

Childhood Obesity and Its Effects on Students' Academic Performance

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“When you are talking about morbidly obese kids, zero percent will grow up to be normal-weight adults.”

Randy Seely¹

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I. Introduction

This paper addresses childhood obesity and its correlating effects on an obese child's academic development. The terms and studies outlined in this paper specifically address the issue of obesity in children. It is important to state this distinction because obesity among children is defined and measured differently than it is among adults. Before discussing the differences in the academic development of non-obese children and obese children, I will begin by defining the following terms: "Body Mass Index (BMI)," "BMI-for-age," "Overweight," "Percentile Rates," and "Childhood Obesity."

II. What is Obesity?

BMI is an indicator of the amount of body fat a person has based on his/her height and weight.² For children, the term is referred to as BMI-for-age because, unlike adults, a child's BMI is also gender and age specific. Once a child's BMI is determined, it is ranked according to a percentile rating.³ The percentile rating compares a particular child's BMI with other children of the same age and gender across the United States.⁴

Overweight is the term used by the Centers for Disease Control (CDC) for children with BMIs "at or above the 95th percentile for children and teens of the same age and sex."⁵ Obesity is the term used by the CDC for adults who have BMIs "equal to or greater than the 95th percentile" and is not dependent on sex.⁶ However, most people refer to "childhood obesity" as the prevalence of children and teens

² Ctr. for Disease Control and Prevention, About Child & Teen Bmi, http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html (last visited June 18, 2016).

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

with BMIs at or above the 95th percentile.⁷ For simplicity, the use of the terms “obese” and “overweight” in this paper refer to a child who has a BMI at or above the 95th percentile. According to a survey conducted in 2011-12 by the CDC, 17% of children in the U.S. aged 2 to 19 years old were overweight.⁸ The study reports 22.8% of children aged 2 to 5 years were overweight and 34.2% of children aged 6 to 11 years were overweight.⁹ But some researchers believe the prevalence of childhood obesity is at epidemic levels.¹⁰ For instance, a 2013 survey of high school children in Texas revealed that 15.6% were overweight and 15.7% were obese, which is slightly higher than the national rate of 13.7%.¹¹ In 2015, the same survey found high school children in Tennessee to be 17.1% overweight and 18.6% obese.¹² African American and Hispanic children experience a higher prevalence of childhood obesity than other racial groups.¹³

⁷ CTR. FOR DISEASE CONTROL AND PREVENTION, *Defining Childhood Obesity: BMI for Children and Teens*, <http://www.cdc.gov/obesity/childhood/defining.html> (last visited June 18, 2016).

⁸ Cynthia L. Ogden et al., *Prevalence of Childhood and Adult Obesity in the United States, 2011-2012*, 311 J. AM. MED. ASS'N 806 (2014); CTR. FOR DISEASE CONTROL AND PREVENTION, *Prevalence of Overweight Among Children and Adolescents: United States 2011-2012*, <http://www.cdc.gov/obesity/data/childhood.html>.

⁹ See *Id.* at Table 3.

¹⁰ National Ctr. for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, *The Obesity Epidemic and United States Students*, CTR. FOR DISEASE CONTROL AND PREVENTION, http://www.cdc.gov/healthyyouth/data/yrbs/pdf/us_obesity_combo.pdf.

¹¹ CENTERS FOR DISEASE CONTROL AND PREVENTION, *Youth Online: High School YRBS Texas 2013 and United States 2013 Results*, <https://nccd.cdc.gov/Youthonline/App/Results.aspx?LID=TX> (last visited June 18, 2016).

¹² CENTERS FOR DISEASE CONTROL AND PREVENTION, *Youth Online: High School YRBS Tennessee 2015 and United States 2015 Results*, <https://nccd.cdc.gov/Youthonline/App/Results.aspx?LID=TN> (last visited June 18, 2016).

¹³ See generally May Nawai Lutfiyya et al., *Overweight and Obese Prevalence Rates in African American and Hispanic Children: An Analysis of Data from the 2003-2004 National Survey of Children's Health*, 21 J. AM. BD. FAMILY MED. 191 (2008), http://www.medscape.com/viewarticle/585206_4.

The figures are even more sobering when one considers the history of obesity in children. In 1971 only 4% of 6-11 year-old kids were obese; by 2004, the figure had leapt to 18.8%.¹⁴ In the same period, the number rose from 6.1% to 17.4% in the 12-19 year-old group, and from 5% to 13.9% among kids ages 2-5.¹⁵

III. What is Childhood Obesity?

The headlines about the obesity epidemic in America are prevalent. It has become a problem that touches each and every American in some way because of the huge costs that are weighing all of us down.¹⁶

Burgeoning health problems in a large sector of the population means increased health care and insurance costs borne by the public as a whole. A recent study funded by the U.S. Centers for Disease Control and Prevention estimated the direct annual medical costs of overweight and obesity at almost \$93 billion (9.1 of total national medical costs), with about half of that being paid for by the government through Medicaid and Medicare. Private first-party health insurance also spreads the costs of care from those who are overweight to those who are not.¹⁷

In America we are facing an epidemic of astronomical proportions. The size of our waistlines is growing exponentially. Because of these growing weight problems, there has also been an increase in the number of weight-related diseases. Childhood obesity is a serious problem that infringes upon physical and psychological health and

¹⁴ Jeffrey Kluger, *How America's Children Packed on the Pounds: It Wasn't Easy to Produce a Generation of Overfed Kids—But It Might Well Have Been Inevitable*, TIME Jun. 12, 2008, at 68.

¹⁵ *Id.*

¹⁶ Adam Benforado, Jon Hanson & David Yosifon, *Broken Scales; Obesity and Justice in America*, 53 EMORY L.J. 1645 (2004).

¹⁷ *Id.* at 1650-51.

foreshadows severe health consequences in adulthood.¹⁸ In fact, in 2012, the CDC published statistics demonstrating that more than one-third of obese children and adolescents remained obese as adults.¹⁹ The risk of adult obesity was twice as great for obese children and also was greater for children who were obese at older ages.²⁰

While legislators, government agencies, physicians, and public health advocates are trying to counteract the weight gain epidemic in America, they continually look to the school systems as a starting point to promote good nutrition, proper eating, and physical activity. The U.S. Surgeon General has identified the obesity epidemic as “one of the greatest health problems facing the nation today.”²¹ Public schools are recognized as a key setting for public health strategies to prevent and decrease the prevalence of overweight and obesity.²² Unfortunately, schools often promote the obesity epidemic by serving unhealthy food and beverages in school cafeterias.²³

It is assumed that schools have a duty to maintain a safe and healthy environment for their students. Schools have a social responsibility to provide healthy food to their students because students are generally mandated by most jurisdictions to remain on the campus for lunch. Additionally, schools are deemed to act in *loco parentis*, thus having the duty to act as a reasonable parent in making decisions that affect the health

¹⁸ CTR. FOR DISEASE CONTROL AND PREVENTION, *Health Effects of Childhood Obesity*, <http://www.cdc.gov/healthyschools/obesity/facts.htm> (last visited June 18, 2016).

