

Examination of the Relationships Between Prenatal Testosterone, Binge Eating and Emotional Regulation: A Pilot Study

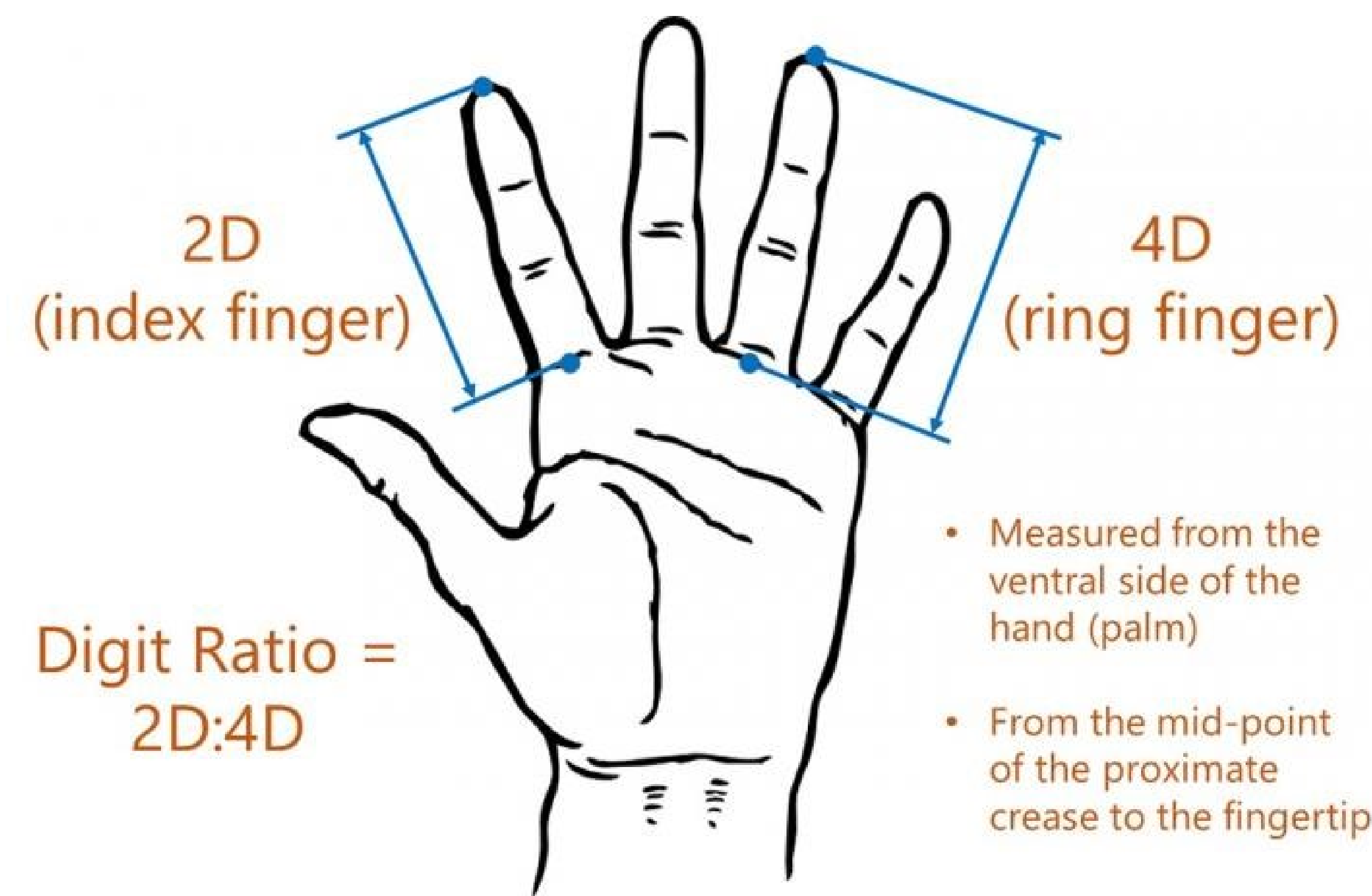
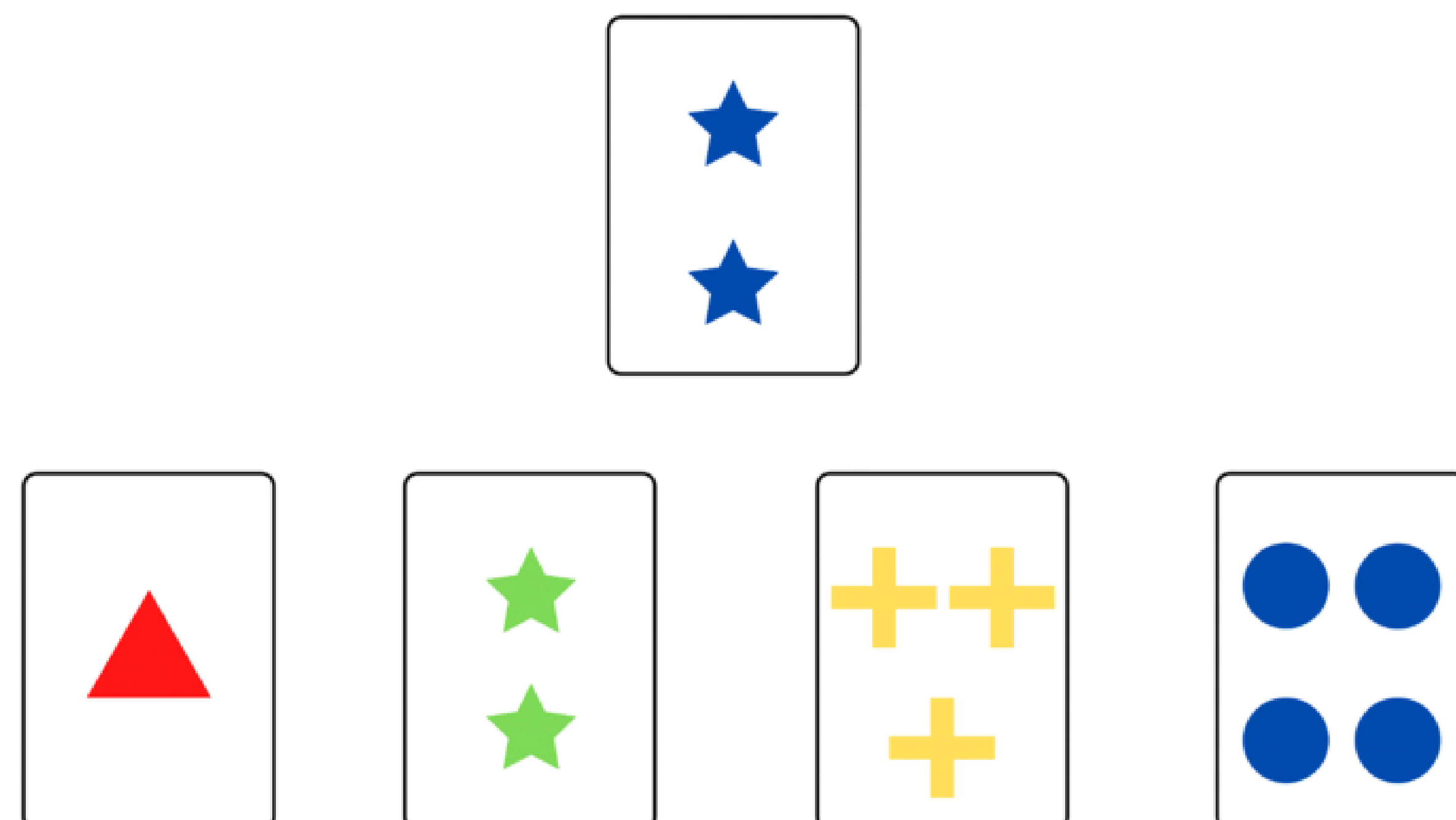
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Introduction

