
****NEWS FROM THE JOURNAL OF HUMAN RESOURCES****

For Immediate Release

August 3, 2006

Contact:

Dr. Patricia M. Anderson

603-646-2532

patty.anderson@dartmouth.edu

Dr. Kristin F. Butcher

312-322-8122

kbutcher@frbchi.org

Snack Foods in Schools Linked to Greater Body Mass for Some Students

School fund raising through selling sweets and salty, fat-laden snacks at school puts some students—particularly those with overweight parents—at risk of increased body mass, new research published in the *Journal of Human Resources* suggests. The study is the first to use a nationally representative sample to look at the link between the availability of junk food in schools and adolescents' weight.

“Schools tend to sell snack foods, often through cafeterias, school stores and vending machines, when doing so helps their budgets,” says researcher Patricia M. Anderson, Ph.D., professor of economics at Dartmouth College. “We found that middle school and high school students who are exposed to junk food at school tend to have greater body mass, but this was true only for kids whose parents are overweight.”

Among students with overweight parents, a 10 percentage point increase in predicted exposure to junk food was associated with a 2 percent increase in body mass index (BMI*), the researchers found. This 2 percent increase translates into 3.3 extra pounds for adolescents. Averaging across all students—with or without overweight parents—every 10 percentage point increase in predicted junk food exposure was associated with a 1 percent increase in BMI, or about 1.5 extra pounds.

Students with overweight parents may be more susceptible to weight gain because of genetics or their home environments, the authors assert.

“There appears to be a portion of the population that is susceptible to obesity, and the current environment is one that promotes their condition,” write Anderson and co-author Kristin F. Butcher, Ph.D., a research economist at the Federal Reserve Bank of Chicago and associate professor of economics at Wellesley College. “For students with this susceptibility, these school food policies appear to be part of the environment that encourages their propensity to gain weight.”

In their paper, Anderson and Butcher suggest that factors like population growth, school accountability rules and property-tax restrictions may have simultaneously increased schools' need for new funds while

limiting their ability to raise them through traditional means. As a result, many schools today drum up dollars to strengthen core academic programs and to support extras such as field trips, clubs and yearbooks by selling snack foods or signing soft drink and vending contracts.

The researchers used a two-step process to probe the relationship between students' BMI and school food policies for adolescents nationwide. First, they estimated the relationship between financial pressures and the availability and advertising of snack foods at 451 public middle and high schools. They hypothesized that school financial pressures can be assessed by looking at tax and expenditure limits, school accountability measures, state school financing rules, and relative growth in the local school-aged population. Next, they used that estimated relationship to predict whether the availability of snack foods and in-school advertising of such foods was linked to BMI in a nationally representative dataset of 3,482 adolescents that allowed them to control for an array of individual and family characteristics.

Data used for the analysis came from the School Health Policies and Programs Study (SHPPS), National Longitudinal Study of Youth 1997 (NLSY97), and National Health and Nutrition Examination Survey (NHANES).

The researchers found that schools that are under financial pressure are more likely to sell junk food to students, to allow food and beverage advertising to students, and to have "pouring rights" contracts under which the school agrees to sell one brand of soft drinks and receives a percentage of the soft drink revenue. They also found that schools in communities of higher socioeconomic status are more likely than less well-off schools to make junk food available to their students.

School food policies are currently being hotly debated, but very few studies have looked at the direct relationship between such policies and children's obesity, Anderson and Butcher say. Rather, policymakers and others are acting on the "intuitive notion" that ready access to sodas and snacks at school contributes to obesity among American youth.

"We need to look at both the benefits and costs of making snack foods available at school," Anderson suggests. "On the benefit side, schools can raise a lot of money through snack food sales to increase their budgets for important programs. On the cost side, junk food exposure at school is associated with increased body mass, but this appears to be the case only for students whose parents are overweight. Based on the latter finding, policymakers and others might be disappointed if they are expecting reductions in junk food availability in schools to be the 'magic bullet' in the fight against adolescent obesity."

In the year 2000, students at 96 percent of U.S. public and private high schools, 67 percent of middle schools, and 27 percent of elementary schools had access to food or soda vending machines, according to the SHPPS. Also in 2000, 26 percent of high schools served a brand-name fast food—up from 19 percent in 1994.

The study results can be found in the Summer 2006 issue of the *Journal of Human Resources*, published by the University of Wisconsin Press.

**BMI is a widely used measure of body composition that is calculated using a person's height and weight.*

[Return to JHR Home Page](#)

Last updated: August 10, 2006