¹⁹ CTR. FOR DISEASE CONTROL AND PREVENTION, *Childhood Obesity Facts*, <http://www.cdc.gov/healthyschools/obesity/facts.htm> (last visited June 18, 2016).

²⁰ See David S. Freedman et al., *The Relation of Childhood BMI to Adult Adiposity: The Bogalusa Heart Study*, 115 PEDIATRICS 22 (2005).

²¹ Howell Wechsler et al., *The Role of Schools in Preventing Childhood Obesity*, CTR. FOR DISEASE CONTROL AND PREVENTION (2004), http://www.cdc.gov/healthyyouth/physicalactivity/pdf/roleofschools_obesity.pdf.

²² *Id.*

²³ *Id.*

and well-being of their students.²⁴ Schools are effectively breaching this duty by serving and endorsing fast food, beverages, and unhealthy snacks in order to generate a profit from manufacturers of such products.²⁵

IV. The Current Context

The causes of obesity are complex and reflect food and lifestyle choices that ultimately result in an energy intake that exceeds expenditure.²⁶ There are many key players when assigning responsibility to a child's activity and food choices. Many argue that the most important participants in creating a healthy lifestyle for a child are the child and the child's parents.²⁷ This was the defense raised in a very controversial lawsuit filed in 2002 when the popular fast-food chain, McDonald's, was sued by a group of obese children who claimed that practices by McDonald's in making and selling its products were deceptive and that the deception caused minors consuming the products to injure their health by becoming obese.²⁸ Federal District Judge Thomas Sweet

²⁴ Caroline Fabend Bartlett, *You Are What You Serve: Are School Districts Liable for Serving Unhealthy Food and Beverages to Students?*, 34 SETON HALL L. REV. 1054, 1056 (2004).

²⁵ *Id.*

²⁶ Ruth S. M. Chan & Jean Woo, *Prevention of Overweight and Obesity: How Effective is the Current Public Health Approach*, 7 INT'L J. ENV'T RESEARCH PUB. HEALTH 765 (2010).

²⁷ *Healthy Eating Starts with Parent Role Models*, DAIRY COUNCIL OF CALIFORNIA (last visited Feb. 2, 2017), <http://www.healthyeating.org/Healthy-Kids/Eat-Play-Love/Article-Viewer/Article/271/healthy-eating-starts-with-parent-role-models.aspx>.

²⁸ *Pelman v. McDonald's Corp.*, 237 F. Supp. 2d 512 (S.D.N.Y. 2003).

"Parents brought action on behalf of children against fast-food corporations and restaurants, alleging violations of state consumer protection laws and negligence in connection with children's over-consumption of fast-food products. On plaintiffs' cross-motion to remand to state court, and on defendants' motion to dismiss, the District Court, Sweet, J., held that: (1) district court held diversity jurisdiction over action; (2) parents failed to allege specific deceptive acts or omissions; (3) defendants owed no duty to warn

dismissed the plaintiffs' case, saying, "If a person knows or should know that eating copious orders of super-sized McDonalds' products is unhealthy and may result in weight gain. . . it is not the place of the law to protect them from their own excesses."²⁹

While the trial court dismissed the suit with leave to amend in 2003, in 2005 it was reinstated by the Court of Appeals.³⁰ The burden of proof in New York is low and requires only that a plaintiff seeking to recover show that the practice complained of was objectively misleading or deceptive and that he had suffered injury "as a result" of the practice.³¹ The case was brought before the district court again in 2010, with plaintiffs moving for class certification.³² The motion was denied.³³

For a while, there were many eager eyes watching the obesity case against McDonald's as it unfolded in the courts. Depending upon the outcome of the case, many onlookers believed there could have been a floodgate of litigation against restaurants and fast-food chains nationwide. And once litigation had been instituted against restaurants and fast-food chains for making children obese, where else would that trail of litigation lead? Could American schools be next in the new wave of tobacco-type litigation? While 26 states have passed legislation limiting the civil liability of restaurants for an individual's weight problem that results from long-term consumption of food or beverage,³⁴ there are many questions

consumers of products' well-known attributes; and (4) parents failed to allege facts demonstrating that products were addictive. Defendants' motion granted."

²⁹ *Id.* at 533.

³⁰ *Pelman v. McDonald's Corp.*, 396 F.3d 508 (2d Cir. 2005).

³¹ *Id.* at 511.

³² *Pelman v. McDonald's Corp.*, 272 F.R.D. 82 (S.D.N.Y. 2010).

³³ *Id.*

³⁴ Jeff Guo, *These 26 States Won't Let You Sue McDonald's for Making You Fat. The Surprising Consequence of Banning Obesity Lawsuits*, WASH. POST (May 28, 2015),

https://www.washingtonpost.com/blogs/govbeat/wp/2015/05/28/these-26-states-wont-let-you-sue-mcdonalds-for-making-you-fat-the-surprising-consequence-of-banning-obesity-lawsuits/?utm_term=.96a74892b07b.

and dilemmas that schools are also faced with in this age of obesity in school children. Rather than focus on potential litigation, schools should instead take this as an opportunity to evaluate their current lunchrooms. This analysis should prompt changes such as providing healthier foods in their cafeterias, requiring physical education classes, and teaching children about the importance of eating nutritious foods and daily activity to maintain a fit and healthy body and mind.

Following the McDonald's case, legislative bodies began enacting laws to require the fast-food and restaurant industry to disclose the calorie content for all menu items. In 2006, New York City passed an ordinance "mandating the disclosure of calorie content directly on restaurant menus" to address the obesity epidemic in New York City. N.Y. City Health Code § 81.50 (2006).³⁵ Vermont and Montgomery County, Maryland, passed similar ordinances as well.³⁶ Ultimately, the federal government also addressed the issue by including a provision within the Affordable Care Act that amended sections of the Federal Drug & Cosmetic Act requiring restaurant chains to disclose the calorie content of food items within the menu.³⁷ While most restaurants have begun listing calorie content within their menus, the FDA has chosen not to begin enforcing the new provision. Currently, restaurants will not be required to comply until 2017.³⁸

V. The School Lunchroom of Yesterday

When evaluating why the lack of proper nutrition is such a problem for school children, it is important to discuss the history of food policies in American schools. In the early

³⁵ See Jodi Schuette Green, *Cheeseburger in Paradise: An Analysis of How New York State Restaurant Association v. New York City Board of Health May Reform Our Fast Food Nation*, 59 DEPAUL L. REV. 733 (2010).

³⁶ Mary Clare Jalowich, *FDA Punts Calorie Labels on Menus for Another Year, Again*, U.S. NEWS & WORLD REPORT (Mar. 28, 2016), <http://www.usnews.com/news/politics/articles/2016-03-28/looking-for-calorie-labels-on-menus-not-until-2017>.

