Purpose: Three out of four alcoholics enter treatment as smokers. Research with adults suggests that smoking cessation does not interfere with treatment outcomes and is associated with improved outcomes for quitters with co-morbid mood/anxiety disorders. The purpose of this study is to determine if smoking cessation interferes with treatment response among youth with and without co-morbid ADHD.

Method: One-hundred ninety-five substance-dependent adolescents (50% female, aged 14–18) who were referred to a residential treatment program were assessed at intake, prospectively during the 8-week treatment period, and at discharge. Multi-informant data was prospectively collected from youth self-reports, clinician-rated assessments, biomarkers, and medical chart records.

Results: Three out of four (76%) youths entered treatment as smokers and approximately half (46%) quit during treatment. Smokers entered treatment with greater HIV/STD risk behaviors, trauma, attempted suicide, and rates of ADHD ($p < 0.05$). Youths with ADHD (inattentive only or combination type) were less likely to quit smoking than youths without ADHD ($p < 0.0001$). For youths without ADHD or inattentive ADHD only, smoking cessation was associated with greater treatment response in terms of treatment completion ($p < 0.05$), service participation ($p < 0.001$), step-work ($p < 0.01$), global functioning ($p < 0.01$), and lower cravings ($p < 0.05$). Quitting smoking with combination ADHD was associated with greater likelihood of testing positive during treatment ($p < 0.05$).

Conclusion: Smoking cessation appears unlikely to hinder and may even help recovery from substance use disorders among youths without ADHD and with inattentive ADHD. In a climate of finite treatment resources, nicotine-replacement therapies should be targeted at adolescent smokers with combination ADHD.