

## Background

- Parental synchronization, or the synchronized interactions between a parent and their child, has been shown to positively impact developmental outcomes for children (Harrist & Waugh, 2002). Prior research suggests that low-levels of parental synchrony in the first few weeks of life is related to emotional, social, and self-regulatory deficits (Feldman, 2007).
- Further, high parenting stress has been shown to have a negative effect on parental synchronization (Bontinck et al., 2018), and has been associated with negative outcomes for children's overall well-being (Canzi et al., 2019).
- Existing research indicates mixed results on whether parenting stress is higher for parents of children with Autism Spectrum Disorder (ASD) versus parents of children with typical development (TD) (Craig et al., 2016, McStay et al., 2014). No prior studies have examined the potential moderating effect or parenting stress on developmental status (ASD vs TD) and parental synchrony.

## Objectives

The current study examines the association between children's developmental status (ASD vs. TD) and parental synchronization, and whether parenting stress moderates this relationship (see *Figure 1*).

- Hypothesis 1: There will be no statistically significant difference in parental synchronization scores for both ASD and TD parent-child dyads.
- Hypothesis 2: Parental stress will moderate the effect of developmental status (ASD vs TD) on parental synchrony.

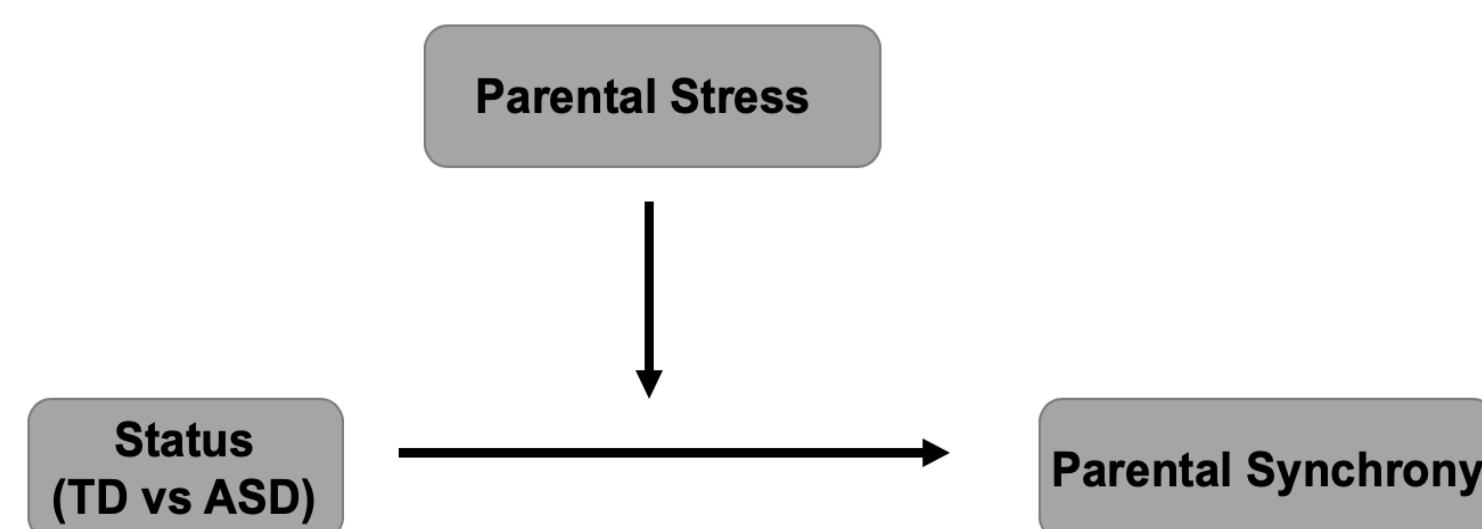


Figure 1. Model evaluating parenting stress moderating the effect of status on parental synchrony

## Participants

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- 43 children (ages 3:0 to 6:11) and their parents
- 30 typically developing with children (44.44% female)
- 13 children with ASD (14.29% female)

## Measures

### Parental Stress

- Total parenting stress scores were determined by the Parenting Stress Index Short-Form (PSI-4-SF; Abidin, 2012)

### Parental Synchronization

- Videotaped recordings of an 8-minute parent-child free-play task were coded using an adapted version of Siller, Hutman, & Sigman coding schema and their precedent of coding 2-minute segments (2013)

## Results

### Primary Analysis

A moderated multiple regression analysis was conducted using the Ordinary Least Squares (OLS) modeling process in R studio, which provided bootstrapped estimates of the indirect effect based on 1000 resamples. OLS was used to examine the additive and interactive effects of developmental status and parenting stress on parental synchrony scores. Gender, age, verbal ability were controlled for in our analysis. We examined the conditional effects of developmental status on parental synchrony scores at different parenting stress levels. No statistically significant main effects of status ( $B = -0.523$ ,  $SE = 0.317$ ,  $p = .107$ ) or parenting stress ( $B = 0.008$ ,  $SE = 0.004$ ,  $p = .105$ ) on parental synchrony were detected. Furthermore, the conditional effects of developmental status on parental synchrony scores at different levels of parental stress was also not statistically significant ( $B = -0.005$ ,  $SE < 0.001$ ,  $p = -.105$ ).