³⁷ Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119.

³⁸ See Schuette, *supra* note 35.

1900s, malnutrition was rampant in young American people, as was evidenced by one-third of young men who tried to enlist in the military in World War I being rejected due to diseases of malnutrition.³⁹ It was not until 1909 that the first school lunch program was created by Philadelphia's William Penn High School because janitors were selling unclean and unwholesome food to students for profit because the students were so hungry.⁴⁰ While some states, like Philadelphia, attempted to create their own school lunch programs, it was not until the Great Depression of the 1930s that the federal government got involved with school meal programs.⁴¹ Ironically, while millions of unemployed Americans were undernourished to a point of serious health threat to the nation, there were agricultural surpluses because farmers could not find markets for their goods.⁴² Finally, the government decided that it could help get rid of surplus farm commodities as well as help hungry children in one great program. This program would allow for the Secretary of Agriculture to purchase surplus domestic foods and then distribute them to hungry schoolchildren.⁴³ This helped both the children and the schools while also helping the agricultural community by removing price-depressing surplus foods from the market.⁴⁴ By 1946, there were school lunch programs in every state, six million children were being fed daily, and the program seemed to be working.⁴⁵

Unfortunately, another motivation behind the school lunch program at this time was to give displaced workers jobs in the school cafeterias and to support agriculture; children were simply lucky secondary beneficiaries of the policy.⁴⁶

³⁹ Lizabeth DiSiena, *Practice What You Preach: Does the National School Lunch Program Meet Nutritional Recommendations Set By Other USDA Programs?*, 28 J. L. & HEALTH 164, 172 (2015).

⁴⁰ Susan Roberts, *School Food: Does the Future Call for New Food Policy or Can the Old Still Hold True?*, 7 DRAKE J. AGRIC. L. 589 (2002).

⁴¹ DiSiena, *supra* note 39, at 173.

⁴² *Id.* at 172.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.* at 171.

Therefore, it came as no surprise that the growth of the school food program was short lived. Workers and food commodities were sent to World War II in the late 1930s and early 1940s, and by 1944 the number of children being served school lunch dropped to about five million.⁴⁷ Supporting the war effort took priority over continued expansion of the school lunch program and hungry children.

However, a statement made by General Hershey, Director of the Selective Service, brought new life to the school lunch program. As the war ended, he told Congress that the nation had sustained 155,000 casualties because of malnutrition in its young men.⁴⁸ The nation was now ready to address the problem of unhealthy children and youth as a national security measure. In 1946, the National School Lunch Act was signed into law.⁴⁹

The National School Lunch Act declared that its policy, as a matter of national security, was to “safeguard the health and well-being of the Nation’s children” and “encourage the domestic consumption of nutritious agricultural commodities and other food.”⁵⁰ This same purpose has not changed in over 60 years and is still what guides the school food legislation today. However, in the late 1960s it became apparent that the National School Lunch Act was not enough to ensure that needy children received proper nutrition while at school.⁵¹ Research found that, at most, one-third of poverty-stricken children attending public school participated in the school lunch program.⁵² The rest of the poor children were still being forced to pay the full price for

⁴⁷ *Id.*

⁴⁸ BERNARD BARD, *THE SCHOOL LUNCHROOM: TIME OF TRIAL* 15 (John Wiley & Sons, Inc., 1968).

⁴⁹ National School Lunch Act of 1946, 42 U.S.C. §§ 1751-1769(h) (1966).

⁵⁰ Gordon W. Gunderson, *National School Lunch Act Approved*, USDA (June 18, 2016),

http://www.fns.usda.gov/nslp/history_5#natact.

⁵¹ *See generally* John Kramer, *HUNGER, U.S.A.: A REPORT BY THE CITIZENS’ BOARD OF INQUIRY INTO HUNGER AND MALNUTRITION IN UNITED STATES* (Beacon Press, 1968) [hereinafter *Hunger, U.S.A.*].

⁵² *Id.*

school lunch or they were simply going without.⁵³ President Richard Nixon responded by establishing the Food and Nutrition Service as part of the Department of Agriculture to operate federal food programs, including the school lunch programs.⁵⁴ Congress responded with more appropriations to reach a greater number of needy children and regulations which required the use of federal standards to determine which children were to receive free and reduced price lunches, rather than to allow the states to continue to arbitrarily decide which children would receive this welfare service.⁵⁵ More than ever before food policy was focusing on the needs of hungry and needy children. While maintaining agricultural support was still important, it had finally taken a back seat to the nutrition needs of children. Today, the focus remains the same because legislators realize that taking care of children means providing healthy meals and encouraging physical activity in order to effectively fight childhood obesity. Unfortunately, The National School Lunch Act essentially “put schools in the restaurant business,”⁵⁶ and running a restaurant is not easy. Ultimately, the school lunch program can be a success only when every child eats a nutritious lunch at school.⁵⁷

VI. The School Lunchroom of Today

While parents by and large have the most power over their children’s nutritional choices, parents cannot be present with their child 24-hours a day to ensure that they are making proper nutritional choices. Making sure that children eat properly has been a shared responsibility of parents and schools ever since the first school sold or provided a food

⁵³ *Id.*

⁵⁴ Richard M. Nixon, *187 – Special Message to the Congress Recommending a Program to End Hunger in America*, THE AMERICAN PRESIDENCY PROJECT (May 6, 1969), <http://www.presidency.ucsb.edu/ws/?pid=2038>.

⁵⁵ School Breakfast and Special Food Programs Act, 42 U.S.C. § 1752 (1971).

⁵⁶ Alice Waters, *The School-Lunch Test*, N.Y. TIMES (Aug. 20, 2006), <http://www.nytimes.com/2006/08/20/magazine/20lunches.html>.

⁵⁷ *Id.*

item or beverage to a student.⁵⁸ Many parents rely upon their child's school dietary service to provide their child with a proper, nutritious lunch when they are away from their home. Whoever is providing food for children should be responsible for the quantity and quality of the foods that they provide. In fact, schools may bear a certain increased burden because, as a teaching institution, they need to be a role model. The school environment has a powerful influence on children. In schools, healthy behavior can be modeled and reinforced so we can educate students to make the choices that will develop into lifelong healthy habits.⁵⁹ The goal of schools should be to bring children into a relationship with food that will nourish them in multiple ways throughout their entire lives, through a hands-on education that connects them both to the garden and the beauty of nature and to the pleasures of cooking and traditions of the table. Ideally, children should enjoy this education so much that they learn and implement the lessons effortlessly and eagerly into their daily lives.

