

Title:

Social Network Characteristics of Adolescents With ADHD

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Session Title:

Global Psychiatric Health Promotion

Slot:

A 06: Saturday, 28 October 2017: 2:15 PM-3:00 PM

Scheduled Time:

2:15 PM

Keywords:

ADHD, adolescents and social networks

References:

References

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Abstract Summary:

Youth with ADHD have been demonstrated to have social difficulties but no study has analyzed the social networks of adolescents with ADHD. This session presents research comparing the social networks of adolescents with ADHD to those without ADHD, and explores the clinical and research implications.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Describe the differences in school social networks between adolescents with ADHD and without ADHD.	Study background, theory, methods, results
Discuss the implications and limitations of the study.	Study conclusions: how the results advance the science, clinical implications, strengths and limitations of the study, implications for further research

Abstract

Purpose

This study compares the social network features of adolescents with ADHD to those without ADHD.

Background

ADHD prevalence is estimated at 8% of children and youth in the US, making it one of the most common chronic disorders of school-aged children, and the most common mental health disorder (American Academy of Pediatrics, 2011). Children with ADHD frequently experience lowered academic performance, are retained in grade, or are suspended or expelled from school, as well as having lower high school graduation rates. Adolescents with ADHD on average begin sexual activity at a younger age, have more sexual partners, use less contraception, and consequently have significantly higher rates of teen pregnancies and STDs. Adolescents with ADHD are more likely to smoke, may have increased rates of drug and alcohol abuse, have higher rates of legal difficulties including incarceration, accidents including auto accidents and injuries, employment and marital difficulties, and significant mental health comorbidities. Children and adolescents with ADHD have significant disruptions in relationships with both family and peers (American Academy of Pediatrics, 2011; Barkley, 2014) .

Although much research has examined social difficulties of children and adolescents with ADHD (Barkley, 2014; Glass, Flory, & Hankin, 2012; Marton, Wiener, Rogers, & Moore, 2015; Normand et al., 2011; Storebø et al., 2011), no sociometric or social network analysis has examined the friendship networks of adolescents with ADHD. Peer problems in adolescents with ADHD have been linked to riskier sexual behaviors and substance abuse (Barkley, 2014; Umberson, Crosnoe, & Reczek, 2010). Many other adolescent health behaviors have been linked to peer influence. For nurses working with adolescents with ADHD, an understanding of their social networks will assist in understanding their types of social difficulties, providing accurate anticipatory guidance, and serve as a foundation for building effective interventions for youth with ADHD that are struggling socially.

Treatment of adolescents with ADHD is an interprofessional endeavor, involving nurses, parents, social workers, educators, psychologists, occupational therapists, probation officers, and others. The social ties of adolescents are critical in their development. Nurses are experts in leading and coordinating holistic care, and are ideally positioned to be leaders in research with implications for a holistic, interprofessional approach to ADHD management, including attending to the social dynamics of the condition. Yet, few nurses have published on this topic.

Theoretical framework

Umberson, Crosnoe and Reczek's model, "mechanisms linking social ties to health behaviors," defines social networks as the structural linkages between an individual and his/her network, and social integration as the presence, quantity, and frequency of contact with social ties (Umberson et al., 2010). This study operationalizes structural linkages and integration using social network variables, frequency of contact with ties, and perceived social acceptance. The results of this study can serve as a basis for examining the health behaviors of adolescents with ADHD from a social network perspective and crafting interventions based on social ties.

Methods

Descriptive study utilizing secondary analysis of school social network data from the National Longitudinal Study of Adolescent Health, a nationally representative sample of 7th through 12th grade, was conducted on a sample of 9626 adolescents. Friendship nominations were collected in Wave I for all students in 122 schools; each student could nominate up to 5 male and 5 female friends. This allows for whole network analysis of schools with >50% participation. Adolescents with ADHD symptoms in childhood were identified by retrospective self-report in wave III (N=703). Standard social network measures, perceptions of social acceptance, closeness to social ties, and extracurricular activity participation were examined, both for ADHD overall and for inattentive and hyperactive subtypes, comparing those with ADHD symptoms to those without. The study was approved by the Institutional Review Board of The Ohio State University.

Research questions

1. How do adolescents with ADHD compare with adolescents without ADHD on measures of perceived social acceptance, total ties and incoming ties in their school social network, presence of one mutual same gender friend, strength of ties, centrality and reach (measures of social integration), and number of extracurricular activities?
2. Are there differences in these measures among the ADHD subtypes of inattentive, hyperactive, and combined?
3. Are differences in race, gender and family education associated with differences in the social networks of those with ADHD?

Results

Multiple linear and logistic regressions demonstrated that those with ADHD were no more likely to be isolates or pendants (to have no or only one social tie) than others. Those with ADHD had similar strengths of ties with their friends as others, and there was no difference in popularity among those with ADHD than others, although those with inattentive ADHD reported fewer friends on average than others. Those with inattentive ADHD also had lower centrality within their social networks. Girls with low socioeconomic status with ADHD had weaker social ties than others, which was not true of girls with ADHD who did not have low socioeconomic status. Youth with ADHD had significantly less extracurricular activity involvement than others, but the difference was primarily in academically focused extracurriculars. Youth with ADHD self-reported significantly less social acceptance than those without ADHD. The presence of one mutual friend and time spent with friends increased with age among all participants, and this trajectory was not significantly different among those with ADHD symptoms.

Conclusions

This study found fewer social deficits in adolescents than suggested in the literature, possibly because most studies of adolescent social ties were carried out in clinical sample, where ADHD severity is likely higher. These findings may also reflect that no previous study examined whole social networks of high school students, so that analyses of social ties were based on self-report, teacher report and parent report. Discrepancies between teacher, parent, and adolescent reports were considered to indicate that the adolescent with ADHD had an inaccurate representation of their own popularity. However, when the

student nominated by an adolescent with ADHD as a friend reciprocates that nomination, then this is the most accurate way to measure the existence of a social tie. Lack of perceived social acceptance was striking among ADHD subgroups. This may reflect that while those with ADHD had friends, those friends may not have been in prestigious cliques; social acceptance can mean prestige to an adolescent rather than number of people that name the youth as a friend (Borgatti, Everett, & Johnson, 2013). A more detailed analysis of who adolescents with ADHD are friends with, rather than simply that they have friends, would be valuable.

In clinical practice, the results of this study allow nurses to offer reassurance to children and parents of children with ADHD that most of the participants who had significant childhood ADHD symptoms appeared to be functioning well socially in adolescence, despite their perception that they were socially rejected. The lack of significant differences on most measures, and the improvement in presence and strength of ties over time, suggests that there is room for a positive, strengths based approach to the social problems of adolescents with ADHD. Girls with inattentive ADHD named fewer friends than named them (out-degree was less than in-degree), suggesting social insecurity more than unpopularity. However, they had less dense connections (lower centrality) within their social groups.

This study does not predict outcomes. Further research is needed to identify to what extent friendship networks and characteristics predict future health behaviors and academic and career success. Further research is needed to explore the effects of comorbidities such as depression and Oppositional Defiant Disorder on the social networks of those with ADHD, as well as specific environmental factors that might be associated with better social outcomes, such as the size of the school and participation in specific types of extracurricular activities. Lastly, there is a noticeable gap in research addressing nursing interventions for helping the minority of adolescents with ADHD who have more significant social difficulties affecting their quality of life.

A major strength of this study is that it is the largest population based examination of the social position of adolescents with ADHD to date, and the only one describing specific social network characteristics. Limitations of the study include the age of the data, the lack of longitudinal whole network data, and the self-reported nature of the ADHD symptoms.