

Study uses diverse sample to examine childhood weight's link to age of first substance use

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Girls who were overweight as children are likely to begin using cigarettes, marijuana or alcohol at an earlier age than their healthy-weight peers, according to a new study by researchers in the Indiana University School of Education.

But the correlation between weight and substance use shows up only when the data are broken down by the subjects' racial or ethnic group and sex. Previous research that didn't take those categories into account found only a weak relationship between childhood weight and substance use.

"Childhood [weight status](#) and timing of first substance use in an ethnically diverse sample," published in the journal *Drug and Alcohol Dependence*, is the first study to examine the relationship between childhood weight and the timing of first substance use while taking into account the sex and race or ethnicity of the subjects. Authors are Jennifer C. Duckworth and Kelly A. Doran, doctoral students in the Department of Counseling and Educational Psychology, and Mary Waldron, associate professor in the department.

"Early drinking and drug use are associated with increased risk of problem substance use," Duckworth said. "Identifying predictors of early substance use, including weight status during childhood, can help us develop targeted substance abuse prevention."

Using data for nearly 7,000 subjects from the National Longitudinal Survey of Youth, the researchers examined the relationship between the weight status of children at age 7 or 8 and the age at which they began using substances.

They found that being overweight as a child was associated with earlier alcohol and marijuana use among Hispanic females and with earlier cigarette and marijuana use among white females. Among black females, however, there was little or no correlation between childhood weight and age of first use of cigarettes, marijuana or alcohol.

By contrast, obese white males and underweight Hispanic and black males were less likely than their peers to start using illegal [substances](#) as adolescents.

"What was most surprising, at least to us, were the different patterns observed for girls and boys," Waldron said. "Again, for girls, earlier substance use was associated with being overweight as a child, especially for Hispanic girls. For boys, unhealthy weight status predicted later substance use."

Previous research on the relationship between weight and adolescent substance use typically pooled together data for boys and girls and for black, white and Hispanic youth, resulting in few or no obvious trends. But it only makes sense to break out the data by racial and ethnic groups and by sex, the IU researchers say, because there are well-documented differences in obesity rates and in rates of substance use among different groups of children and youth.

But additional research will be required to understand the reasons for the differences. The researchers say socio-developmental mechanisms may be a factor: For example, early puberty is associated both with childhood weight and early substance use, but more so for girls.

Also, being obese, overweight or underweight can have consequences for forming peer relationships. And the types of relationships that young people form may influence their opportunities and motivation to experiment with substance use.

The authors say the study can provide guidance for agencies and individuals that work with youth. The findings suggest that Hispanic girls, in particular, could benefit from early screening and education programs aimed at delaying substance use and ultimately reducing the risk of problem use of cigarettes, alcohol and marijuana.

More information: Jennifer C. Duckworth et al, Childhood weight status and timing of first substance use in an ethnically diverse sample, *Drug and Alcohol Dependence* (2016). [DOI: 10.1016/j.drugalcdep.2016.05.006](https://doi.org/10.1016/j.drugalcdep.2016.05.006)

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