging would have a more avoidant attachment style. Those with low stress and low belonging would have an a slightly avoidant attachment style, but one that is closer to being secure. Lastly, it is anticipated that those with low stress and high belonging would have a secure attachment style.
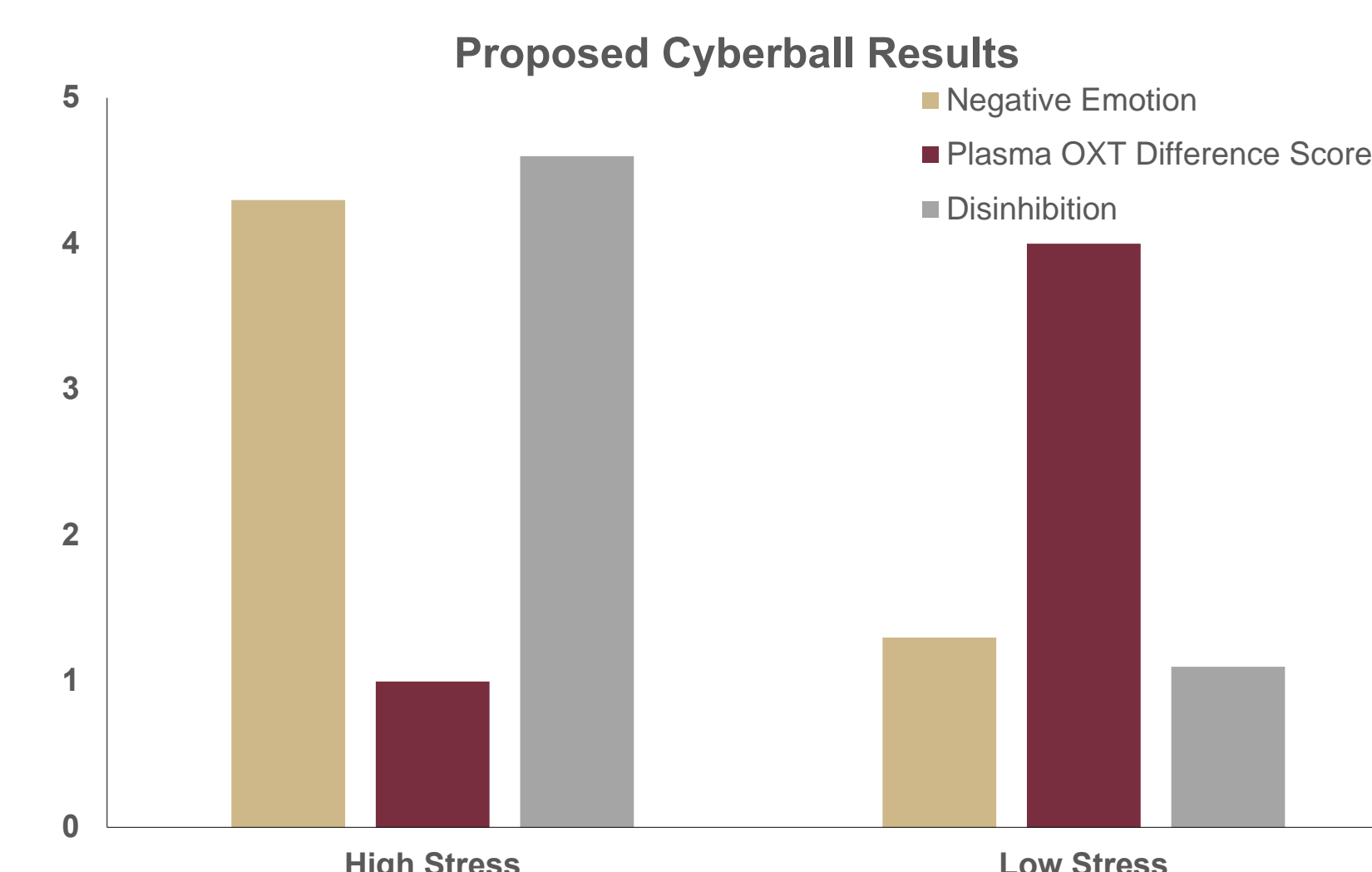
Figure 3: This figure represents the proposed results for the Cyberball task. We anticipate that participants would score higher on negative emotion when their race-based stress is higher and lower when their stress is lower. It is also anticipated that they would score lower on their plasma oxytocin difference score when their stress is high and higher when their stress is low. Lastly, we anticipate high disinhibition when their stress is higher and lower when their stress is lower.
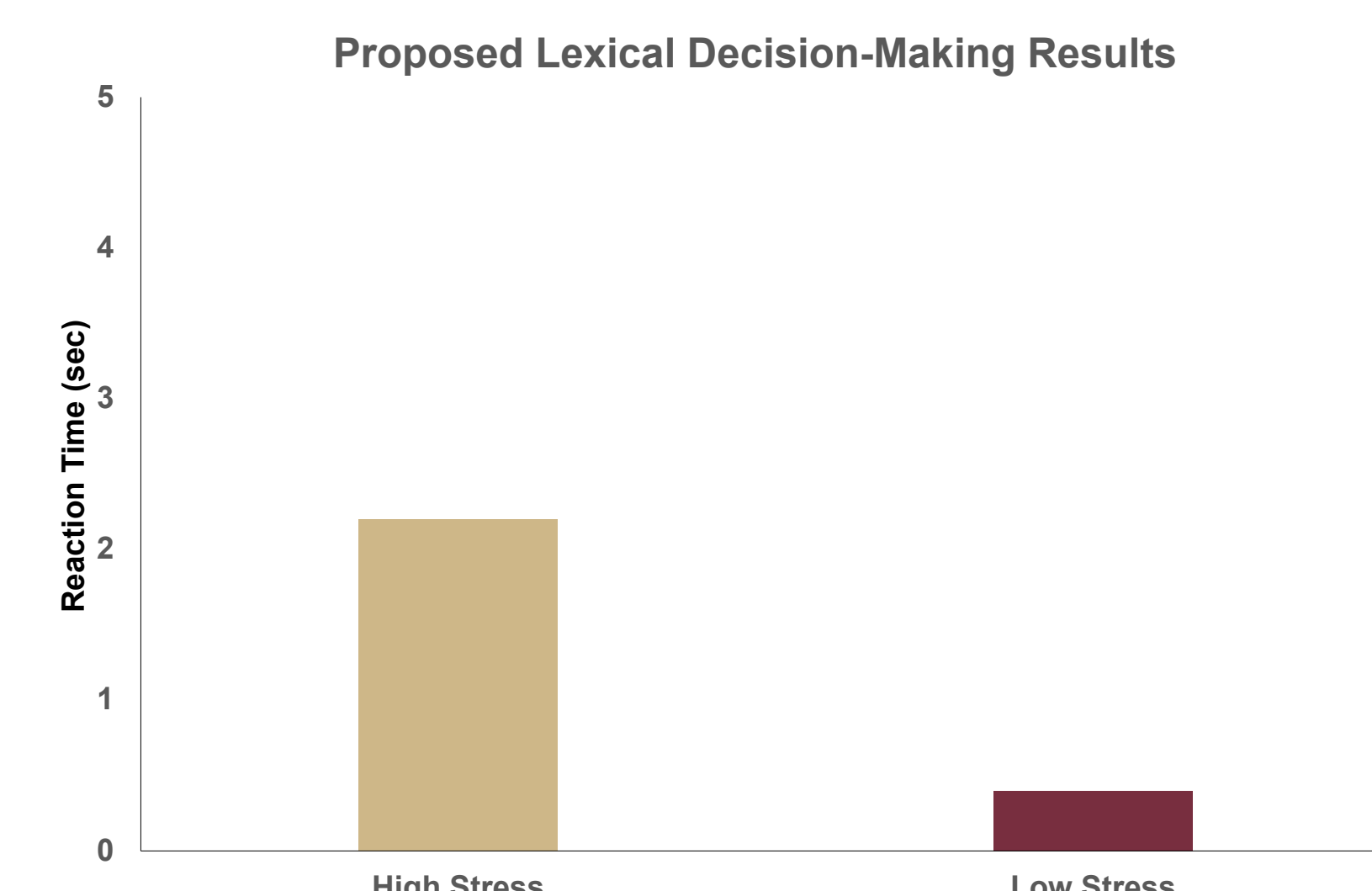
Figure 4: This figure represents the proposed results for the Lexical Decision-Making task. We anticipate that participants' reaction time will be faster when they are under higher stress. It also anticipated that their reaction time would be slower when they are under low stress.

Discussion

Race-based stress will be related to several factors:

- **IMABI**: This measure will be used as a proxy for race-based stress. We expect that high stress levels will be related to higher anxiety, a lower sense of belonging and lower boldness (proxy for stress susceptibility).

- **Cyberball task:** This task will be used to induce social exclusion. We expect that high stress levels will be positively correlated to self-report negative emotions (low empathy scores), disinhibition (high impulsivity) and low plasma OXT difference score (oxytocin levels are similar before and after task).

- **Lexical Decision-Making task:** High levels of race-based stress related to a faster reaction time to emotional words.

Limitations and Future Directions:

Moving forward this study aims to have a larger sample size of participants as well as to increase the racial minorities within the sample. A solution to this could be implementing equipment that is more inclusive of curly and kinky hair types.

Acknowledgements

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