

Introduction

- Many developmental studies include parent and child reported measures, yet agreement between reports can vary. Agreement scores are thought to be impacted by various factors that affect the parent's awareness of tested measures.
- Current literature suggests that parents and children have higher agreement when reporting symptoms of externalizing problems vs internalizing problems¹. Studies have found a significant impact of gender and income on parent-child agreement, but findings are mixed regarding directionality^{5,2}.
- Factors such as conflict can shape the family environment. A family environment with less conflict could lead to an increase in disclosure of symptoms, which can lead to higher agreement.³

Hypotheses

- Child's gender and family income will influence the agreement of parent-child reports.
- Parent-child agreement on symptom scores for depression and anxiety will be associated with decreased family conflict.

Methods

- The study utilizes data from the Adolescent Brain Cognitive Development (ABCD) Study, a longitudinal project that tracks the health and cognitive development of diverse youth.
- The sample includes children aged 9-10 (F =5664 , M= 6181).
- We used the Youth Brief Problem Monitor (BPM) assessment for child reports, and the Child Behavior Checklist (CBCL) assessment for parental reports of internalizing and externalizing problems.
- To test predictors of agreement between parent and child report, we analyzed parent and child reported measures that could influence agreement, such as age, gender, family income, and family environment.
- Discrepancy scores were calculated as the absolute value of the difference between parent and child report.
- We used linear regression to test if income, gender, age, and family environment predicted discrepancy scores.

Results

Predictors of Discrepancy Between Parent and Child Report

| Figure 1 | Internal Discrepancies | | | External Discrepancies | | |
|---------------------|------------------------|---------------|-------------------|------------------------|---------------|------------|
| | Estimate | t value | Pr(> t) | Estimate | t value | Pr(> t) |
| Income | 8.28E-05 | 2.433 | * | 1.93E-04 | 6.138 | *** |
| Gender | 6.69E-04 | 1.705 | . | 2.84E-04 | 0.857 | . |
| Age | -1.56E-03 | -1.474 | . | -1.90E-03 | -1.927 | . |
| FES (parent) | 3.39E-02 | 7.603 | *** | 5.01E-02 | 12.122 | *** |
| FES (youth) | 6.63E-02 | 14.769 | *** | 8.46E-02 | 20.234 | *** |
| R-squared: 0.03242 | | | DF: 10544 | R-squared: 0.06635 | | |
| F-stat: 70.67 | | | p-value: <2.2E-16 | F-stat: 148.2 | | |
| | | | | p-value: <2.2E-16 | | |

Figure 1: Across both symptom types, higher family environment (reported with conflict subscale) are strongly associated with better agreement, as indicated by significant estimates and high t-values. Additionally, income shows a significant effect, with stronger influence on externalizing agreement. Gender and age did not show any significant correlations.

Agreement Between Parent and Child Reports of Internalizing and Externalizing Symptoms