Most parents expect their children to eat a well-balanced meal at school. They do not anticipate the marketing of high-calorie, low-nutrient soft drinks and other snack foods to children in schools. In a school environment, parents do not supervise food purchases, and, without parental guidance, children may be less able to resist food marketing techniques or judge the suitability of specific foods for themselves. This is especially true when children are faced with limited healthy food choices in the lunchroom, such as when snack food and soft drink companies purchase the exclusive right to place vending machines in schools.⁶⁰ These types of unhealthy choices are labeled as "competitive foods."⁶¹ In the past,

⁵⁸ Scott LaFee, *Another Weighty Burden: How Much Responsibility do Schools Bear for Addressing the Obesity of Their Students?*, AASA THE SCHOOL SUPERINTENDENTS ASS'N, (Oct. 9, 2005), <http://www.aasa.org/SchoolAdministratorArticle.aspx?id=7772>.

⁵⁹ *Id.*

⁶⁰ Susan Linn & Josh Golin, *Beyond Commercials: How Food Marketers Target Children*, 39 LOY. L.A. L. REV. 13, 15 (2006).

⁶¹ Ellen Fried & Michele Simon, *The Competitive Food Conundrum: Can Government Regulations Improve School Food?*, 56 DUKE L. J. 1491, 1493-94 (2007).

competitive foods were typically popular fast foods, which are offered to entice children to pay more and waste less, because the choices are more appealing to the students.⁶² These foods included name-brand items like Coca-Cola, McDonald's, Pizza Hut, and Taco Bell; but also included non-name-brand selections like hamburgers, French fries, sandwiches, fried chicken, salty snacks, chocolate candy, and ice cream. In 2013, the Department of Agriculture proposed several changes to the Competitive Food Service regulation, which were implemented on July 1, 2014.⁶³ The new regulation sets forth specific requirements for competitive food offerings that are available throughout the school day, including up to 30 minutes following the instructional period.⁶⁴ These requirements address the need for more fruit and vegetable options, but also include grain content guidelines and sodium limitations.⁶⁵ Additionally, the new regulation provides for limitations for sugar, calorie, and sodium content for a la carte items.⁶⁶ Essentially these new regulations have ended the school's ability to bring in fast-food chains to serve unhealthy foods that compete with healthier options offered by the cafeteria; however, it should be noted that under current law, schools are provided a "special exemption" for fundraising. Exempted fundraisers may sell competitive foods that do not comply with the new competitive food nutritional guidelines.⁶⁷ The frequency of these fundraisers is to be governed by the state agency, and allows many opportunities for the new regulations to be undermined.

VII. Inside the Schools

In 2005, the advertising budget of Coca-Cola for advertisements on television and student newspapers increased by thirty percent from the previous two years to

⁶² *Id.* at 1500.

⁶³ National School Lunch Program, 7 C.F.R. § 210.11 (2013).

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

\$2.4 billion.⁶⁸ Soft drink companies, like Coca-Cola, aim advertising campaigns at children in effort to develop lifetime brand loyalties and capture market shares.⁶⁹ Entire conferences are devoted to marketing to children, offering sessions on effective promotional campaigns and “emotional branding” for kids.⁷⁰ This is a major concern for those helping to fight the obesity epidemic because these sugary food and beverages that are marketed to children negatively affect their long-term health. Children who habitually consume sodas take in fewer nutrients and more calories, and they are more likely to be overweight or obese after adjustment for anthropometric, demographic, dietary, and lifestyle variables.⁷¹ Additionally, students in schools that provide access to soft drinks and snack foods are less likely to consume fruits, juice, milk, and vegetables than students who do not have such access.⁷² In fact, in 1997, American children obtained half of their daily calorie intake from added fat and sugar (thirty-five percent and fifteen percent, respectively).⁷³ Only one percent regularly ate diets conforming to the recommendations of the Food Guide Pyramid and forty-five percent failed to achieve any of the Pyramid recommendations.⁷⁴

Unfortunately, even though some schools have now banned sales of sodas from their campus, soft drink

⁶⁸ Michael Blanding, *The Case Against Coke*, THE NATION (Apr. 13, 2006), <http://www.thenation.com/article/case-against-coke/>.

⁶⁹ MARION NESTLE, *FOOD POLITICS: HOW THE FOOD INDUSTRY INFLUENCES NUTRITION AND HEALTH 200-02* (Univ. of Cal. Press, 10th ed. 2013) (ebook).

⁷⁰ ALISSA QUART, *BRANDED: THE BUYING AND SELLING OF TEENAGERS* 49 (Perseus Pub. 2003).

⁷¹ David S. Ludwig, Karen E. Peterson & Steven L. Gortmaker, *Relation Between Consumption of Sugar-Sweetened Drinks and Childhood Obesity: A Prospective, Observational Analysis*, 357 THE LANCET 505-06 (2001).

⁷² See generally, Karen Weber Cullen et al., *Effects of A La Carte and Snack Bar Foods at School on Children's Lunchtime Intake of Fruits and Vegetables*, 100 J. AM. DIETETIC ASS'N 1482 (2000).

⁷³ Kathryn A. Munoz et al., *Food Intakes of US Children and Adolescents Compared With Recommendations*, 100 PEDIATRICS 323 (1997).

⁷⁴ *Id.*

companies circumvent rules by donating soft drinks for free distribution during school meals. And when schools do allow for the soft drink sales to continue, it is often because cash-strapped school administrators accept, sometimes solicit, and increasingly defend commercializing activities, such as selling Coca-Cola to students, as means of making up budget shortfalls and financing everything from computers and musical instruments to art supplies and staff training.⁷⁵ The overarching idea is to completely blur the line between advertising and education, and the effect is often to replace thought with food. In a 1998 letter to the principals of School District 11 in Colorado Springs, Colorado, John Bushey, the district's executive director of "school leadership" for Coca-Cola, made it clear how to meet the necessary quota (70,000 cases of products) for an \$8 million exclusive vending contract with Coca-Cola.⁷⁶

- 1) Allow students to purchase and consume vended products throughout the day. If sodas are not allowed in classes, consider allowing juices, teas, and waters.

- 2) Locate machines where they are accessible to the students all day. Research shows that vended purchases are closely linked to availability. Location, location, location is the key. You may have as many machines as you can handle. Pueblo Central High tripled its volume of sales by placing vending machines on all three levels of the school. The Coke people surveyed the middle and high schools this summer and have suggestions on where to place additional machines.⁷⁷

To further help advertise Coke products, Mr. Bushey even

⁷⁵ Alex Molnar & Joseph A. Reaves, *Buy Me! Buy Me! The Fourth Annual Report on Trends in Schoolhouse Commercialism Year 2000-2001*, EDUC. POL. STUDIES LAB.: ARIZ. STATE. UNIV. (Sept. 2001).

⁷⁶ John Bushey, *District 11's Coke Problem*, HARPER'S, Feb. 1999, at 26-27.

