



Replication of Troy et al. (2017), Study 1 at the University of Minnesota Spring 2024

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Introduction

- Troy et al. (2010), described how cognitive reappraisal (CRA) may be a protective factor against certain psychological factors such as stress and depression.
- Troy et al. (2017) study explores the association of CRA and psychological health with SES (Socioeconomic Status). It found that high CRA can serve as a protective factor against depression for those with lower SES.
- Through project CREP we are replicating Troy et al. (2017) study 1. We aim to expand upon the original SES measures used for family income, social status and other aspects of SES.

Research Questions

- How does cognitive reappraisal interact with SES in terms of depressive symptoms?
- Does having a more comprehensive inventory for SES measures differ from previous results of the study by increasing generalizability?
- Does the subjective view of SES differ from reported income and therefore influence the ability for emotional regulation?

Hypotheses

- Perceived SES and reported income will be a predictor of emotional regulation, which aligns with the original findings of Troy et al. (2017).

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METHODS AND MATERIALS

- Participants consisted of undergraduate students from the University of Minnesota and were recruited through social media posts and by emailing professors to forward the survey link to their classes.
- Our final sample included 56 participants with ages ranging from 18 to 24 ($M = 19.82$, $SD = 1.716$). Of that, 30 identified as female, 22 identified as male, and 4 identified as other. The racial demographics of the sample were 82% White or European American, 10% Black or African American, and 8% other.
- The survey was taken online through Qualtrics and included 65 questions made available after consenting to participate.
- Questions were asked in the same order and consisted of demographics, the original Troy et al. (2017) measures, and our extension measures. It ended with a debriefing statement, which thanked participants for their time and included mental health resources.
- Original measures from Troy et al. (2017):
 - Demographics included age, gender, race, and family income level (i.e., How high is your current family income?)
 - Cognitive reappraisal ability (CRA) adapted from the Emotional Regulation Questionnaire (ERQ).
 - Habitual cognitive reappraisal use (ERQ subscale).
 - Center of Epidemiological Studies Depression Scale (CES-D).
 - 4-item version of the Perceived Stress Scale (PSS-4).
- For our extension, we added two subjective social status measures obtained from the SPARQtools Measuring Mobility Toolkit (Stanford University, n.d.), and additional questions on parental education level, employment status, student enrollment status, and childhood social class.
 - MacArthur Scale of Subjective Social Status- Youth Version.
 - Sense of Social Fit Scale (SSF).

RESULTS

- The interaction between reported family income level and CRA was not statistically significant [$\beta = -0.07$, $t(51) = -0.92$, $p = 0.364$]. Family income level and CRA were not significant predictors of depressive symptoms (Figure 2).
- The interaction between perceived SES (Family income level + MacArthur Scale of Subjective Social Status + Sense of Social Fit Scale) and CRA was not statistically significant [$\beta = -0.26$, $t(48) = -1.45$, $p = 0.152$]. A more comprehensive measure of SES was not a significant predictor of depressive symptoms (Figure 3).