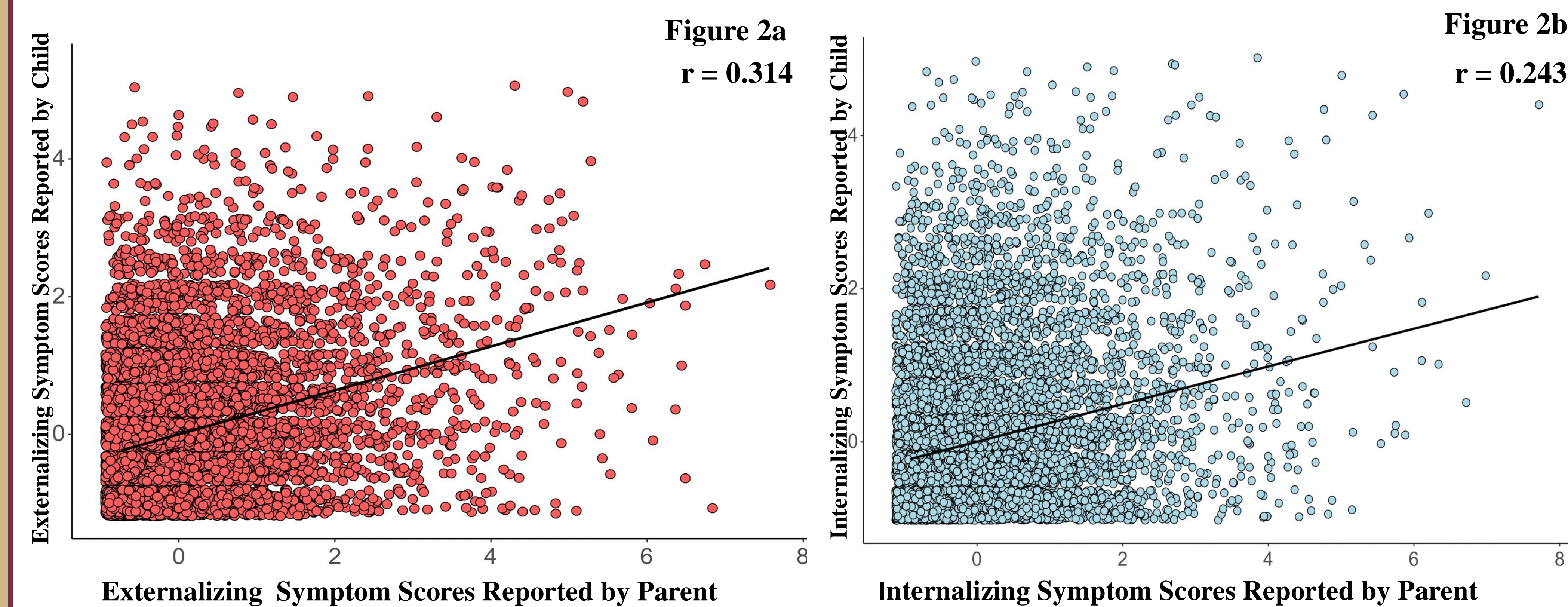


Figure 2: Scatterplots depicting the agreement between parent and child reports of symptom scores. The internalizing and externalizing symptoms both show a positive but moderate correlations, suggesting variability in agreement between parent and child assessments. Both p values < 2.2e-16.

Discussion

- Our findings are in line with previous literature except for gender having no significant impact.
- Interestingly, both parent and child perception of family conflict is associated with larger discrepancies between parent and child reports.
- The positive correlation between income and discrepancy suggests that as family income increases, parent-child agreement on mental health symptoms decreases.
- Our findings suggest that the reliability of parent-child measure surveys may be impacted by certain variables such as income, and family environment and should be taken into consideration when conducting studies with these measures.

Implications and Limitations

- The agreement between parent and child reports have wide-ranging implications on a study's design, data collection, analysis, and conclusions. Having just one reporter can introduce reporting bias and affect the accuracy of study results.
- Discrepancies or agreement between reports can inform research about family dynamics and other underlying factors that can help clinical recommendations.
- Some limitations for our study include reporting bias, such as underreporting or misreporting mental health factors due to stigma, lack of awareness, or social desirability, or implications such as parental influence on reporting.
- An example of this would include differential parent reports influenced by factors such as their own mental health issues, which could affect their perceptions and interpretations of the child's experiences⁵.

References

- (Bajeux et al., 2018) <https://doi.org/10.1007/s10578-018-0815-7>
- (Chen et al., 2017) <https://doi.org/10.1371/journal.pone.0178863>
- (Ghriwati et al., 2018) <http://dx.doi.org/10.1037/fam0000459>
- (Treutler, et al. (2003) <https://doi.org/10.1023/a:1021765114434>
- (Yoon et al., 2023) <https://pubmed.ncbi.nlm.nih.gov/35246720/>

Acknowledgements

The ABCD Study® is supported by the National Institutes of Health and additional federal partners under award numbers U01DA041048, U01DA050989, U01DA051016, U01DA041022, U01DA051018, U01DA051037, U01DA050987, U01DA041174, U01DA041106, U01DA041117, U01DA041028, U01DA041134, U01DA050988, U01DA051039, U01DA041156, U01DA041025, U01DA041120, U01DA051038, U01DA041148, U01DA041093, U01DA041089, U24DA041123, U24DA041147.

We acknowledge The Learning Brain Lab for the continuous support and guidance on this research opportunity.

This project would not be possible without the support of the Women in Math, Science, and Engineering Living Learning Community at FSU.