

# MOTHERS REPORT ELEVATED SEPARATION ANXIETY IN CHILDREN WITH CHROMOSOME 22q11.2 DELETION SYNDROME

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## Chromosome 22q11.2 Deletion Syndrome

- Chromosome 22q11.2 deletion syndrome (22q11.2DS) includes DiGeorge and Velocardiofacial (VCFS) syndromes.
- Children and their families affected by 22q11.2DS experience significant stressors and anxiety during the course of their lives.
- Socioemotional development is often delayed.

## Overview and Purpose

- Anxiety associated with parent-child separation is central to psychosocial development (Hock, McBride, & Gnezda, 1989).
- Experiencing a major stressor in early development, common in children with 22q11.2DS, is the most common risk factor for elevated separation anxiety (Beaton & Simon, 2011).
- Stress in children with 22q11.2DS is associated with short-term memory impairment, decrease in brain volume, and higher risk of psychosis (Sanders et al., 2016; Angkustsiri, 2014).
- We compared self- and parent-reported separation anxiety in children with 22q11.2DS and those typically developing (TD).

## Hypotheses

- Children with 22q11.2DS will report higher levels of separation anxiety than typically-developing controls.
- Mothers will report higher levels of separation anxiety in their children with 22q11.2DS compared to their typically developing children.
- Fathers will also report higher levels of separation anxiety in their children with 22q11.2DS compared to their typically developing children.

## Participants and Procedure

- Children aged 7 to 16 years and their parents
- 22q11.2DS**:  $n = 20$ , 10 female; mean age = 10.9 years,  $SD = 2.5$
- TD**:  $n = 32$ , 13 female; mean age = 12.2 years,  $SD = 2.4$
- Multidimensional Anxiety Scale for Children, 2nd Ed. (MASC-2)*: Parent- and Self-Report (March, 1997)
  - Separation anxiety and phobias subscale was used for this study.