Figure 1 Family Income Distribution

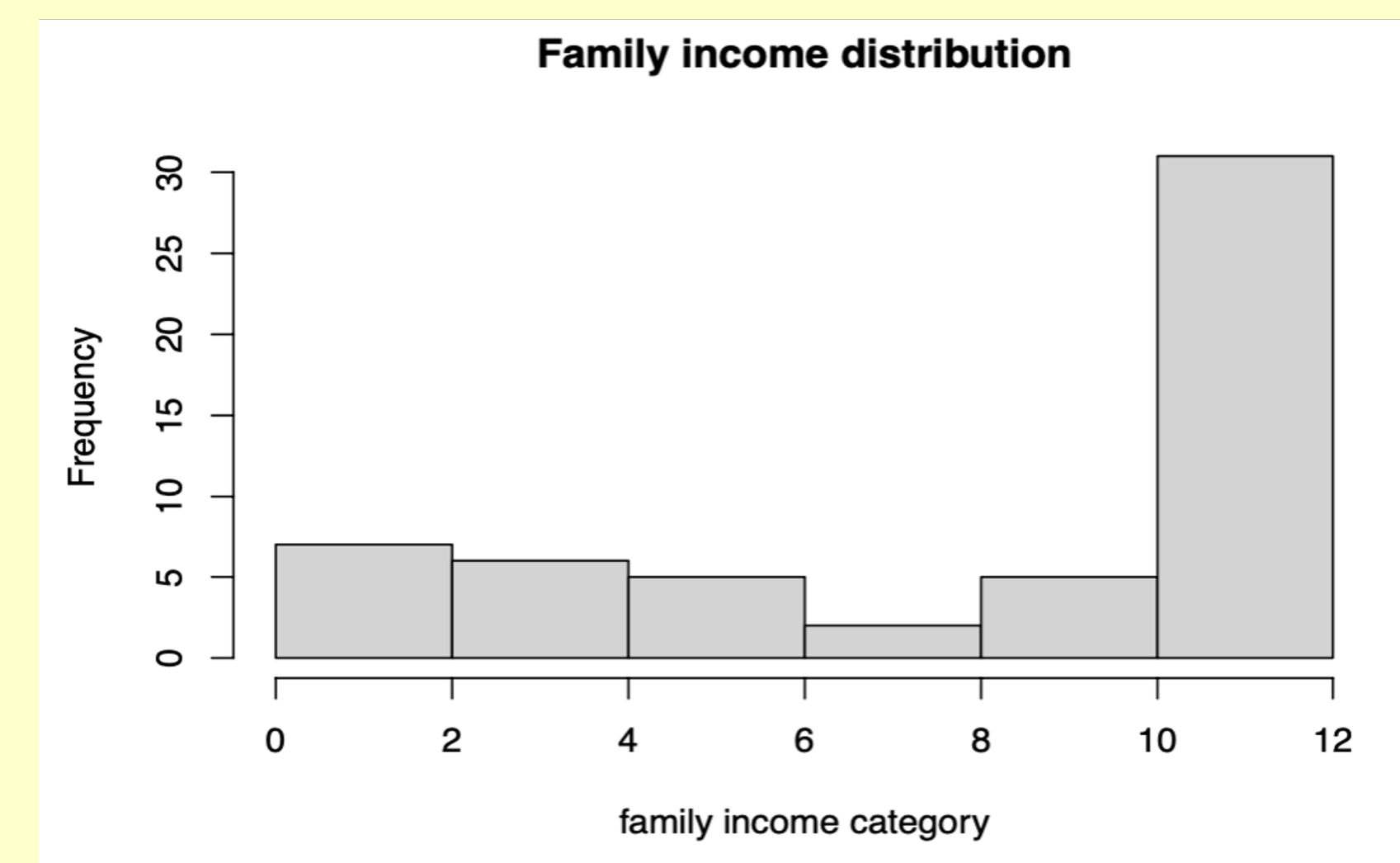


Figure 2 CES-D and CRA in