⁷⁷ *Id.*

enclosed a calendar of promotional events.⁷⁸

These types of need-based decisions not only affect the health of children, but they “alter the schoolhouse environment and influence how students are taught and the ethical priorities they see supported.”⁷⁹ These school vending machines have long provided funds for under-funded schools and administrators worry that replacing unhealthy foods with healthy options will further stress their already threadbare budgets. However, some of these fears may be unfounded. In California, Vista Unified School District reportedly increased annual vending sales by \$200,000 by offering fresh fruit, nuts, and frozen fruit bars.⁸⁰

One of the biggest concerns is the use of exclusive agreements between schools and soft drink companies. These contracts are frequently called “pouring rights” contracts and they aim to create brand loyalty “among young people who have a lifetime of soft drink purchases ahead of them.”⁸¹ Thirty-eight percent of elementary schools, fifty percent of middle schools and seventy-two percent of senior high schools have a contract that gives a company rights to sell soft drinks at the school and/or school events, such as Friday night football games.⁸² While new regulations imposed by the Department of Agriculture in 2014 do not allow schools to offer caffeinated sodas to elementary and middle school

⁷⁸ *Id.*

⁷⁹ Susan Lynn Roberts, *School Food: Does the Future Call for New Food Policy or Can the Old Still Hold True?*, 7 *DRAKE J. AGRIC. L.* 587, 607 (2002) (citing Molnar & Reaves, *supra* note 75).

⁸⁰ *FOOD, INC.: HOW INDUSTRIAL FOOD IS MAKING US SICKER, FATTER AND POORER- AND WHAT YOU CAN DO ABOUT IT* 238, KARL WEBER EDR., 1ST ED. 2009.

⁸¹ Marion Nestle, *Soft Drink “Pouring Rights” Marketing Empty Calories to Children*, 115 *PUB. HEALTH REP.* 310 (2000).

⁸² Howell Wechsler, *Food Service and Foods and Beverages Available at School: Results from the School Health Policies and Programs Study 2000*, 71 *J. SCH. HEALTH* 313, 321 (2001). In a follow-up study in 2012, receipts from the sale of soft drinks decreased from 81.7% to 69.3%. *Results from the School Health Policies and Practices Study 2012*, U.S. DEPT. HEALTH AND HUMAN SERVS. CTR. FOR DISEASE CONTROL AND PREVENTION 85 (2013), http://www.cdc.gov/healthyyouth/shpps/2012/pdf/shpps-results_2012.pdf.

students during the instructional school day, the schools are permitted to offer caffeinated sugar-filled sodas at school events and activities.⁸³

VIII. Inside the Federal Government

Congress passed an amendment to The Child Nutrition Act in 1970 eliminating foods sold in competition to the school lunch program.⁸⁴ Unfortunately vending machines, school stores, and snack bars began inching their way back in to schools once school administrators recognized the profitability of competitive foods.⁸⁵ By 1972, Congress had amended the Act eliminating any regulation of competitive foods.⁸⁶ Today, the Department of Agriculture's regulations require state agencies and local school food authorities to establish rules for the sale of competitive foods "as are necessary," but at a minimum they must comply with several requirements relating to fruit, grain, and sodium content for offerings in the food service area during lunch or breakfast periods.⁸⁷

Today, over five different, nationwide programs are in place to give children a more nutritious diet, improve children's eating habits and help American farmers sell surplus food. The National School Lunch Program provides nutritious lunches in more than 100,000 public and non-profit schools and residential child care institutions. In Fiscal Year 2012, over thirty-one million children were fed lunch each day either for free or at a reduced cost at a yearly cost of \$11.6 billion.⁸⁸

There were no federal nutritional policies that would require schools to comply with dietary guidelines until the

⁸³ 7 C.F.R. § 210.11, *supra* note 63.

⁸⁴ National School Lunch Act and Child Nutrition Act of 1966 § 8, Pub. L. No. 91-248, 84 Stat. 207, 212-213 (1970).

⁸⁵ Nat'l Soft Drink Ass'n v. Block, 721 F.2d 1348, 1350 (D.C. Cir. 1983).

⁸⁶ Act of Sept. 26, 1972 § 7, Pub. L. No. 92-433, 86 Stat. 724-729 (1972).

⁸⁷ 7 C.F.R. § 210.11, *supra* note 63.

⁸⁸ *National School Lunch Program*, USDA FOOD AND NUTRITION SERVICE, <http://www.fns.usda.gov/sites/default/files/NSLPFactSheet.pdf>.

1990s.⁸⁹ It was in 1980 that the Department of Agriculture and the U.S. Department of Health and Human Services first published The Dietary Guidelines for Americans, which described the link between poor diet and physical inactivity and death.⁹⁰ Although this report is updated every five years, emphasizing how important proper nutrition and exercise is, it was not until 1990 that the federal school food program began to reflect the changes accentuated in the guidelines.⁹¹ In 1994, the Clinton Administration began to tackle the high fat/low nutrition values of school lunches when the Healthy Meals for Americans Act of 1994 was passed.⁹² This Act mandated that school food programs had to provide meals that were consistent with the Dietary Guidelines for Americans, in addition to meeting students' daily needs for calories and key nutrients, in order to receive reimbursement for meals.⁹³ Congress emphasized that poor eating habits established during childhood usually carry over to adulthood and that these habits lead to the chronic diseases rampant in the United States today, along with their inherent deaths, disabilities, and costs.⁹⁴

Unfortunately, five years after these mandates, only one in five elementary schools and one in five secondary schools met these standards.⁹⁵ More importantly, eighty-two percent of elementary and ninety-one percent of secondary school children could have chosen lunches that did meet these

⁸⁹ Nutrition Standards in the National School Lunch and School Breakfast Programs, 77 Fed. Reg. 17 (Jan. 26, 2012) (to be codified at 7 C.F.R. pts. 210 & 220).

⁹⁰ FOODUCATE,

<http://www.fooducate.com/app#!page=post&id=57A32269-8B2D-7EF6-48CE-A29E619C9AE8> (last visited Feb. 1, 2017).

⁹¹ *Id.*

⁹² DiSiena, *supra* note 39, at 175-76.

⁹³ LaFee, *supra* note 58.

⁹⁴ Mark Lino et al., *Report Card on the Diet Quality of Children Ages 2 to 9*, CTR. FOR NUTRITION POLICY AND PROMOTION, 1 (2001), https://www.cnpp.usda.gov/sites/default/files/nutrition_insights_uploads/Insight25.pdf

⁹⁵ *Id.*

guidelines, but chose the less healthy lunch option instead.⁹⁶ Children were found to be eating too much fat, saturated fat, sodium, and sugar. A calorie increase from the early 1990s to the late 1990s was driven by an increase in foods and drinks high in added sugars. This increase in sugar generally came from an increased consumption of soda and sugared fruit drinks.⁹⁷

In an attempt to address these deficiencies, the Healthy Hunger-Free Kids Act (HHFKA) was enacted in 2010 as a component of First Lady Michelle Obama's "Let's Move" campaign.⁹⁸ The Act is 51 pages in length and has made many statutory changes to the National School Lunch Program.⁹⁹ Under the HHFKA, public schools are required to offer lunch and breakfast foods that comply with specific guidelines pertaining to fruit, vegetable, and whole-grain offerings, as well as limitations on saturated fat, sodium, and trans-saturated fat.¹⁰⁰ While the HHFKA is a move in the right direction, it is not without criticism. "Commentators have argued that most of the healthy food mandated under the HHFKA guidelines will go straight from kids' lunch trays into the trash."¹⁰¹ This occurrence has coined the phrase "plate waste" and is an issue that the Department of Agriculture is well aware of.¹⁰² Others have argued that the HHFKA food offerings do not meet the standards recommended by the Department of Agriculture's Food

⁹⁶ *School Nutrition Dietary Assessment Study II: Summary of Findings Executive Summary*, USDA OFFICE OF ANALYSIS, NUTRITION AND EVALUATION (Mar. 7, 2006), <http://www.fns.usda.gov/oane/MENU/Published/CNP/FILES/SNDAIIfindsum.pdf>.