## Results

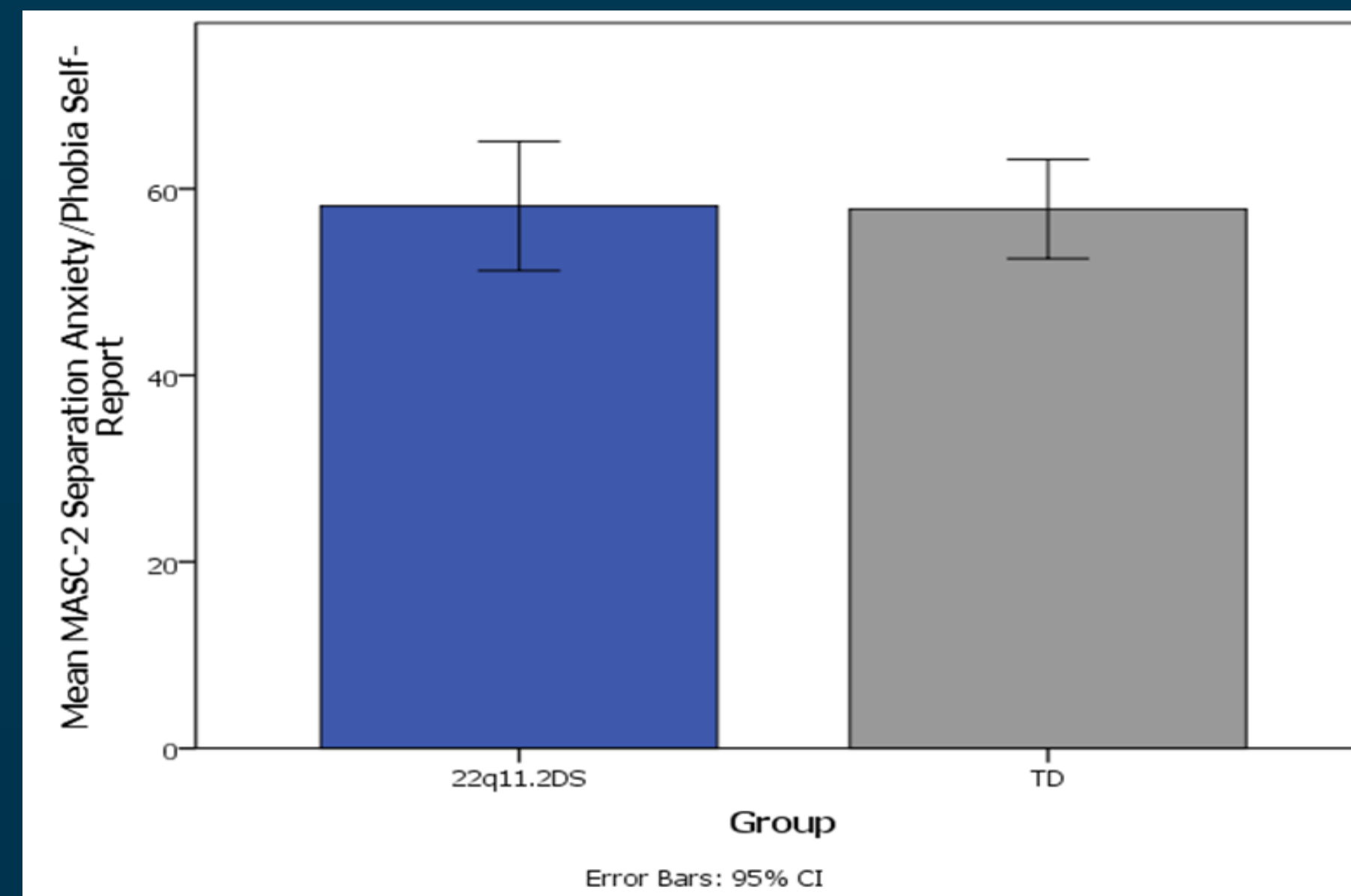


Figure 1. Mean MASC-2 separation anxiety self-report T-score by group.

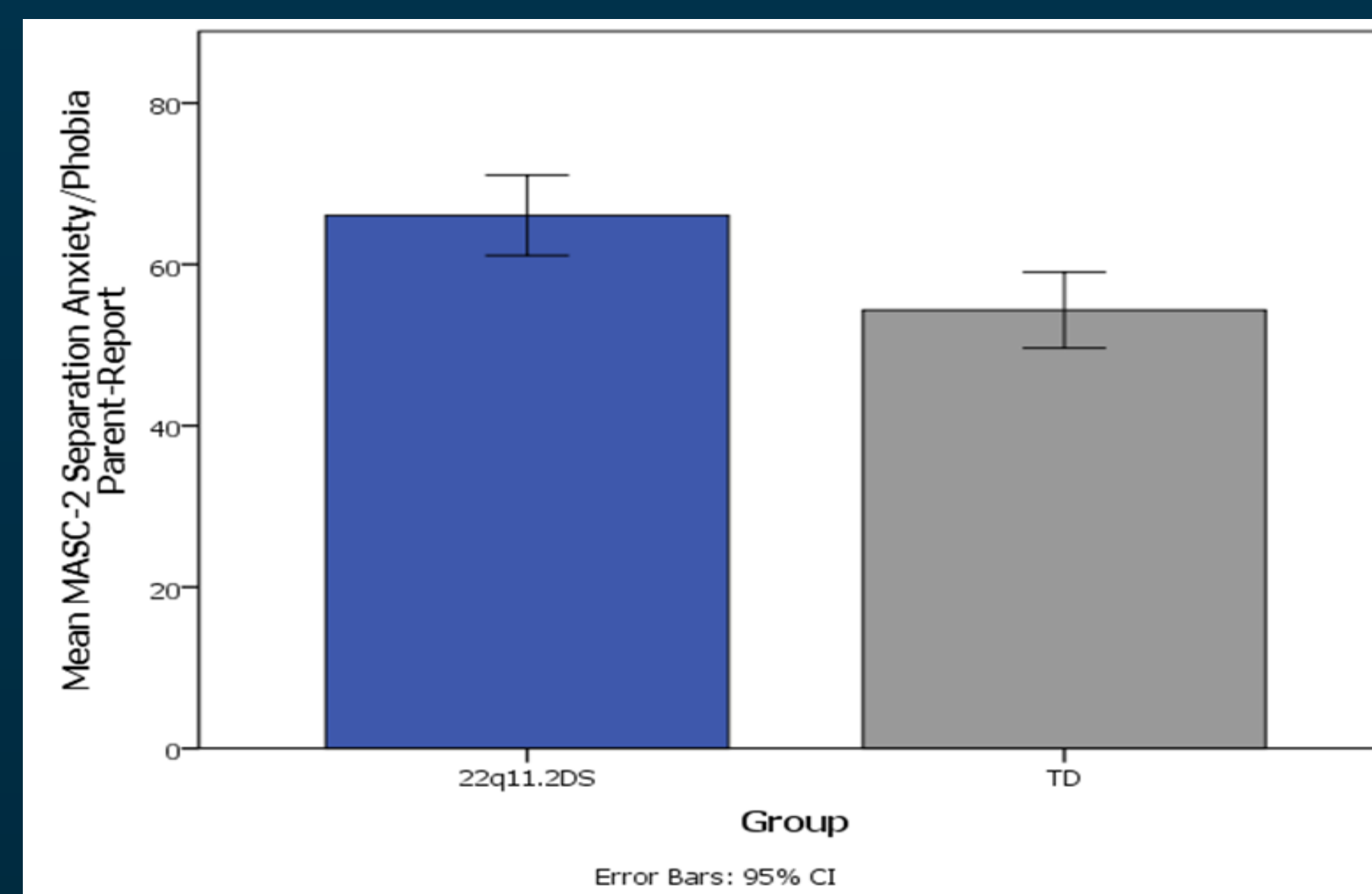


Figure 2. Mean MASC-2 separation anxiety parent-report T-score.

