Post-Secondary Enrolment for Adolescents with and without ADHD Histories: A Longitudinal Analysis Sabrina M. Di Lonardo Burr, Jo-Anne LeFevre, & Andrea L. Howard

Introduction

Attention deficit/hyperactivity disorder (ADHD) is associated with poorer academic outcomes in many academic areas, including reading, writing, and mathematics (Frazier et al., 2007).

Academic outcomes can be measured with standardized achievement tests or school grades. However, the two measures capture different aspects of academic performance and are weakly correlated (Langberg et al., 2011).

- Standardized assessments are designed to measure academic performance objectively, outside of the classroom environment
- In contrast, school grades can reflect a range of situational, cognitive, and affective factors, from child self-control to classroom emotional to student behaviour in the classroom

Research Questions: Do the developmental trajectories of standardized academic achievement and school grades differ for adolescents with or without ADHD histories who do or do not eventually enrol in post-secondary studies? Do standardized academic achievement and school grades have similar developmental patterns?

Method

Data Source: Multimodal Treatment Study of Children with ADHD (MTA).

Ages: 9 – 17 years; 79% boys

Academic Achievement Measures: Wechsler Individual Achievement Test (WIAT) mathematics, spelling, and reading subtests; Ages 9-17

School Grades: Math and English grades coded (A = 5, B = 4, C = 3, D = 2, F = 1; Grade point average (GPA) 0 to 4.0.

	ADHD	Control
Post Secondary	332	205
No Post Secondary	188	45

Figure 1. Trajectories for Standardized Academic Achievement

Control Post-Secondary ADHD Post-Secondary Control No Post-Secondary ADHD No Post-Secondary





The Multimodal Treatment Study of Children with ADHD (MTA) was a National Institute of Mental Health (NIMH) cooperative agreement randomized clinical trial, continued under an NIMH contract as a follow-up study and finally under a National Institute on Drug Abuse (NIDA) contract followed by a data analysis grant: U01 MH50467, N01MH12010, HHSN271200800008-C, DA-8-5553 (and parallel awards to all sites); DA039881.

Figure 2. Trajectories for School Grades

Discussion & Conclusion

Academic Achievement

- The trajectories for all four groups were relatively stable, with a slight decline in scores over time
- Adolescents with ADHD histories had lower academic achievement than adolescents without ADHD histories
- Overall, regardless of age, the same pattern could be found for academic achievement, with the Control Post-Secondary adolescents achieving the highest scores and the ADHD No Post-Secondary adolescents achieving the lowest scores

School Performance

- School performance changed over time. In particular, for all four groups, grades declined during the transition from middle to high school
- The Control Post-Secondary adolescents had the highest school grades and the ADHD No Post-Secondary adolescents had the lowest
- Middle School: The ADHD No Post-Secondary group had declining math and English grades whereas the ADHD Post-Secondary group had stable (English) or improving (math) grades
- **High School:** In contrast to the other groups, overall GPAs improved for the ADHD Post-Secondary group. By the end of high school, the overall GPA for the two post-secondary groups were very similar

Conclusion

- Academic achievement and school grades show different patterns of development
- Both academic achievement and school performance were generally higher for the ADHD Post-Secondary adolescents than the ADHD No Post-Secondary adolescents
- For adolescents with ADHD histories, school performance in core subjects was poorer for those who did not eventually enrol in post-secondary studies. In high school the ADHD Post-Secondary group had improving performance and the ADHD No Post-Secondary group had declining performance. Reasons for these differences needs further exploration
- In summary, when examining academic outcomes for adolescents with ADHD histories, it is important to separate standardized academic achievement and school grades and to consider changes in school grades over time. For adolescents with ADHD histories, core school grades in middle school and overall grades in high school may be particularly important



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