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Q/ What is the long-term educational outlook for youngsters with ADHD?

EVIDENCE-BASED ANSWER

A/ CHILDREN AND ADOLESCENTS with attention deficit hyperactivity disorder (ADHD) complete fewer years of school, graduate from high school at a lower rate, and are less likely to enroll in graduate school. Older adolescents and young adults with ADHD tend to underperform in

both educational and occupational settings (strength of recommendation: **A**, 2 prospective cohort studies and a case control study).

These findings are based solely on patients with ADHD who were referred to psychiatric clinics and therefore may reflect a more severe spectrum of ADHD effects.

Evidence summary

A prospective cohort study compared educational and employment outcomes among 91 middle-class white boys, 6 to 12 years of age, with ADHD who were referred to a psychiatric clinic with outcomes for 96 matched controls. Investigators used multiple educational achievement tests to evaluate participants when they enrolled in the study, then administered educational and occupational questionnaires 16 years later.

Boys with ADHD completed 2.5 fewer years of school than controls ($P=.001$). Although rates of employment for the 2 groups were the same at 90%, those with ADHD had a significantly poorer occupational ranking than controls using the Hollingshead and Redlich system, which rates occupations on 7-point scale, with 1 representing top-ranked occupations. Individuals with ADHD scored 4.4 points compared with 3.5 points for the control group ($P<.001$). However, by the end of the study, more individuals with ADHD owned and operated their own businesses compared with controls (18% vs 5%; $P<.01$).¹

Fewer degrees but comparable employment rates

A similar prospective cohort study evalu-

ated educational and occupational outcomes among 104 boys with ADHD and 106 controls. Investigators recruited boys 5 to 11 years of age from a psychiatric research clinic and followed them for a mean of 17 years using educational and occupational questionnaires.

Boys with ADHD completed 2 fewer years of school than controls ($P=.0001$), and more boys in the ADHD group failed to complete high school (25% vs 1%; P value not supplied). Fewer individuals with ADHD than controls obtained a bachelor's degree (15% vs 50%; $P<.001$), and fewer enrolled in graduate school (3% vs 16%; P value not given). Employment was comparable in the 2 groups, however (92% vs 93%, $P=.07$).²

Less success in school and at work

Another prospective case-control study also found that people with ADHD achieved less educational and occupational success than controls. The study compared 224 subjects between 18 and 55 years of age with ADHD from a psychiatric referral clinic with 146 controls matched for age and intelligence quotient (IQ). Investigators correlated predicted educational achievement based on IQ in the controls with that observed in subjects with ADHD.

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Five years later, subjects with ADHD didn't perform as well as predicted. Fewer earned college degrees (29% vs 52%) or graduate degrees (20% vs 33%), and more earned no college or graduate school degrees (50% vs 16%) ($P < .001$ for comparison of observed compared with expected means using Wilcoxon matched pairs test). Similarly, fewer subjects with ADHD attained a level of 6 on the Hollingshead Socioeconomic Status Scale than controls (58% vs 80%; $P < .001$).³

Recommendations

We found no statements from national organizations about the long-term educational prognosis for children and adolescents with ADHD. However, the authors of the Multimodal Treatment Study of Children with ADHD have expressed the opinion that prognosis depends on initial presentation (including severity of symptoms and comorbid conduct disorders), intellect, social advantage, and response to treatment.⁴ **JFP**

References

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