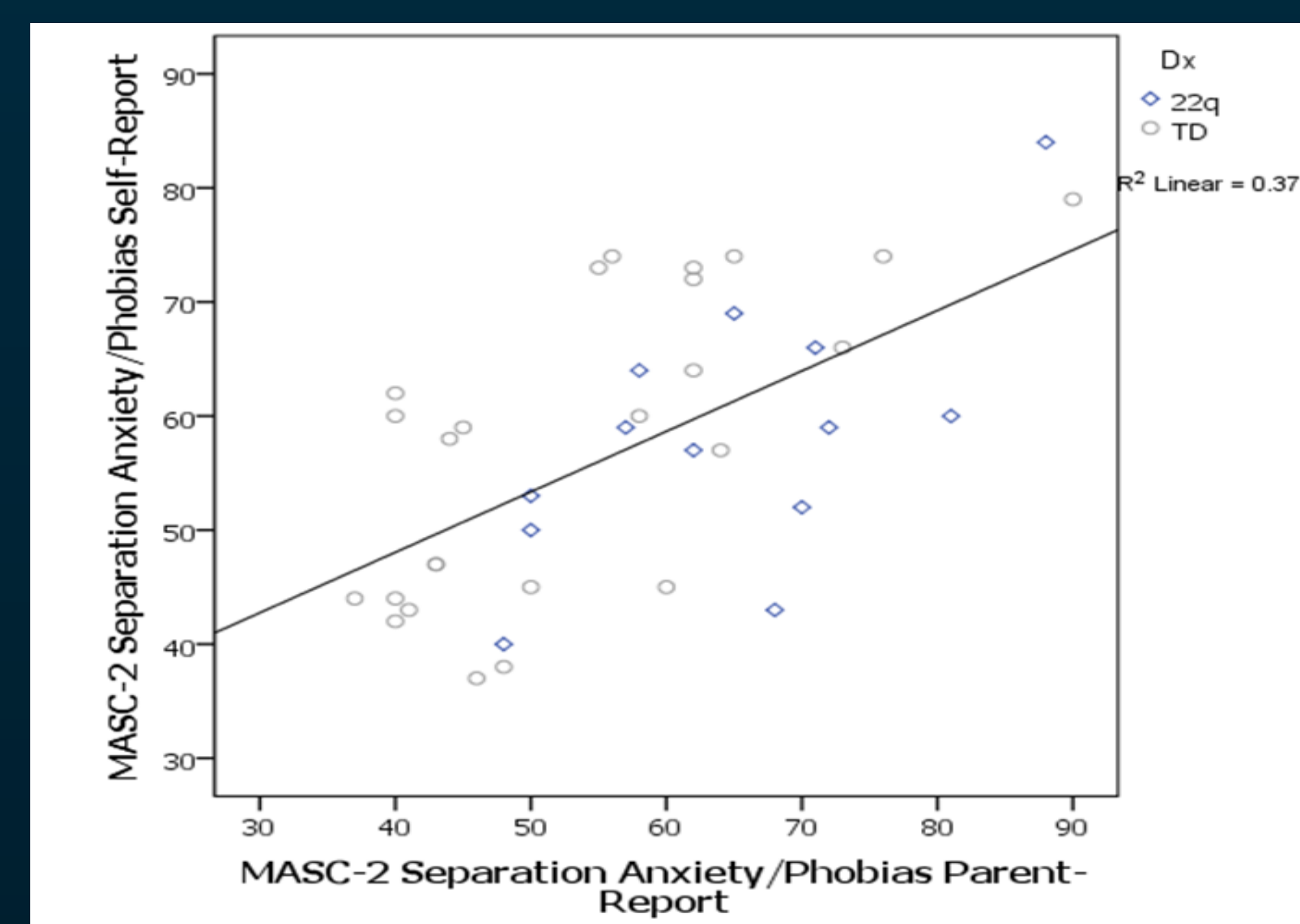
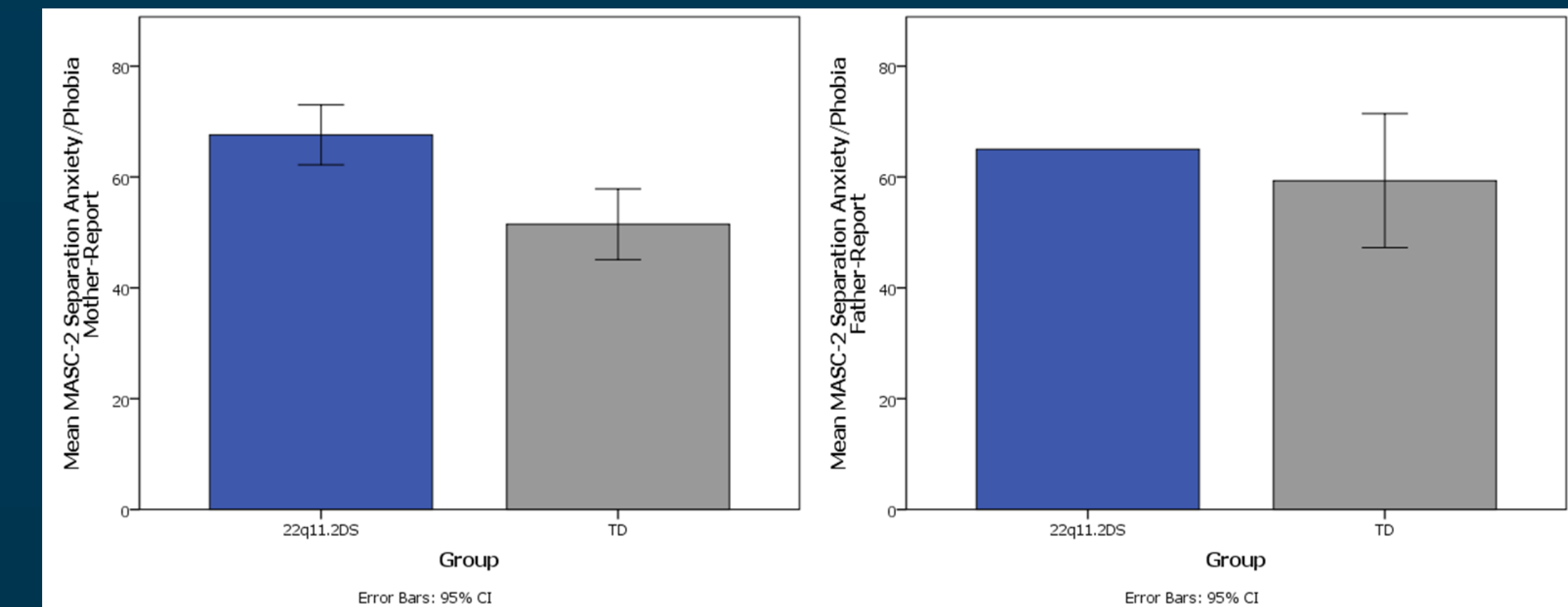


