Social Network Analysis Reveals the Negative Effects of Attention-Deficit/Hyperactivity Disorder (ADHD) Symptoms on Friend-Based Student Networks.


Abstract

INTRODUCTION:
Social network analysis has emerged as a promising tool in modern social psychology. This method can be used to examine friend-based social relationships in terms of network theory, with nodes representing individual students and ties representing relationships between students (e.g., friendships and kinships). Using social network analysis, we investigated whether greater severity of ADHD symptoms is correlated with weaker peer relationships among elementary school students.

METHODS:
A total of 562 sixth-graders from two elementary schools (300 males) provided the names of their best friends (maximum 10 names). Their teachers rated each student's ADHD symptoms using an ADHD rating scale.

RESULTS:
The results showed that 10.2% of the students were at high risk for ADHD. Significant group differences were observed between the high-risk students and other students in two of the three network parameters (degree, centrality and closeness) used to assess friendship quality, with the high-risk group showing significantly lower values of degree and closeness compared to the other students. Moreover, negative correlations were found between the ADHD rating and two social network analysis parameters.

CONCLUSION:
Our findings suggest that the severity of ADHD symptoms is strongly correlated with the quality of social and interpersonal relationships in students with ADHD symptoms.