

## Oral Session 6

### Research Study

Title: "Electronic Device Usage in Relation to Substance Use in High School Students"

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Category: Public Health; Pediatrics

Keywords: substance-related disorders; screen time; social media; adolescents; substance use

**Introduction and Objective.** Substance use amongst adolescents is a serious problem as it can lead to negative health outcomes and poor academic performance. It is critical to understand what risk factors drive adolescents both to experiment and maintain these risky behaviors. Electronic device usage has received limited examination as a factor contributing to adolescent substance use behavior. Our objective is to assess if electronic device use, measured as screen time, is associated with substance use behavior in U.S. adolescents.

**Methods.** A cross sectional comparative study of the Youth Risk Behavior Surveillance System (YRBSS) 2019 survey was conducted. Separated analyses were conducted to assess the association of screen time ( $\geq 3$  vs.  $< 3$  hours spent using electronic devices for non-school activities per day) and the 3 following outcomes: use of drugs, use of alcohol, and smoking while controlling for potential confounders including age, sex, race, depression, bullying, physical fighting, intimate partner violence, history of sexual assault, exercise habits, and sexual identity, by fitting binary unconditional multiple logistic regression models.

**Results.** A total of 13,177 participants responded to the item regarding screen time. Different subsets of this sample had valid information on each one of the 3 outcomes of interest: 10,154 for illicit drugs; 12,379 for alcohol use and 11,493 for smoking. Prior to adjustment, the odds for drug use were significantly higher among adolescents reporting  $\geq 3$  hrs. of screen time (OR=1.20 95%CI=1.02-1.41), but after adjustment the OR was no longer statistically significant (OR=1.19 95%CI=0.93-1.52). In the case of alcohol and smoking, there were no differences in the odds ratios both prior and after adjustment: for alcohol the unadjusted OR was 1.04 95%CI=0.91-1.18 and the adjusted OR was =1.19 95%CI=0.97-1.36; for smoking the unadjusted and adjusted ORs were 1.04 (95%CI=0.91-1.20) and 1.09 (95%CI=0.91-1.30) respectively.

**Conclusions-Implications.** Our study did not find evidence of an association between increased screen time and various forms of substance use in a representative sample of high school US adolescents. Further research should explore the associations of various subtypes of screen time (video games, television, etc.) and substance use.