⁹⁷ Stephen Crutchfield & Jon Weime, *Nutrition Policy in the 1990s*, 23 FOOD REV. 38, 38-43 (2000).

⁹⁸ Healthy, Hunger-Free Kids Act of 2010, P. L. No. 111-296, 124 Stat. 3183 (2010).

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ Lindsay F. Wiley, *No Body Left Behind: Re-Orienting School-Based Childhood Obesity Interventions*, 5 DUKE FORUM FOR L. & SOC. CHANGE 97, 121 (2012).

¹⁰² *Id.*

Guide Pyramid.¹⁰³ It seems that the general consensus is that although the HHFKA is a welcome change for the National School Lunch program, there is still work to be done by our legislators to ensure that our children are getting a well-balanced healthy diet while at school.

While the United States' school food programs have seen great successes, such as providing more than five billion lunches per year of which seventy-two percent were free or offered at a reduced price in 2015, there have also been new challenges.¹⁰⁴ Only two percent of school-aged children meet the Food Guide Pyramid's serving recommendations for all five major groups.¹⁰⁵ And while school food programs are contributing to better nutrition for participants, what's happening in the halls outside the school cafeteria is just the opposite. Unfortunately, even though the schools are helping to provide cleaner and more wholesome food choices through the National School Lunch and Breakfast programs, the problems that plagued William Penn High School in 1909 still exist, just with different actors. Today, it is the vending machines and snacks sold under the guise of fundraisers, which tempt children with unwholesome sugary sodas and candy. Competitive foods convey a mixed message. When children are taught in the classroom about proper nutrition and the importance of healthy food choices, but are then surrounded by vending machines, snack bars, and school stores offering low nutrient density options, they receive the message that good nutrition is merely an academic exercise.¹⁰⁶ They also receive a message that good nutrition is not supported by the school administration, and is therefore not important to their health or education.¹⁰⁷

¹⁰³ Lizabeth Disiena, *Practice What You Preach: Does the National School Lunch Program Meet Nutritional Recommendations Set by Other USDA Programs?*, 28 J.L. & HEALTH 164 (2015).

¹⁰⁴ *National School Lunch Program: Participation and Lunches Served*, FOOD & NUTRITION SERV. (2017), <http://www.fns.usda.gov/sites/default/files/pd/slsummar.pdf>.

¹⁰⁵ Susan Linn & Josh Golin, *supra* note 60.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

But competitive foods are not the only problem. Many schools now provide a variety of food options from vending machines to snack bars, which are available to students.¹⁰⁸ In 2001, the availability of these unhealthy options was staggering, “forty-three percent of elementary schools, seventy-four percent of middle schools and ninety-eight percent of senior high schools either have a vending machine, school store, canteen, or snack bar.”¹⁰⁹ And by no means are they only selling fresh fruit or other healthy snack alternatives. A study in twenty-four California middle schools found that over eighty-eight percent of the student store inventory was high in fat and/or sugar.¹¹⁰ Moreover, according to the Academy of Pediatrics Statement on Soft Drinks in Schools, “Exclusive pouring rights” contracts, in which the school agrees to promote one brand exclusively in exchange for money, are being signed in an increasing number of school districts across the country. . . [and] such contracts already have provided schools with more than \$200 million in unrestricted revenue.”¹¹¹ Therefore, we as a nation must take steps to curb unhealthy eating by preventing schools from signing these exclusive pouring rights contracts.

IX. Moving in the Right Direction

In order to help win the fight against obesity and avoid possible liability, the federal government and school districts must recognize that when school cafeterias provide fattening, unhealthy options to children such as pizza and French fries without providing equally as enticing healthier alternatives, it is almost certain that children will opt for the more tasty, less nutritious food options. In fact, when administrators trimmed fat and sugar from menus at schools in Rio Grande City,

¹⁰⁸ *Id.*

¹⁰⁹ *Hunger, U.S.A.*, *supra* note 53.

¹¹⁰ Marianne Wildey, *Fat and Sugar Levels are High in Snacks Purchased from Student Stores in Middle Schools*, 100 J. AM. ASS'N. 319, 321 (2000).

¹¹¹ Statement, *Soft Drinks in Schools*, AMERICAN ACADEMY OF PEDIATRICS 153 (2004), http://westerndairyassociation.org/wp-content/uploads/2014/01/aap_policy_statement_on_softdrinks_in_schools.pdf.

Texas, along the Mexican border, students staged lunchroom protests. They hung signs that read “NO MORE DIET” and “WE WANT TO EAT COOL STUFF - PIZZA, NACHOS, BURRITOS.”¹¹² These unhealthy options should not be made available to children who are in an educational setting. The school lunchroom should be another education arena, where children learn what foods are healthy and nutritious for their body. Schools that try to offer both good and unhealthy foods are not going to succeed because children will almost always buy the unhealthy foods when given the choice. It is all or nothing. The schools must realize that at first the new menus may not be successful, but once children adjust to the new fare and realize that healthy food can be good for them and also taste good, the school lunchroom will be a success again.

In response to the changing needs of school-aged children, Aramark, a professional food service organization, has developed ‘tween focused 12 Spot and high-school-relevant U.B.U. Lounge concepts.¹¹³ Aramark realizes that children today are exposed to fashionable national chain restaurants and so they have created these youthful lunchrooms to incorporate elements of pop culture such as trendy colors and punchy graphics.¹¹⁴

Sodexo USA, another foodservice corporation, also looks to customer desires for image inspiration.¹¹⁵ The company acknowledges that they are committed to offering “healthy environments” for the students as well as healthy, wholesome foods.¹¹⁶ Sodexo provides lunches based on the federal dietary guidelines and according to one school district, this allows their students to be “engages and ready to learn in

¹¹² Karen Tumulty, *The Politics of Fat*, TIME, Mar. 27, 2006, at 40.

¹¹³ ARAMARK EDUCATION, <https://www.niles-hs.k12.il.us/aramark> (last visited Feb. 1, 2017).

