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Childhood Obesity: What Role Does Public Policy Play?

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I am just completing the first semester of my Junior year in the nursing program at the University of Kentucky. I have been a research intern under the guidance of Fran Hardin-Fanning for the past two semesters, and I have been assisting her with research concerning the prevention of cardiovascular disease, most notably in low-income rural populations in Kentucky. I have performed reviews of the literature concerning public policy's involvement in the prevalence of obesity in adults and children in the United States. I presented my research concerning public policy and adult obesity/cardiovascular disease with a poster at this spring's College of Nursing scholarship showcase. I have also done some research involving strategies for behavior change concerning smoking cessation, especially in low-income rural communities. I will be further assisting my faculty mentor next semester in a study that involves comparing dietary intake with cholesterol levels and BMI in several communities in eastern Kentucky. Outside of the nursing program and research I work full time at UK Hospital as a nursing care technician on the fifth floor. I also really enjoy being outside and working with my horse and at the farm where he is boarded.

Faculty Mentor: Professor Frances Hardin-Fanning, College of Nursing

Shannon Turbeville, a junior in the University of Kentucky College of Nursing baccalaureate program, has been a participant in our research intern program for the past two semesters. Shannon recently presented her poster "The Politics of Obesity" at the College of Nursing Student Scholarship Showcase at which she was the only undergraduate student who was the sole poster author. Shannon is an extremely intelligent student and has shown significant potential to become a nurse scholar. She is devoted to the problem of childhood obesity and plans to continue her internship program for the next two years. Her submission to *Kaleidoscope* contains important information that should be disseminated to other nursing students and health care professionals in the fight against this growing public health problem.



Childhood Obesity: What Role Does Public Policy Play?

Abstract

The purpose of this review is to explore public policies that impact the health of American children and adolescents. The National School Lunch Program (NSLP) has a significant impact on school-age children's nutritional intake. Foods provided by the NSLP have been analyzed for their nutritional content. Although these foods did not exceed the recommended total caloric intake, they were below other nutritional standards, and these shortcomings are primarily attributable to cultural preferences. Other important contributors to childhood obesity are unregulated school food items sold in vending machines. These items are becoming increasingly more prevalent in schools. Public policy is an appropriate method of curbing the growing incidence of childhood obesity, including the mandatory implementation of school wellness policies for all schools that participate in the NSLP. Many school districts have had success in implementing these programs, but implementation is difficult in low-income rural schools. The wellness programs with the greatest success have been those at the local level, such as the CATCH program in Texas and the Pathways program in American Indian communities. The federal government should be aggressive in creating more healthy school food environments, which might help reduce the prevalence of childhood obesity.

Introduction

Two of the main populations affected by obesity are children and adolescents. The CDC (Centers for Disease Control) reports that 16.3% of children in the U.S. are obese or in the 95th percentile of the current BMI (Body Mass Index) for age growth charts (CDC, 2009). Obesity during childhood can ultimately lead to obesity in adulthood, an important factor behind many health problems such as cardiovascular disease, type II diabetes, stroke, and many cancers. Most adults find it quite difficult to change their dietary and lifestyle habits late in life; if obesity can be prevented in childhood, so can many of the co-morbidities associated with obesity. Children and adolescents spend much of their time each day in school, and it is the food environment there that can be the most influential in their dietary choices.

The federal government funds the National School Lunch Program (NSLP), which is regulated by dietary guidelines established by the Department of Health and Human Services. However, these guidelines are over ten years old and, with the growing rates of childhood obesity, new regulations may be necessary to ensure that children are receiving nutritious meals. Other factors that contribute to school-age childhood obesity are vending machines, school fundraisers, and a la carte items, which have an immense impact on children's food choices, and are not subject to any sort of dietary regulation. The federal government has mandated that by 2006 all schools that participate in the NSLP must have a school wellness program in place to begin to correct these nutrition and lifestyle risk factors.

National School Lunch Program

The National School Lunch Program is one of the three most utilized federal government food assistance programs, together with the Food Stamp Program and WIC (Women, Infants, and Children). It provides a nutritionally balanced, low-cost, or free lunch to children each school day in public and nonprofit private schools, based on the 1995 Dietary Guidelines for Americans. The program was established under the National School Lunch Act in 1946. However, there are now new dietary guidelines for Americans, established in 2005, and because childhood obesity rates have doubled and adolescent obesity rates have tripled in recent years, researchers have assessed the nutritional components of meals offered via the NSLP.

In Fall, 2003, Graves et al. (2008) analyzed the nutritional content of school lunches in four rural east Tennessee schools. Meals from the School Meals Initiative for Healthy Children, established in 1995, were also analyzed. These schools' breakfast programs were assessed for their contribution to children's daily intake of calories, fat, and fiber. Although the breakfasts did

not exceed the recommended number of calories for school breakfasts, they did exceed the recommended percent of calories from fat and saturated fat by 13% and 5% respectively. The breakfasts also did not meet the recommended fiber requirements for a school breakfast meal. Biscuits, gravy, sausage, orange juice, and 2% milk were the most often served menu items, most of which are high in fat. The researchers proposed that these menu choices were culturally significant and accepted, and it would be difficult to find healthier alternatives to these menu choices without completely replacing them. Replacement of these menu items would require changes in the diet patterns of this rural Appalachian culture, but what better place to start than with the schoolchildren who are not yet so culturally set in their ways?

School Food Environment

Schools in other locations may be able to better meet guidelines set for school lunches and breakfasts, but there are other food items offered in school that are not subject to any sort of nutrition regulations. These items include snacks sold in vending machines, food sold through school fundraisers, and other a la carte items. These food options can greatly influence the nutrition of schoolchildren due to the amount of time each day they spend in school as well as the great percentage of their daily food intake being consumed at school.

