

Gender Differences in ADHD Symptom Presentation and Relations with Domains of Functioning

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BACKGROUND

- Existing literature on gender differences in ADHD has focused on ADHD subtypes, referral bias, and internalizing disorder comorbidity with ADHD.
- There is limited research on gender differences for specific symptoms of ADHD and whether gender moderates the relationships among ADHD, internalizing problems, and social problems.
- Hypothesis 1: Males diagnosed with ADHD will show a stronger link between ADHD referral status and ultimate diagnosis than girls.
- Hypothesis 2: Females diagnosed with ADHD will endorse more symptoms of anxiety/depression than males diagnosed with ADHD based on child and parent reports.
- Hypothesis 3: The relationship between ADHD and social problems will be explained by internalizing problems and this relationship will be moderated by gender (see Figure 1).

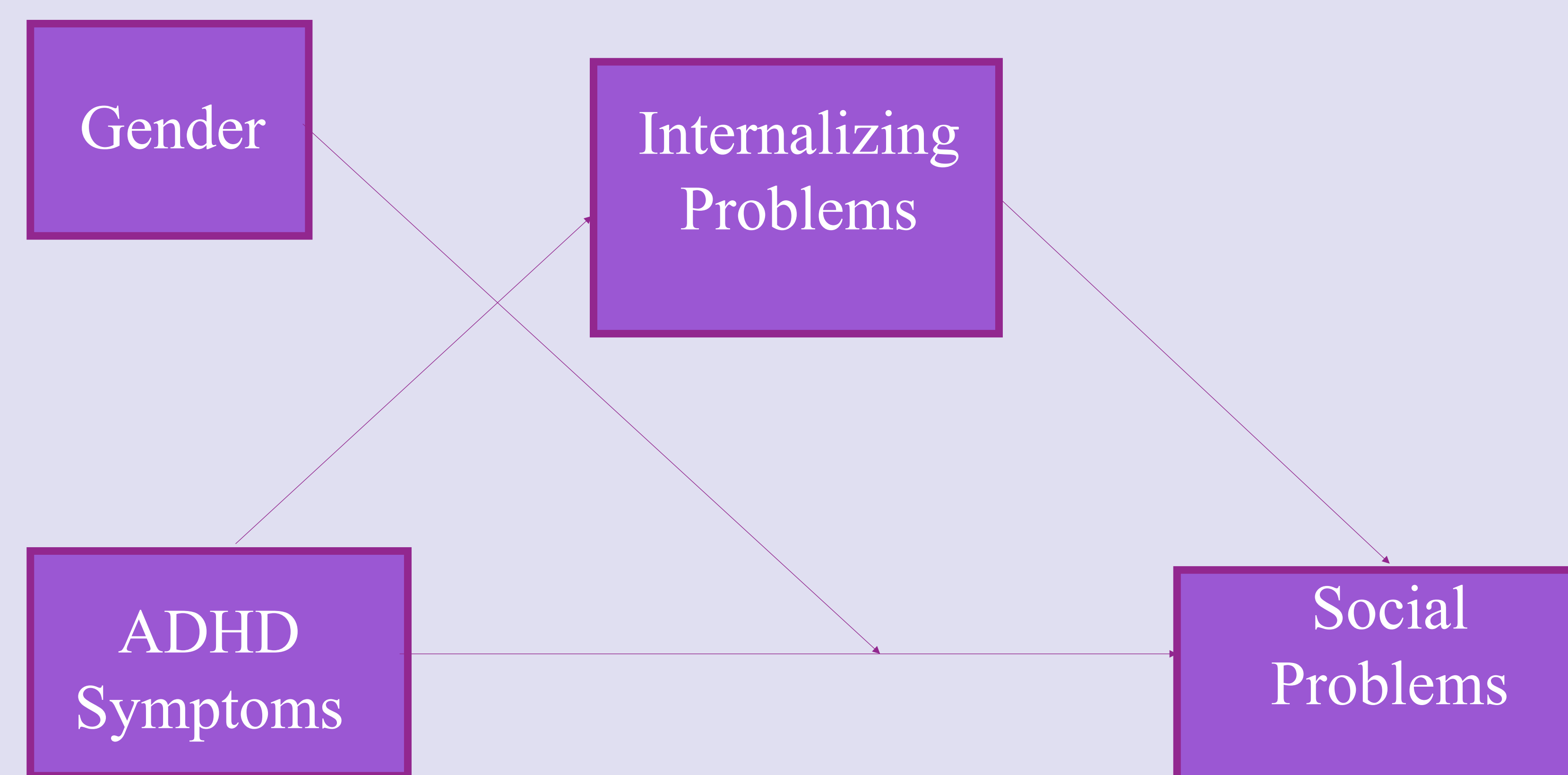
METHODS

- Participants: 206 children diagnosed with ADHD, ages 6-16, 33% female, 91% White
- Children and their parents were referred to an outpatient clinic in southwestern Virginia for a comprehensive psychoeducational assessment.
- Study informants included children, parents, and teachers.
- Analyses were conducted in SPSS. Chi-square analyses were conducted for gender differences on outcomes of interest. The PROCESS macro was utilized for conditional effects regression analyses.

