

POSTER OF DISTINCTION

Rovner, A., Wang, J., Nansel, T., & Iannotti, R: School food environment and student's dietary behaviors.

ABSTRACT

Background: Foods and beverages consumed at school provide a large portion of children's daily nutrient intake. Aim: To examine the association between foods sold in school vending machines and students' dietary behaviors. Methods: The Health Behavior in School Aged Children (HBSC) in-class survey was administered to a nationally-representative sample of students in 6th to 10th grades during the 2005-2006 school year. Dietary intake was estimated with a brief food frequency scale. School administrators completed survey items assessing their school food environment. Only public schools were included in the analyses. For each food intake behavior, a multilevel regression analysis modeled students (level 1) nested within schools (level 2), with the corresponding foods provided by school vending machine as the main predictor. Control variables included gender, grade, family affluence and school poverty index. Analyses were conducted separately for younger (6th- 8th) and older grades (9th – 10th), using Mplus 5.1. Results: One hundred fifty-two schools (83.1%) consisting of 5930 students (49.2% males, 44.1% Caucasian) had vending machines. Vending machines were found more frequently in schools with older grades. Foods found in the vending machines included fruits/vegetables (44.5%), chocolate/sweets (55.0%), chips (65.6%) and soft drinks (81.0%). Having fruits/vegetables and chocolate/sweets available in vending machines were positively related to the corresponding food intake for younger, but not older, grades. Among younger grades, vending machine content and school poverty explained 70.6% of between-school variation in eating fruits/vegetables, and 71.7% in eating chocolate/sweets. Conclusions: Vending machines are widely available in public schools throughout the US and most contain low nutrient dense foods. Particularly in younger grades, dietary behavior can be affected by the type of foods offered in school vending machines.