¹¹⁴ Jamie Popp, *Class action; New legislation mandates what can be served but school foodservice directors say laws alone won't change students' habits. Creativity, suggestive selling and education must be part of lesson plans (SPECIAL REPORT)*, RESTAURANTS AND INSTITUTIONS (Oct. 15, 2005), <https://www.highbeam.com/doc/1G1-137968456.html>.

¹¹⁵ MINDFUL, <https://mindful.sodexo.com/why-mindful> (last visited Feb. 1, 2017).

¹¹⁶ *Id.*

school.”¹¹⁷ Sodexo touts the fact that they have helped 111 schools across the country that participate in the National School Lunch Program to be recognized in the Healthier US School Challenge.¹¹⁸ This program is designed to promote nutrition and physical activity and is seen as a prestigious honor by schools that receive the certification.¹¹⁹ There is not one clear solution to encourage children to choose to make better food choices, but these and other creative solutions are a step in the right direction to addressing the issues that contribute to childhood obesity.

X. Where has Recess Gone?

Another argument that begs recognition is the decreasing amount of physical exercise in American schools. In 2013, the CDC surveyed high school students and found that a mere 27.1% of them had taken part in “at least 60 minutes per day of physical activity on all 7 days before the survey and only 29% attended physical education class” each day.¹²⁰ But childhood obesity is more complex than so-called unhealthy food. This is a multi-faceted issue that involves several factors and one of those factors is the sedentary nature of today’s youth. Many children spend exorbitant amounts of time in front of a television. Studies find that children are spending far greater amounts of time in front of digital devices and television screens than in years past.¹²¹ Physical education classes and daily recess are basic ways for schools to encourage movement and activity in children.¹²² Physical education classes were originally organized during World

¹¹⁷ *Nutrition Solutions*, WOONSOCKET EDUCATION DEPARTMENT, <https://woonsocket.sodexomyway.com/menus/menus.html> (last visited Feb. 1, 2017).

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ CTRS FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/healthyschools/physicalactivity/facts.htm> (last visited Feb. 1, 2017).

¹²¹ Jane Wakefield, *Children spend six hours or more a day on screens*, BBC NEWS, Mar. 27, 2015, at 1.

¹²² INSTITUTE OF MEDICINE, PREVENTING CHILDHOOD OBESITY: HEALTH IN THE BALANCE 253 (2005).

War I when the federal government passed legislation for improved physical education in schools because one-third of those drafted for World War I were “unfit for combat and many of those drafted were highly unfit prior to military training.”¹²³

Today, schools have shifted their focus from physical education to substantive education and have taken time away from physical education and recess in order to provide more time for classroom learning. It is vital for schoolchildren to have physical education in order to develop a foundation for lifetime physical fitness and wellness. But a good physical education program also benefits students in the classroom by helping to relieve stress and depression and ultimately produce a better, more focused student.¹²⁴ Journalist Brenda Schmidt recognizes that, “A healthy school environment goes beyond meals in the cafeteria. The healthy, nutritionally astute and physically active child is more likely to be academically successful.”¹²⁵ She further argues that “the body and mind work together; if kids aren’t healthy, their academic prowess is affected.”¹²⁶ For many American children, physical education classes are the only times that they are exposed to health education and physical activity.¹²⁷ While many states have proposed legislation to mandate standards for physical education in schools, these measures have been stalled because of the additional costs associated with their implementation and the greater emphasis being placed on

¹²³ Lance Dalleck & Len Kravitz, *The History of Fitness*, THE U. OF N.M. (Dec. 4, 2005), <http://www.unm.edu/~lkravitz/Article%20folder/history.html>.

¹²⁴ Sarah Donta, *Healthy Schools, State Solutions: Fixing the Sedentary and the Super-Sized in School Systems*, THE COUNCIL OF STATE GOVERNMENTS STATE NEWS (Jan. 2005), <http://www.csg.org/knowledgecenter/docs/sn0501HealthySchools.pdf>.

¹²⁵ *Model Wellness Policy*, SOUTH DAKOTA BOARD OF EDUCATION 2 (2005), http://doe.sd.gov/schoolhealth/documents/Wellness_Policy.pdf.

¹²⁶ Scott Lafee, *How much responsibility do schools bear for addressing the obesity of their students?*, THE SCHOOL SUPERINTENDENT ASS’N, <https://www.aasa.org/SchoolAdministratorArticle.aspx?id=7772> (last visited Feb. 2, 2017).

¹²⁷ Improved Nutrition and Physical Activity (IMPACT) Act, S. 1325, 109th Cong. (2005).

academic standards.¹²⁸

Schools must implement wellness policies that teach the healthy benefits of ensuring proper nutrition and physical fitness. These policies should 1) encourage kids to choose nutritious foods,¹²⁹ 2) provide opportunities for regular, supervised physical activities to teach kids the benefits of an active, healthy lifestyle,¹³⁰ 3) offer nutrition education yearly to all students and integrate nutrition topics into the rest of the curriculum,¹³¹ 4) discourage foods and drinks that compete with promoting a healthy school environment,¹³² and 5) encourage fundraisers that do not sell foods of minimal nutritional value,¹³³ encourage adults at school to choose healthy foods and partake in physical activities.¹³⁴ The combination of poor food choices and lack of physical activity is one that is perpetuating the problems of childhood obesity. A recent study reported that childhood obesity threatens to create the first American generation of children whose average life span will be shorter than that of their parents.¹³⁵ As a society, we must ask ourselves if we want this

¹²⁸ Carla Plaza, *States Focus on Health Issues to Minimize Future Healthcare Costs*, HEALTHCARE FINANCIAL MGMT., at 20 (Mar. 3, 2005).

¹²⁹ *Healthy Eating*, KAISER PERMANETE, <https://thrivingschools.kaiserpermanente.org/wellness-resources/healthy-eating/> (last visited Feb. 1, 2017).

¹³⁰ Council on Sports Medicine, *Active Healthy Living: Prevention of Childhood Obesity Through Increased Physical Activity*, 117 AM. ACAD. OF PEDIATRICS 5 (May 2006).

¹³¹ NATIONAL CENTER FOR EDUCATION STATISTICS, NUTRITION EDUCATION IN PUBLIC ELEMENTARY & SECONDARY SCHOOLS (Jul. 1996), <https://nces.ed.gov/surveys/frss/publications/96852/index.asp?sectionid=3>.

¹³² CTRS FOR DISEASE CONTROL & PREVENTION, SCHOOL HEALTH GUIDELINES TO PROMOTE HEALTHY EATING & PHYSICAL ACTIVITY (Sept. 16, 2011), <https://www.cdc.gov/MMWR/preview/mmwrhtml/rr6005a1.htm>.

¹³³ *Nutrition Standards for Foods in Schools*, CTRS FOR DISEASE CONTROL & PREVENTION (Dec. 2009), https://www.cdc.gov/HealthyYouth/nutrition/pdf/nutrition_factsheet_parents.pdf.

¹³⁴ SCHOOL HEALTH GUIDELINES, *supra* note 132.