- Emotion regulation (ER) difficulties is a transdiagnostic risk factor for various mental and physical health problems (Barnhart et al., 2021, Crockett et al., 2015, Gianini et al., 2013, Braden et al., 2018)
- Previous research has found a positive correlation between emotion regulation (ER) difficulties and health behaviors, such as binge eating (Leehr et al., 2015)
- Additionally, ER difficulties have been associated with sex hormones, such as testosterone and estrogen (Graham et al., 2018)
- Specifically, higher prenatal testosterone exposure have been associated with higher emotional reactivity (Auyeung et al., 2013, Hu et al., 2015)

Methods

- Participants were asked to complete a survey assessing their binge eating (Binge Eating Scale, Gormally et al.) and emotional regulation (Difficulties in Emotion Regulation Scale, Gratz & Roemer)
- After the survey participants were asked to complete the Wisconsin Card Sorting Task to evaluate cognitive flexibility linked to emotional stability.
- After completing the WCST participants were asked to scan one hand at a time with an Epson scanning device.
- GNU Image Manipulation Program, GIMP, Version 2.217

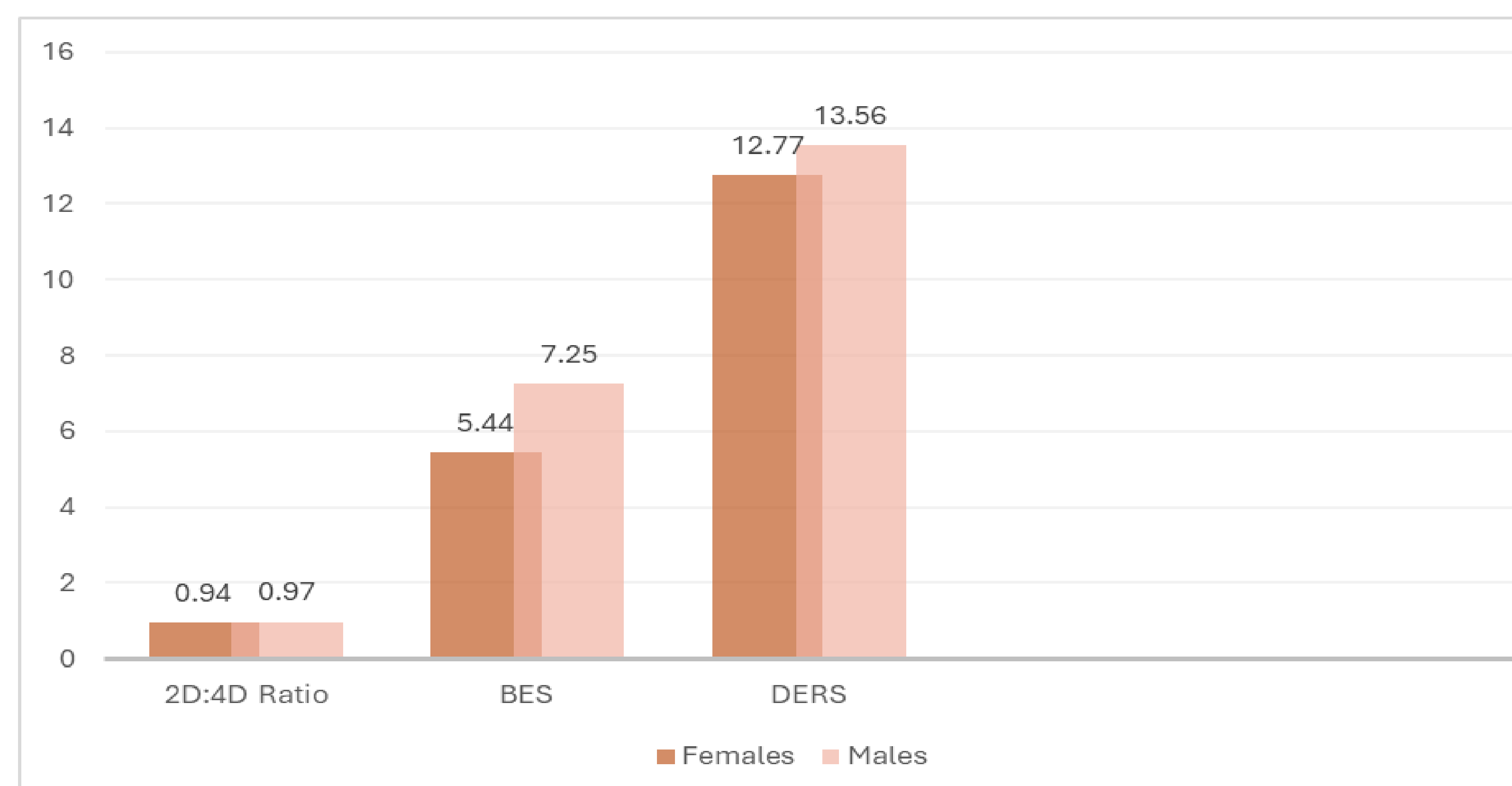


Results

Participant Characteristics (N=22):

- First (91%) and second (9%) year college students
- 21.5 years-old
- 81.8% Female
- 91% heterosexual

Figure 1. Means of constructs of interest across sexes



Bivariate Correlations:

Overall, there is a small and negative correlation between 2D:4D ratio and ER difficulties ($r=.24, p<.05$) but not binge eating ($r=.02, p>.05$)

Discussion

- Preliminary evidence suggests that higher prenatal testosterone exposure is related to greater difficulties in ER (Klump et al., 2006)
- There is greater binge eating and ER difficulties in men than women (Culbert et al., 2021)

Future Directions

1. Substantially increase sample size
2. Independent samples t-test will be conducted to compare the mean 2D:4D ratios between females and males
3. Investigate if 2D:4D ratio moderate the relationship between ER difficulties and binge eating
4. Analyze cognitive flexibility (per the WCST) to examine it's possible interactions with both emotion regulation difficulties and 2D:4D ratio

Funding & Acknowledgements

Department of Psychology Clinical Area Funds

References

