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Can Schools Prevent Childhood Obesity?

Introduction

Obesity is a serious epidemic affecting adults and children across the country. Currently around 17% of children between the ages of 2-17 years old are classified as obeseⁱ. Childhood obesity is particularly dangerous because individuals who are overweight or obese in childhood are more likely to remain overweight/obese in adulthood. Obesity also disproportionately affects low-income minority children compared the rest of the population. Thus it is imperative to find successful interventions for combatting childhood obesity.

In 2013, only 17.7% of high school aged females and 36.6% of high school boys participated in the recommended 60 minutes of daily physical activity. Despite the existence of physical education (PE) in schools, only 24% of girls and 35% of boys were attending daily PE classes.ⁱⁱ Considering that, on average, a child spends at least 6.5-7 hoursⁱⁱⁱ a day in school, more priority needs to be placed on physical activity and physical education in schools.

Current education legislation is more focused on academic achievement and nutrition, ignoring the importance of physical activity. With policies like The Healthy, Hunger-Free Kids Act of 2010 and No Child Left Behind, poor nutrition and the achievement gap are being addressed, but physical activity is not. In fact, the No Child Left Behind legislation has forced many schools to cut physical education funding in favor or more funding for academics^{iv}. Particularly for low income students for whom access to physical activity equipment, safety in neighborhoods, and availability of green space, are all barriers to increased

physical activity, increased physical activity in schools needs to be a priority.

The purpose of this brief is to encourage the use of schools as a tool for combatting childhood obesity. The revamping of schools physical activity requirements through the introduction of after-school physical activity programs could go a long way in combatting obesity, particularly for those most affected by it.

Background

Obesity is a serious health problem for many adults and children in America. In the last 40 years, the prevalence of obesity has more than doubled.^v For children, this means that 1 in every 6 children is obese and 1 in every 3 children is overweight or obese. Being obese is linked to many health problems such as diabetes, heart disease, stroke, high blood pressure, some cancer, and more^{vi}. Yet it wasn't until 2013 that the American Medical Association decided to officially classify obesity as a disease^{vii}. Beyond the risk for other physical diseases, childhood obesity can also have a very negative effect on the social development of the obese child. Children that are obese have been shown to be less desirable as friends than their normal weight peers. Body image and self-esteem are also established and developed during adolescence, and studies have shown that being obese can cause a child to have both low self-esteem and a negative body image.^{viii}

Thus if being obese puts people at risk for all these horrendous diseases, and being obese as a child increases your risk of being obese as an adult, it is highly imperative that the nation implement as

many measures as possible to combat this disease.

The first question then becomes, why has the prevalence of obesity increased so much? Two highly cited reasons are the increased intake of sugar and saturated fats and the reduced level of physical activity. The increased availability of entertainment via sedentary activities (such as TV, computers, video games, cellphones, etc) has led to children spending 75% of their awake time being inactive and only spending about 12 minutes a day doing vigorous physical activity^{ix}. Studies have shown that children who watch 4 or more hours of TV daily (which represents about 26% of all US children and 42% of African American children) tend to have more body fat and higher BMI scores^x.

Another key question is, who is being affected the most? Childhood obesity rates have stayed relatively constant since 2008, but have not affected the whole population in the same way^{xi}. Specifically obesity rates tend to be higher among low income and minority populations. The prevalence of obesity rose 2x as fast in minority populations as compared to white populations^{xii}. Rates are particularly highest among African American and Mexican youth. High rates of obesity are also highly associated with urban environments, which often have high populations of low-income minorities. This could be because low-income urban environments have easy access to fast food and less access to nutritious fruits and vegetables. Additionally there is often a lack of green spaces in urban environments and a concern for safety, which are significant barriers to increased physical activity in children^{xiii}.

Literature Review

Thus schools could be ideal intervention points for the elimination of many of the barriers to physical activity that

many youth face. The mission of the Department of Education is to “ promote student achievement and preparation for global competitiveness by fostering educational excellence^{xiv}”. While the emphasis is generally on the skills needed to communicate, think critically, read proficiently, and quantitative computations, it can be said that schools should go beyond those criteria to more basic skill sets such as eating well and getting enough exercise which are equally important for livelihood.

If the moral obligation argument isn't convincing enough, there is also the fact that reducing obesity rates is beneficial for the school also. Studies have shown that there is a positive correlation between physical fitness level and academic achievement.^{xv} On one hand this correlation can be associated with the psychological benefits of being a physically fit adolescent. The social stigma of being obese as an adolescent can take a toll on the psyche of youth and therefore affect their academic performance.^{xvi} However the benefits are not solely psychological. Students who passed more fitness tests had increased odds of passing academic achievement tests administered in both Massachusetts and Illinois.^{xvii} This likely happens because, as studies have shown, physical activity can enhance learning efficiency^{xviii}.