The association between soft drink availability in schools and overall soft drink consumption for elementary school children in the United States was recently analyzed. Almost 40% of elementary schools offered soft drinks and, for children who consumed soft drinks, half of their soft drink consumption took place at school. The researchers suggested that voluntary sales restrictions could be effective in decreasing soft drink consumption of schoolchildren and an agreement has been reached between the Alliance for a Healthier Generation and the American Beverage Association, Cadbury, Coca-Cola, and PepsiCo that stipulates that by the beginning of the 2009-2010 school year, no soft drinks will be available during school hours in public elementary schools (Fernandes, 2008). This agreement is part of a new policy known as the National School Beverage Guidelines, which has taken roughly three years to implement.

School food policies and practices, availability of competitive foods, the presence of school wellness policies, and the content of offered school lunches were analyzed in a nationally representative population of schools by Finklestein et al. (2008). Seventeen factors were used to characterize these school environments as unhealthy or healthy. There were significant decreases in school food environment scores going from elementary to high schools, most probably linked

to the higher prevalence of vending machines and other unregulated a la carte items. The authors suggest that with proper regulation of these competitive food items, it may be possible for secondary schools to achieve healthier school environments. In fact, federal legislation was passed in 2004 requiring each local educational agency participating in the NSLP to establish a local school wellness policy by the 2006 school year.

These wellness policies must include goals for nutrition education, physical activity, and other school-based activities; include nutrition guidelines for all foods available during the school day; assure that guidelines for reimbursable school meals shall not be less restrictive than those of the NSLP; establish a plan for measuring implementation of the local wellness policy; and involve parents, students, and representatives of the school food authority, the school board, school administrators, and the public in the development of the school wellness policy (USDA, 2004).

Local School Wellness Policies

The local wellness policies established by Pennsylvania public schools in response to this legislation were analyzed in 2007. Researchers completed policy checklists at Pennsylvania public school districts that sponsored school meal programs, and found 100% of those districts to have a wellness policy in place aimed at reducing childhood obesity. The Pennsylvania school board provided an optional template for each of their school districts to aid them in establishing a wellness policy that met each of the policy mandate requirements set by the legislation. Almost all school districts (85.6%) met all of these requirements (Probart et al., 2008). It is evident that this federal policy has been effective in causing policy change on a local level, but it remains to be seen whether or not these wellness policies will effectively curb the growing childhood obesity problem.

Schools in lower-income and rural areas often have difficulty in meeting the suggested school nutrition and physical activity mandates of the legislated wellness policy. Middle and high school principals in Utah were surveyed via the 2006 School Health Profiles. School wellness policies differed based on enrollment in the free or reduced-price lunch program (economic circumstances) or on geographic location (rural vs. urban). Utah school districts with the highest percentage of free and reduced-price lunch participants, as well as rural school districts, offered fewer healthful food choices from vending machines and school stores, in addition to many other inconsistencies from the prescribed school wellness policies. The school policy improvements in these socioeconomically disadvantaged areas are of particular concern because no funding has been provided to implement or evaluate the USDA

School Wellness initiative in these underprivileged areas (Nanney, Bonner, and Friedrichs, 2008).

The USDA wellness policy implementation is one of the most recent government efforts toward reducing the childhood obesity problem in the United States. There have, however, been several other local efforts prior to the initiative by the USDA. The CATCH (Coordinated Approach to Child Health) Program has been implemented in school districts in 24 states nationwide to help children achieve good health for their entire lifetimes. The CATCH program, funded by the CDC, combines health education, health promotion by staff, health and nutrition services, health counseling, physical education, a healthful school environment, and family and community involvement to promote child health.

The influence of a program such as this is dependent upon efficacy and the extent to which the program reaches its target audience. By surveying the foodservice administrators, all elementary schools in Texas that had employed the CATCH program were analyzed to examine the adoption and implementation of the program. This coordinated school health program had been successfully implemented in the participating schools; all schools surveyed had implemented an average of 80.44% of the guidelines. Another Texas based initiative is the legislation passed by the Texas state senate requiring all school districts in the state to implement an elementary school coordinated school health program that includes health education, physical education, nutrition services, and parental involvement by September 1, 2007 (McCullem-Gomez et al., 2006).

A program implemented on an even smaller scale for a vulnerable population is the Pathways program, an obesity prevention program for Native American schoolchildren involving seven tribes in Arizona, South Dakota, Utah, and New Mexico. This project was funded by the National Heart, Lung, and Blood Institute in response to recognition of the alarming rates of obesity, heart disease, and diabetes among Native Americans. The overall focus of the program and supporting materials were designed to prevent childhood obesity through a classroom curriculum, a family component, a food service component, and a physical activity component, much like the other wellness initiatives now employed nationwide (Center for Health Promotion and Disease Prevention, n.d.).

Conclusion

The National School Lunch Program was created to address nutritional needs of children and adolescents, but in today's world, in which competitive foods and sedentary lifestyles are prevalent, other measures must be taken to combat childhood obesity. One of the most apparent changes that should be made is for the NSLP

to attempt to maintain nutritional guidelines that are current with the latest research and recommendations. The federal government has also required all school districts nationwide that participate in the NSLP to create wellness programs. Many schools are in compliance with this mandate although schools with vulnerable populations, such as rural and poverty-stricken areas, have had a harder time complying, because no funding has been provided to implement or evaluate a school wellness program in these underprivileged areas. It may take the application of a more population-specific program to combat the cultural and economic barriers present in these communities, such as the Pathways and CATCH programs already employed in other parts of the country.

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