RESULTS

- Boys and girls were equally likely to be referred for ADHD (32.2% vs. 28.0%).
- Referral for ADHD was significantly related to ADHD diagnosis for boys (39.5% vs. 25.0%) but not girls (31.7% vs. 25.5%).
- Boys were significantly more likely to be diagnosed with the Combined Presentation (41.2% vs. 29.5%) than girls, and girls were significantly more likely to be diagnosed with the Predominantly Inattentive Presentation than boys (22.0% vs. 12.9%)
- Mothers reported significantly higher levels of sluggish cognitive tempo (SCT) symptoms for girls than boys (M = 2.79 vs. M = 2.10).
- Fathers reported significantly greater symptoms of “restlessness” in boys compared to girls (91.7% vs. 74.5%).
- Boys reported significantly greater problems with “acting too young” compared to girls (54.1% vs. 20.0%).
- No significant gender differences were found for internalizing symptoms across reporters.
- Across all reporters, internalizing disorders significantly mediated the relationship between attention problems and social problems, but none of these relationships were moderated by gender.

Figure #1



Moderated Mediation Model in PROCESS

CONCLUSIONS

- There is less of a link between referral for ADHD and ultimate diagnosis for ADHD for girls than boys.
- Perhaps due to less hyperactivity/impulsivity in girls relative to boys with disruptive behavior driving referral reason.
- Greater SCT symptoms were reported for girls than boys
- Perhaps greater SCT symptoms are a precursor to greater internalizing problems in girls in adolescence (e.g., ruminative thinking).
- There were no gender differences found for internalizing symptoms.
- Our somewhat younger sample, on average, may have impacted this link.
- The strong links among ADHD symptoms, internalizing problems, and social problems are consistent across boys and girls.
- Future studies should continue to examine gender differences in ADHD and their implications for assessment and treatment.

REFERENCES

- Becker, S. P., Kneeskern, E. E., & Tamm, L. (2019). Social anxiety is associated with poorer peer functioning for girls but not boys with ADHD. *Psychiatry Research, 281*, 112524. <https://doi.org/10.1016/j.psychres.2019.112524>
- Biederman, J., Kwon, A., Aleardi, M., Chouinard, V.-A., Marino, T., Cole, H., Mick, E., & Faraone, S. V. (2005). Absence of gender effects on attention deficit hyperactivity disorder: Findings in nonreferred subjects. *American Journal of Psychiatry, 162*(6), 1083–1089. <https://doi.org/10.1176/appi.ajp.162.6.1083>
- Gershon, J. (2002). A Meta-Analytic Review of Gender Differences in ADHD. *Journal of Attention Disorders, 5*(3).
- Hasson, R., & Fine, J. G. (2012). Gender differences among children with ADHD on continuous performance tests. *Journal of Attention Disorders, 16*(3), 190–198. <https://doi.org/10.1177/1087054711427398>
- Isaksson, J., Ruchkin, V., & Lindblad, F. (2016). Unseen and stressed? Gender differences in parent and teacher ratings of ADHD symptoms and associations with perceived stress in children with ADHD. *Journal of Attention Disorders, 24*(11), 1565–1569. <https://doi.org/10.1177/1087054716658381>
- Klefsjö, U., Kantzer, A. K., Gillberg, C., & Billstedt, E. (2020). The road to diagnosis and treatment in girls and boys with ADHD – gender differences in the diagnostic process. *Nordic Journal of Psychiatry, 75*(4), 301–305. <https://doi.org/10.1080/08039488.2020.1850859>
- Ragnarsdottir, B., Hannesdottir, D. K., Halldorsson, F., & Njardvik, U. (2018). Gender and age differences in social skills among children with ADHD: Peer problems and Prosocial behavior. *Child & Family Behavior Therapy, 40*(4), 263–278. <https://doi.org/10.1080/07317107.2018.1522152>