Original Hypothesis

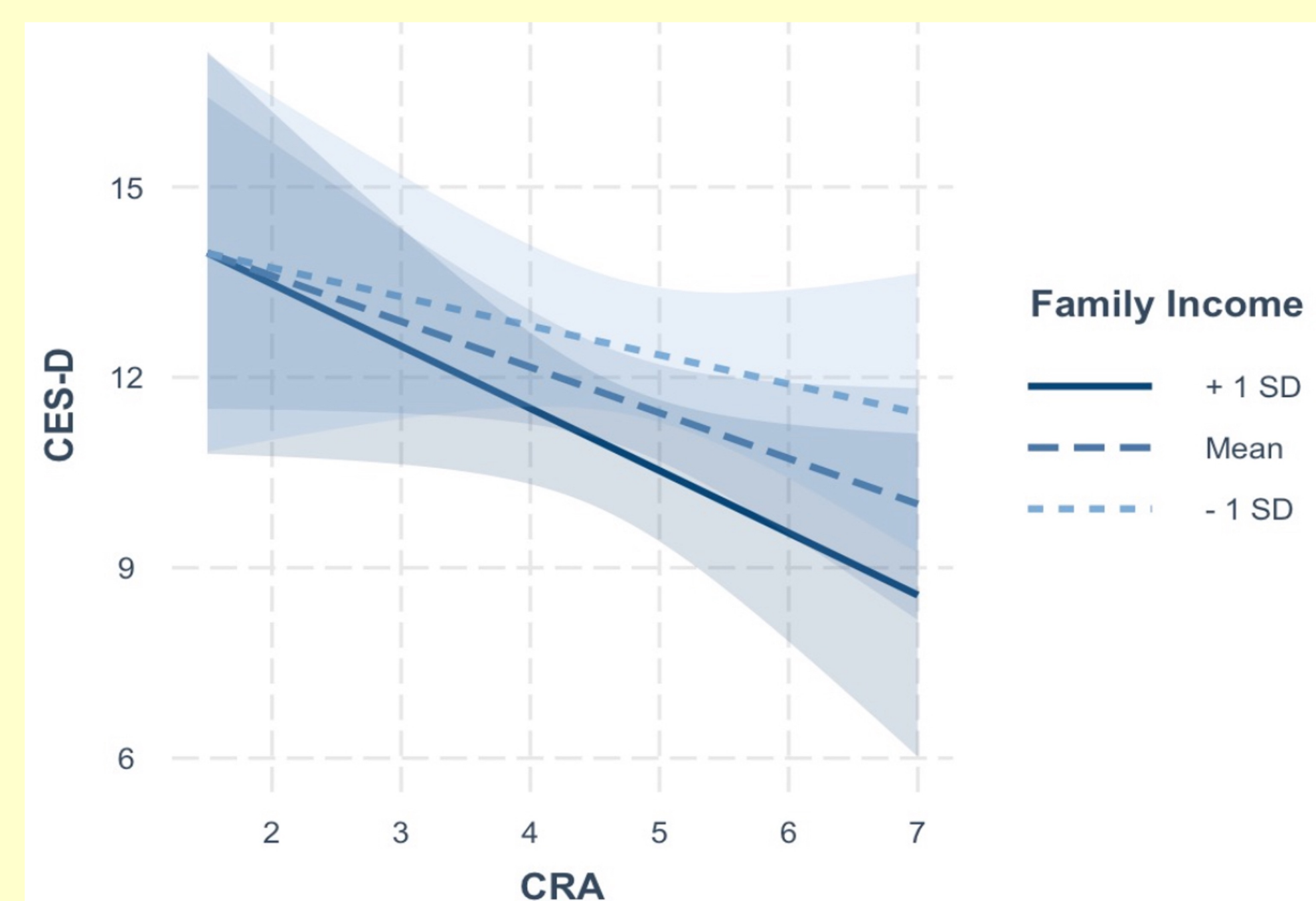
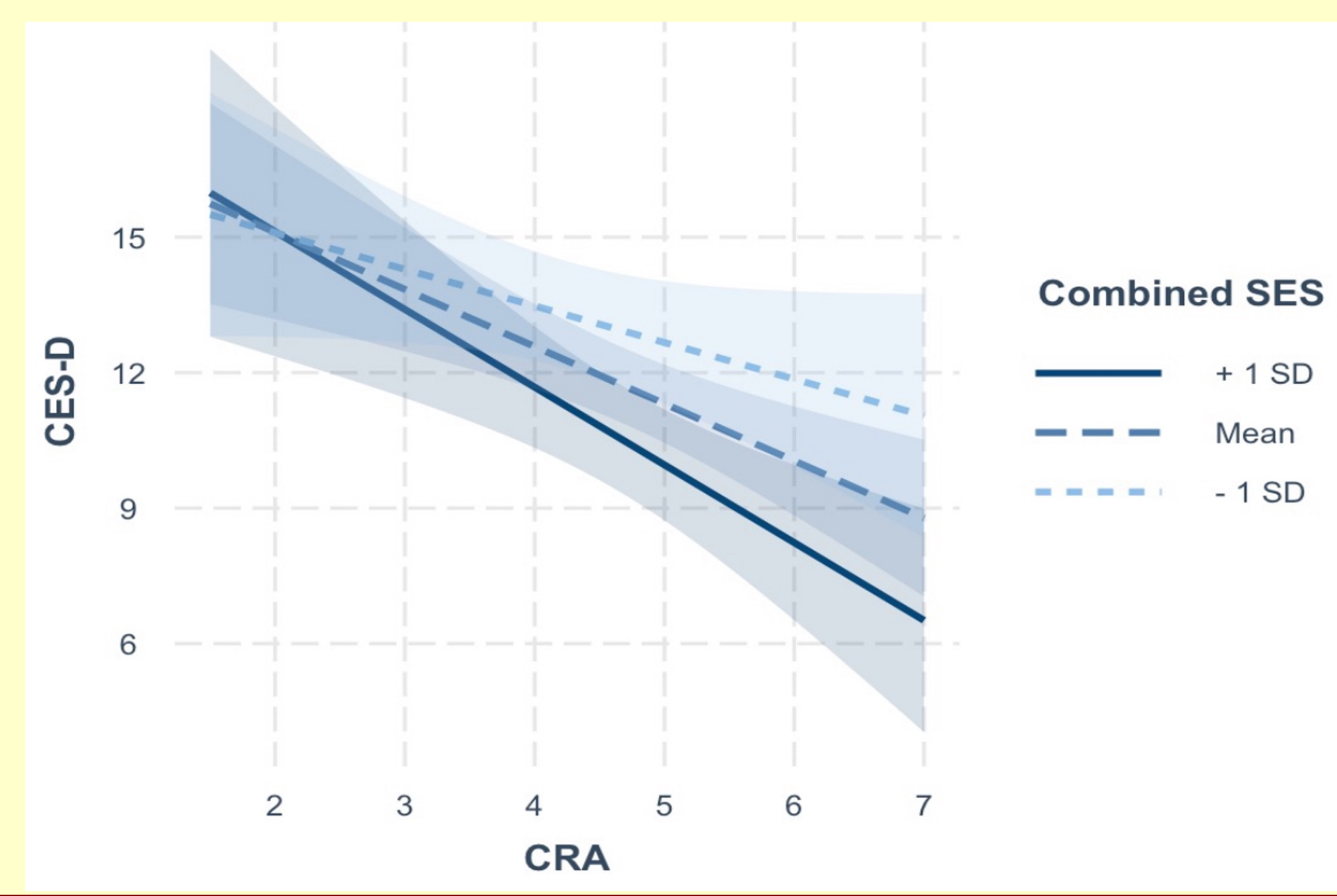