In addition to just improved academic rates, participation in physical activity can help the schools in other ways. Involvement in extracurricular activities, such as sport teams, tends to lead to reduce dropout rates among students and improved behavior and attention in the classroom^{xix}.

Despite the positive correlation between physical activity and academics, many schools are choosing to reduce or completely eliminate their physical education programs. Studies have shown that participation in physical education classes have decreased significantly.

Between 1991 and 2003, rates of participation of high school students in PE decreased from 41.6% to 28.4%. Additionally, less and less kids are using active forms of transportation to get to school, opting for cars or buses over walking or riding a bike. Participation rates also differ along racial and gender lines. Black and Hispanic children, as well as female children, are less likely to participate in physical activity than their white male peers^{xx}.

As stated before, the prevalence of obesity is particularly pertinent among low-income children. While it may seem like eating well and increasing physical activity would be easy solutions for these children, it can actually be very difficult. On the physical activity side, the lack of appropriate space is a critical limiter. Additionally, safety concerns for the neighborhood are also a deterrent. Many low income families also can't afford physical activity equipment (such as bikes or skateboards). All of these are reasons that support the idea of utilizing schools to enable these families to help their kids eat well and achieve necessary level of physical activity^{xxi}.

Current policy initiatives such as SNAP (Supplemental Nutrition Assistance Program) and the Healthy Hunger-Free Kids Act of 2010, are working together to enable low-income families to have access to nutritious foods through food stamps and healthier school foods. Thus we have definitely made appropriate strides to combating the nutritional component of obesity, but the next step needs to be about physical activity.

Policy Recommendation

Increased physical activity through afterschool programming should be the next educational policy implemented. Currently, many schools are cutting their physical activity programs due to budget concerns.^{xxii}

This is particularly problematic because studies have shown that reducing time for other academic classes to provide one hour of daily physical education did not lead to a decrease in academic performance. More importantly, eliminating physical education to provide extra time to other academic classes did not result in enhanced performance^{xxiii}. Thus these studies are showing that cutting physical education classes is not beneficial in any manner.

The afterschool program component is particularly important because it can help combat many of the conditions that are attributed to sedentary behavior and obesity. Specifically, studies have shown that allowing children to stay afterschool can reduce the tendency of children to just go home and watch TV or engage in other purely sedentary activities after school. Specifically, these studies have also found that reducing access to sedentary activities promotes the likelihood of students engaging in physical activities^{xxiv}. Thus having these afterschool programs can be seen as reducing access as many parents would likely encourage their children to participate.

Additionally, it is important for these schools to provide structured afterschool programs for these kids. Studies have shown that providing kids with equipment for physical activity promotes the level of physical activity engaged in^{xxv}. For safety concerns, these after school programs will provide a safe place for children to be active together. There are also studies that show that children who engage in physical activity are more likely to consume fruits and vegetables giving increased access to physical activity a positive cyclical nature.^{xxvi} Thus through afterschool physical activity programs, schools will be reducing sedentary behaviors while also helping many students overcome their barriers to physical activity.

Links to other resources

1. Let's Move- Michelle Obama
<http://www.letsmove.gov/>
2. Healthy Hunger-Free Kids Act
<http://www.fns.usda.gov/school-meals/healthy-hunger-free-kids-act>
3. No Child Left Behind
<http://www2.ed.gov/nclb/landing.jhtml>

ⁱ Childhood Obesity Facts. *Centers for Disease Control and Prevention*. 2014. Available at: <http://www.cdc.gov/obesity/data/childhood.html>. Accessed March 14, 2015.

ⁱⁱ Physical Activity Facts. *Centers for Disease Control and Prevention*. 2014. Available at: <http://www.cdc.gov/healthyouth/physicalactivity/facts.htm>. Accessed March 14, 2015.

ⁱⁱⁱ Average length of school year and average length of school day, by selected characteristics: United States, 2001-02. *National Center for Education Statistics*. 2002. Available at: http://nces.ed.gov/surveys/pss/tables/table_15.asp. Accessed March 14, 2015.

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Fatness Among Children: Results From the Third National Health and Nutrition Examination Survey. *JAMA: The Journal of the American Medical Association*. 1998;279(12):938-942. doi:10.1001/jama.279.12.938.

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