



POLICY PERSPECTIVE

THOUGH IT WAS NOT THE ORIGINAL INTENTION, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972 HAS INCREASED PHYSICAL ACTIVITY AMONG SCHOOL-AGED CHILDREN. ACCORDING TO THIS STUDY, IT HAS ALSO REDUCED WEIGHT AND BODY MASS INDEX AND IMPROVED BODY COMPOSITION. THIS RESEARCH PROVIDES CLEAR EVIDENCE THAT SCHOOL-BASED PHYSICAL ACTIVITY POLICIES CAN BE USED TO REDUCE RISING LEVELS OF CHILDHOOD OBESITY.

Background

There is a widespread belief that school-based physical activity programs and policies will have beneficial effects on children's physical fitness and obesity levels. In fact, as of October 2006, 34 states introduced or carried over obesity control legislation that involves modifying school physical education or physical activity requirements.¹ While it seems logical that this type of legislation would help reduce the growing childhood obesity epidemic, there is little direct evidence to support the claim that these policies will benefit the health of school-aged children. The enactment of Title IX of the Education Amendments of 1972 provides a unique way to study the effects of a school-based policy intervention on physical activity levels and related health indicators, including body mass index and body composition, on school-aged children and teens. Title IX specifies that "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."² In particular, this legislation had important implications for the physical activity of school-aged girls, adolescents and young women. Statistics regarding sports participation show that dramatic increases were seen in adolescent girls' participation in high school sports after passage of the legislation.

In their study entitled "Effects of Title IX and Sports Participation on Girls' Physical Ability and Weight,"³ Robert Kaestner and Xin Xu investigated the effects of increased participation in high school sports on physical activity levels, body mass index and body composition of girls and adolescent women. Title IX legislation provided a unique situation for a "natural experiment" investigating the effects of increases on girls' sports participation and weight and health outcomes. Using data from the First and Second National Health and Nutritional Examination Surveys (NHANES I and II) and the National Federation of State High School Associations (NFSHSA), the researchers used multivariate regression modeling techniques to examine the links between increases in high school sports participation, physical activity and anthropometric measures (including weight, body mass index and skinfold thickness) in women ages 12 to 17.

Findings

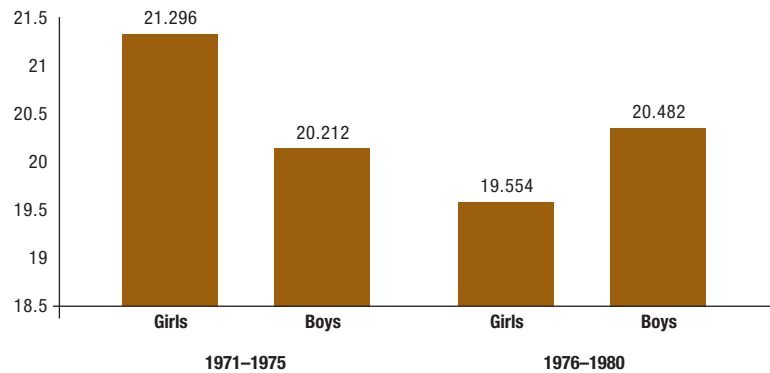
- **Adolescent girls' increased participation in high school sports led to decreased weight and body mass index.** An examination of physical activity levels after the enactment of the Title IX legislation showed increases in sports participation of girls aged 12–17. Increased sports participation resulted in increased physical activity levels among girls and in parallel improvements in girls' weight and body mass index.

1 Health Policy Tracking Service. *Balance: A Report on the State Action to Promote Nutrition, Increase Physical Activity and Prevent Obesity*. Princeton, NJ: Robert Wood Johnson Foundation, 2007.

2 US Department of Education. "Title IX and Sex Discrimination," 2000. http://www.ed.gov/about/offices/list/ocr/docs/tix_dis.html http://www.ed.gov/offices/OCR/docs/tix_dis.html, Website accessed June 2, 2003.

3 Kaestner R and Xu X. "Effects of Title IX and Sports Participation on Girls' Physical Activity and Weight. *Advances in Health Economics and Health Services Research*, 17: (December 2006).

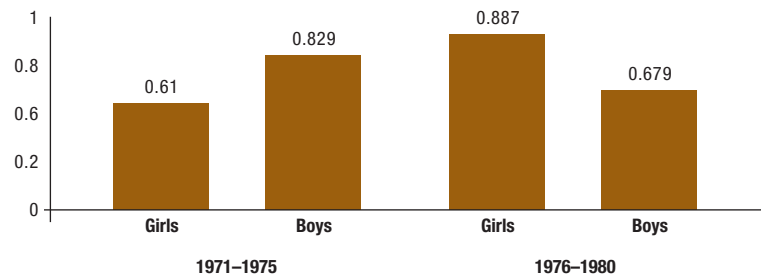
Body Mass Index



Note: This figure shows the changes in body mass index at two time periods in the states with relatively large increases in girls' sports participation.

- **Changes resulting from the enactment of the legislation were not trivial.** When comparing sports participation before and after enactment of the Title IX legislation, the increase in physical activity was substantial. The 20 percentage point increase in girls' participation in sports was associated with a 24 percent increase in physical activity. These changes in activity levels were associated with marked declines in body mass index and improvements in the probability of being overweight and obese.

Physical Activity



Note: This figure shows the changes in physical activity at two time periods in the states with relatively large increases in girls' sports participation. Physical activity is expressed as a dichotomous variable with 1 for much exercise and 0 for little, no or moderate exercise.

- **The effects of Title IX on girls' weights varied based on family income levels (high versus low) but not based on location (urban versus rural).** Title IX resulted in increased sports participation and physical activity in adolescent girls. Improvements in weight and body mass index, however, were seen only in those girls from high income families (defined as having a household income above \$10,000). No geographic differences were seen in the effects of sports participation and activity levels on weight or body mass index when comparing students from urban and rural locations.

—Deanna Lewis

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