Figure 3. Correlation between MASC-2 Parent- and child self-Reports on separation anxiety.

- Children with 22q11.2DS ( $M = 58.15$ ) reported similar levels of separation anxiety as their TD peers ( $M = 57.83$ ):  $t(40) = -0.07$ ,  $p > 0.05$
- Parents reported higher separation anxiety in their children with 22q11.2DS ( $M = 66.08$ ) versus those TD ( $M = 54.33$ ):  $t(46) = -3.87$ ,  $p < 0.001$
- MASC-2 parent- and self-reports were positively correlated:  $r(52) = 0.62$ ,  $p < 0.001$

## Results Continued



Figures 4 and 5. Mean MASC-2 mother- and father-reports in children with 22q11.2DS and those TD.

- Mothers reported higher separation anxiety in their children with 22q11.2DS ( $M = 67.60$ ) than those TD ( $M = 51.47$ ):  $t(37) = -4.06$ ,  $p < 0.001$
- Preliminary: Fathers reported no difference in separation anxiety in their children with 22q11.2DS ( $M = 65.00$ ) compared to those TD ( $M = 59.33$ ):  $t(5) = -0.46$ ,  $p > 0.05$

## Summary and Implications

- There is no difference of *self-reported* separation anxiety between children with 22q11.2Ds and TD children.
- Independent reports by parents about their children indicate higher separation anxiety in children with 22q11.2DS.
- The difference between maternal and paternal reports on children with 22q11.2DS require further investigation.
- Preliminary findings suggest that parents' experience of their children's anxiety may differ significantly with implications for understanding the role of family in stress and development for children.
- Although very preliminary given the small sample, fathers may perceive their child's anxiety differently than mothers.
- Although parents and children appear to agree based on the positive correlation between self- and parent-reports, children with 22q11.2DS may be less aware of their social behavior and anxiety.

## References

- Angkustsiri, K. (2014). *Psychiatric issues in Children and Adolescents with VCFS/22q11.2 Deletion Syndrome* [PowerPoint slides]. Retrieved from <http://www.22q11sa.org.za/wp-content/uploads/2015/10/Psychiatric-issues-in-children-and-adolescents-with-22q11.2DS.pdf>
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