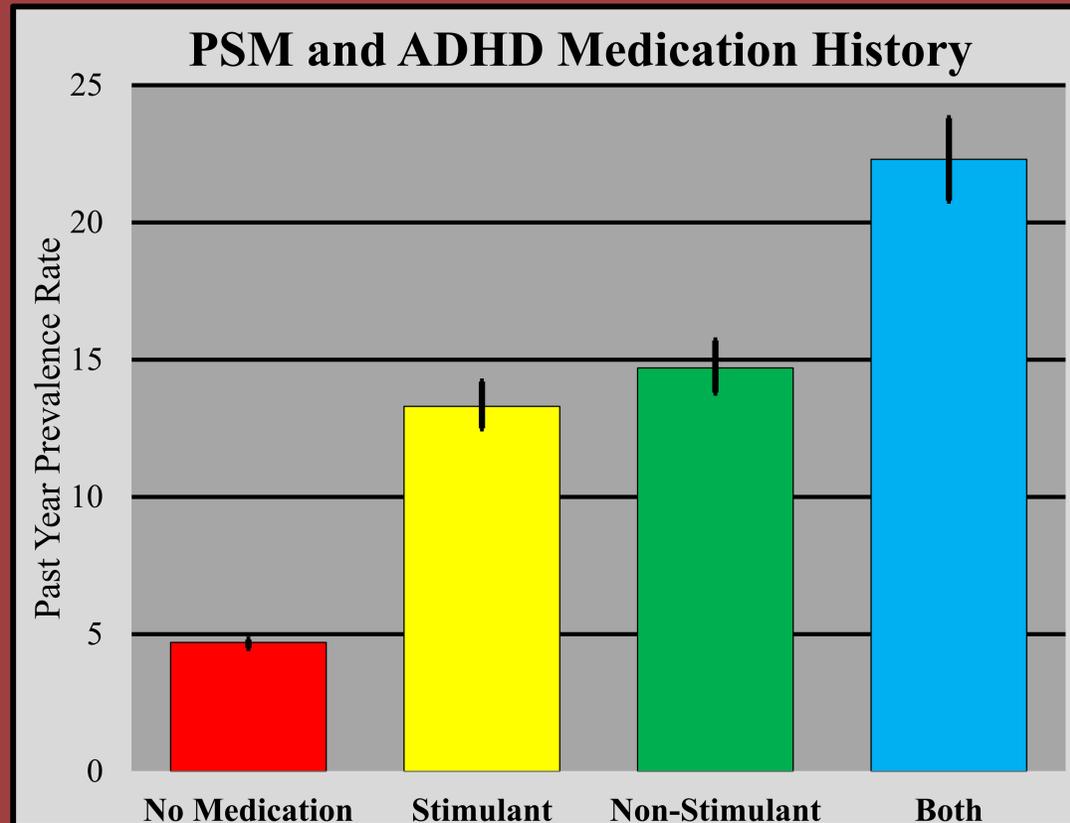




## Introduction

- Adolescent attention-deficit/hyperactivity disorder (ADHD) diagnosis rates increased from 18% to 33% in the USA from 1999 to 2016.
- Fairman et al. found a 15.6% increase in stimulant prescribing to youth from 2008/09 to 2012/13, and non-stimulant prescribing is 10-15% of all therapy.
- Attention-deficit/hyperactivity disorder (ADHD) is associated with higher substance use rates, including prescription stimulant misuse (PSM), cocaine use, and methamphetamine use.
- Stimulant and non-stimulant pharmacotherapy improve adolescent ADHD, but their associations with PSM, cocaine, and methamphetamine use are unclear.
- Using 2005–2020 US Monitoring the Future (MTF) data, we investigated relationships between ADHD pharmacotherapy history and PSM, cocaine, or methamphetamine use.



## Methods

- Secondary students (13-19 years) provided data on pharmacotherapy history (N=199,560; 86.3% of total sample) as a part of the 2005 to 2020 MTF cross-sectional multi-cohort study; weights assured a nationally representative sample.
- Participants were grouped by ADHD pharmacotherapy history: none (88.7%; principally non-ADHD controls); stimulant-only (5.8%); non-stimulant-only (3.3%); both stimulant and non-stimulant (2.2%).
- Outcomes were past-year PSM, cocaine, and methamphetamine use.
- Logistic regressions examined relationships between pharmacotherapy history and outcomes, controlling for sociodemographics, recent substance use, and stimulant treatment cessation.

## Conclusions

- While elevated PSM and illicit stimulant use rates are likely influenced by ADHD, our findings suggested adolescents with a history of both stimulant and non-stimulant pharmacotherapy are at highest risk for these stimulant outcomes.
- Those with stimulant or non-stimulant use only had intermediate rates of stimulant outcomes.
- Adolescents receiving ADHD pharmacotherapy should be monitored for PSM and illicit stimulant use.

## Limitations

- These results may be limited by self-report, self-selection, and retrospective bias.
- Causality cannot be inferred from cross-sectional data.
- 13.7% did not provide ADHD pharmacotherapy data; they were more likely to be male, have poorer grades in school, have parents with lower educational attainment, and come from more recent cohorts.
- No data on ADHD symptoms or symptom history were in the MTF.

### Past Year Cocaine and Methamphetamine Use by Medication History

