Using unselected community samples to derive optimal multiple substance dependence phenotypes for genetic analysis

Program statement

Applying the DSM-IV and structured clinical interview criteria for the diagnosis of substance dependence, the Colorado Adoption Project (CAP) monitors the development of drug abuse and dependence among a representative sample of youth from Colorado. The CAP sample includes twin and adoptive families, with the latter providing an estimate of familial resemblance independent of genetic covariates.

Introduction

The CAP is funded by grants from the NIDA (DA-05131 and DA-11015) and supports the development of multiple substance dependence phenotypes using CAP data. These phenotypes are designed for genetic analyses and are anchored in lifetime symptom counts from the substance use, abuse, and dependence criteria of the DSM-IV. The phenotypes are compared to improve the ability to estimate familial resemblance.

Methods

The Colorado Adoption Project (CAP) is a longitudinal longitudinal twin and adoptive family study that collects data on drug abuse and dependence among youth in Colorado. The CAP sample includes twins and adoptive families, with the latter providing an estimate of familial resemblance independent of genetic covariates. The CAP is funded by grants from the National Institute on Drug Abuse (NIDA) and supports the development of multiple substance dependence phenotypes using CAP data. These phenotypes are designed for genetic analyses and are anchored in lifetime symptom counts from the substance use, abuse, and dependence criteria of the DSM-IV. The phenotypes are compared to improve the ability to estimate familial resemblance.

Analyses and Results, continued

Table 1 shows the variance in each of the ten Dependence Vulnerability measures, along with the average age difference in measures attributable to sex. The variance for boys is relatively small (less than 0.5% for all measures), while girls show a higher variance. The regression predictions for girls and boys show that the variance in measure is relatively small (less than 0.5% for all measures). The regression predictions for girls and boys show that the variance in measure is relatively small (less than 0.5% for all measures).