Identification of risk-factors for early drinking, smoking, and illicit drug use is essential for targeted substance abuse prevention. Few studies have examined associations between weight during childhood and early substance use, with mixed results. Some research has linked childhood obesity to higher rates of alcohol, cigarette, and/or cannabis use during adolescence, while others have found no associations.

The present study examined the role of race/ethnicity as a potential moderator of relationships between childhood weight status and early use (by age 15) of alcohol, cigarettes, and cannabis.

Logistic regression models were conducted predicting likelihood of early substance use from childhood weight status, separately by substance class, sex, and race/ethnicity. Interactions between weight status and race/ethnicity were included in subsequent models.

Among African-American and Hispanic males, underweight status was associated with reduced risk of early drinking and cannabis use compared to healthy weight males of the same race/ethnicity. Among non-Hispanic White females, obesity predicted 71 percent increased risk for early cannabis use, compared to White females of healthy weight.

In subsidiary analyses, weight status by race/ethnicity interactions were found, such that risk of early drinking was further reduced for underweight Hispanic males, compared to White, healthy weight males. Among females, risk of early drinking associated with being overweight and risk of cannabis use associated with obesity were smaller in magnitude for African-American relative to White females.

Results from the present study highlight the role of race/ethnicity as a potentially important moderator of the association between early substance use and childhood weight status and underscore the importance of considering both sex and race/ethnicity when developing preventative interventions. Our findings also call into question the common practice of analyzing data from males and females together, but also collapsing obese and overweight statuses.

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APSSC RISE Research Award Winner