Figure 3 CES-D and CRA in Extension Hypothesis



DISCUSSION

Comparison to Troy et al. (2017)

- In comparison with the original Troy study from 2017, our results aligned with the non-significant findings of the interaction between higher SES and high CRA individuals in predicting depressive symptoms. However, our results did not align with the significant findings of the interaction between lower SES and high CRA individuals in predicting depressive symptoms.
- Our hypothesis was not supported, as the interaction between SES and CRA was not a significant predictor of depressive symptoms for those with lower or higher SES, despite the additional SES measures in our extension.

Limitations

- The majority of our sample consisted of high SES individuals (Figure 1), which may have contributed to the non-significant interaction. Generalizability of findings may not extend to lower SES populations and different cultural backgrounds, as 82% of participants identified as White.
- From the 120 responses, only 56 were valid to complete an analysis on from the original study, and 52 for the extension hypotheses. Many of the invalid responses were due to students completing less than 1/3 of the survey.
- The timing of the survey was sent during the end of the semester for undergraduate students, which may have resulted in higher than normal reported depressive symptoms and stress levels.

Future research directions

- Extend to both high and low SES populations of undergraduates- possibly sample multiple universities in different settings (urban vs. rural).
- Examine the influence of environmental factors due to SES that may contribute to psychological well-being that may be mitigated by CRA (e.g. proximity to healthy food options).

REFERENCES

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