### Post-Hoc Analysis

A post-hoc multiple linear regression analysis was run to predict parental synchrony scores based on developmental status and parenting stress. A significant regression equation was found [ $F(2,40) = 3.454$ ,  $p = 0.041$ ], with an  $R^2$  of 0.147. Parental synchrony scores decreased by -0.002 as parental stress scores increased by 1 ( $p = 0.015$ , see *Figure 3*). Parental synchrony was not statistically influenced by developmental status.

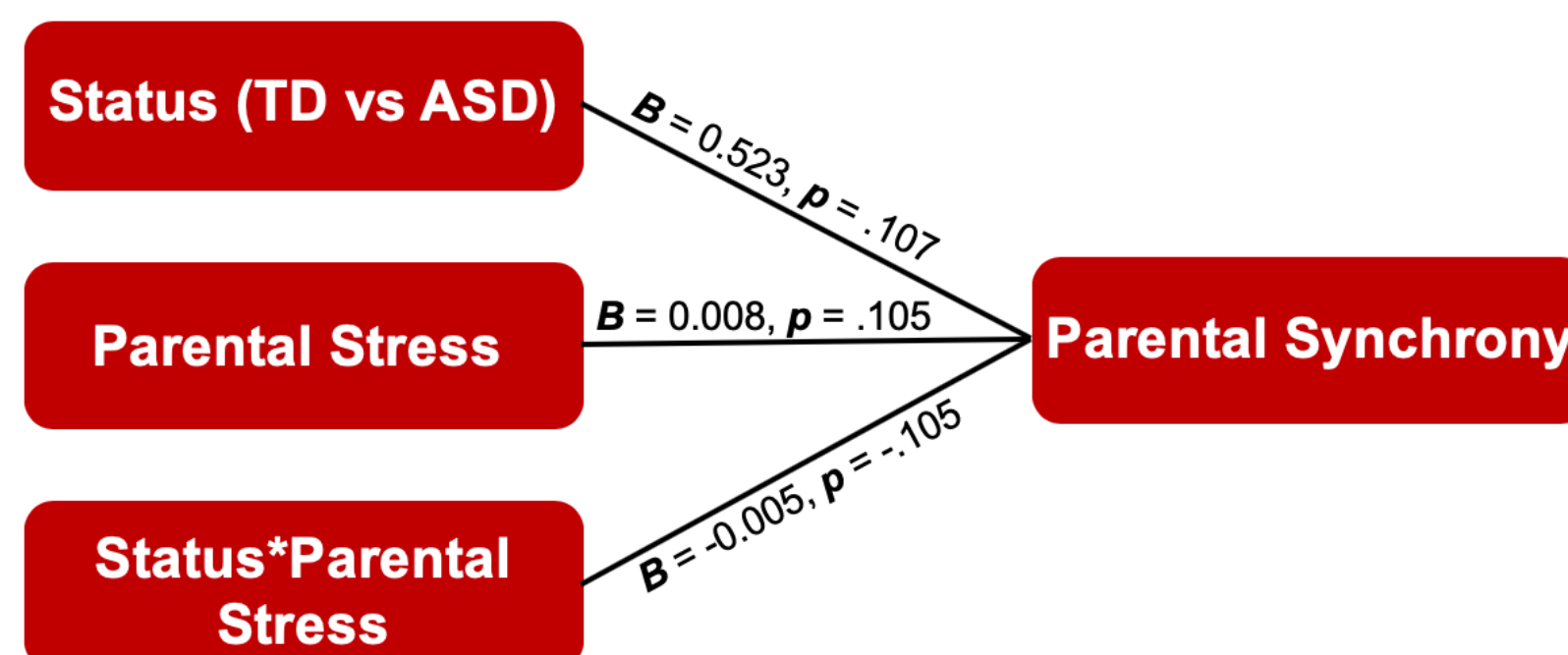


Figure 2. Statistical moderation model

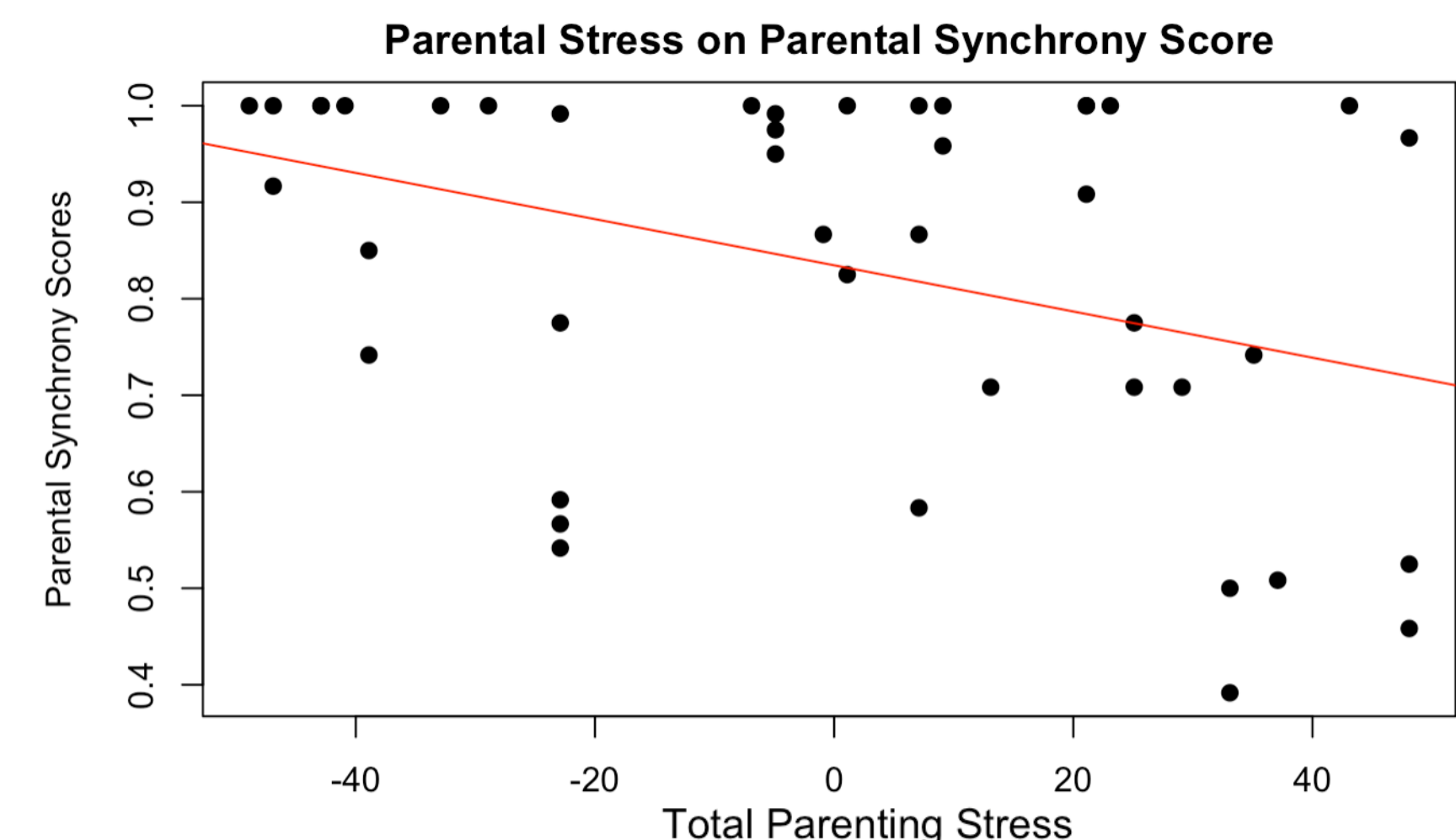


Figure 3. Scatterplot of significant linear regression

## Discussion

### Conclusion

- Consistent with previous research, parenting stress had a negative relation with parental synchrony scores (Bontinck, et al., 2018). Furthermore, parenting stress did not moderate the effects of developmental status on parental synchrony scores. Future research should investigate the function of parenting stress on factors that influence parental synchrony, as previous research has emphasized the adverse outcomes parenting stress has on children's well-being (Canzi et al., 2019).

### Limitations

- This study had a small sample size ( $n = 43$ ) and an unequal distribution of ASD and TD children (30 TD, 13 ASD), which inflated the risk of type two error, therefore limiting the interpretation of our results.

## Citations

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