¹³⁵ *Overweight in Children*, AMERICAN HEART ASSOCIATION, http://www.heart.org/HEARTORG/HealthyLiving/HealthyKids/ChildhoodObesity/Overweight-in-Children_UCM_304054_Article.jsp# (last visited

for the youth of the nation. Do we want children who are literate and math-ready, but who are, at the same time, significantly more likely than necessary to die at a young age from medical ramifications of a poor lifestyle? We must learn to balance these important interests.

XI. Cutting the Fat

There are several important regulatory proposals surfacing in both state and federal government at this point in time. In Texas, the Texas Department of Agriculture's Food and Nutrition Division recently set goals for attaining better nutrition standards in schools.¹³⁶ This policy establishes firm guidelines for what students can and cannot consume during the school day.¹³⁷ For example, the guidelines state that elementary children may not have 'foods of minimal nutritional value' or candy at any time."¹³⁸ Also, French fries may not exceed three ounces per serving and may only be served once a week.¹³⁹ The Department of Agriculture is also asking that schools eliminate frying as method of preparing foods.¹⁴⁰ These standards are definitely a step in the right direction for tackling childhood obesity. Additionally, these policy changes reduce the amount of sugared, carbonated beverages available for purchase in high schools to thirty percent of all available beverages by the end of the 2015-2016 school year and restricts access to these beverages in middle schools and junior high schools until the end of the last lunch period.¹⁴¹ Unfortunately only a few states have even attempted to pass legislation related to school nutrition.¹⁴²

Aug 15, 2016).

¹³⁶ *Texas Public School Nutrition Policy for Elementary Schools*, TEX. DEP'T OF AGRIC. (2004), <http://anthonyisd.net/assets/elementary-nutrition-guide.pdf>.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Texas Public School Nutrition Policy, Nutrition Guidelines for Public Schools Participating in Child Nutrition Programs*, TEX. DEP'T OF AGRIC., <http://www.leanderisd.org/users/0001/docs/cns/nutrition/tpsnpolicy.pdf>.

¹⁴⁰ *Id.*

¹⁴¹ *Nat'l Soft Drink Ass'n*, *supra* note 85, at 1351.

¹⁴² *See Nestle*, *supra* note 81.

During several legislative sessions, federal legislators attempted to pass a community-based legislative approach to childhood obesity prevention and reduction, known as the IMPACT Act.¹⁴³ This legislation was an attempt to get the federal government involved, on a local level, in reducing childhood obesity rates through the promotion of physical activity and improved nutrition.¹⁴⁴ The Senate passed an amended version of this proposed legislation on December 9, 2003, but the House version failed to move past committee debates.¹⁴⁵

IMPACT is composed of two main sections. The first being Title I, which provides guidelines on giving grants to health profession students and health professionals to be used for training in identifying, treating, and preventing weight-related problems such as overweight, obesity, and eating disorders like anorexia and bulimia.¹⁴⁶ Secondly, Title II allows competitive grants to be awarded to community-based programs that “target at-risk populations including youth to promote health eating behaviors and physical activity.”¹⁴⁷ Supporters of the bill explain that IMPACT’s purpose is not to regulate what people eat, but to attempt to change nutrition and activity behaviors.¹⁴⁸

Because IMPACT allows communities to decide what plan of attack will work in their community to fight childhood obesity, communities will be able to decide what is appropriate for their own individual needs. One community utilized this type of program to join schools in arranging for safer bicycle and walking routes to and from school and for healthier after-school programs that promoted physical activity. Other schools have hosted community gardens, opened playgrounds on weekends, and even hosted media

¹⁴³ Improved Nutrition and Physical Activity (IMPACT) Act, S. 1172, H.R. 716, 108th Cong. (2003).

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.* at § 102(b).

¹⁴⁷ *Id.* at § 399AA(a).

¹⁴⁸ 149 CONG. REC. 176. (daily ed. Dec 9, 2003) (statements of Sen. Harkin & Sen. Frist).

events to advertise health programs for families.¹⁴⁹ Community-based legislation is vital because it provides communities with the necessary funding to achieve parental education and environmental change, and to make the goals of the community based approach a reality.¹⁵⁰ A keystone for communities is their school systems, which are the ideal setting for the types of intervention programs prescribed to in the IMPACT legislation promoting heart healthy lifestyle changes in schools.

Unfortunately, after being considered during five consecutive legislative sessions, the IMPACT Act has yet to pass both the House and Senate.¹⁵¹

XII. Childhood Obesity: Academic Problems

The Centers for Disease Control has indicated that overweight children are more prone to a variety of diseases, including heart disease and high-blood pressure.¹⁵² Hospital stays due to obesity-related illnesses in children result in \$14 billion in direct medical billing each year.¹⁵³ But, little attention has been given to the impact of being overweight on students' academic performance.

Studies show that what a child eats has a direct effect

¹⁴⁹ Howard L. Taras, *A Pediatrician's Prescription to Stem Childhood Obesity*, THE SCHOOL SUPERINTENDENT ASS'N (2005), <http://www.aasa.org/SchoolAdministratorArticle.aspx?id=8896>.

¹⁵⁰ Improved Nutrition and Physical Activity (IMPACT) Act, S. 1325, 109th Cong. § 2(12) (2005).

¹⁵¹ See Improved Nutrition and Physical Activity (IMPACT) Act, S. 2821, H.R. 5412, 107th Cong. (2002); IMPACT Act, S. 1171, H.R. 716, 108th Cong. (2003); IMPACT Act, S. 1325, H.R. 5698, 109th Cong. (2005); IMPACT Act, H.R. 2677, 110th Cong. (2007); IMPACT Act, S. 1503, H.R. 2276, 111th Cong. (2009).

¹⁵² CENTERS FOR DISEASE CONTROL AND PREVENTION: CHILDHOOD OBESITY CAUSES & CONSEQUENCES, <http://www.cdc.gov/obesity/childhood/causes.html> (last visited June 16, 2016).

¹⁵³ William Marder & Stells Chang, *Childhood Obesity: Costs, Treatment Patterns, Disparities in Care, and Prevalent Medical Conditions*, THOMPSON MEDSTAT RESEARCH BRIEF (2005), http://www.nptinternal.org/productions/chcv2/healthupdates/pdf/Cost_of_childhood_obesity.pdf.

on test performance. Children, who routinely consume foods high in sugar content and fat content, may suffer from a “brain fog.”¹⁵⁴

In addition, a study conducted in Germany of children between the ages of 4 and 8 years old revealed that obese children had more developmental delays than normal weight children.¹⁵⁵ In particular, the study revealed that obese boys had more deficient motor skills than normal weight boys.¹⁵⁶ Also, obese girls had more difficulty concentrating than normal weight girls.¹⁵⁷ A study of U.S. children in kindergarten to the third grade revealed that academic achievement in school decreased in girls as they gained weight over the years.¹⁵⁸ They tended to have lower test scores and exhibited internal behavioral problems (i.e. low self-esteem and poor social skills).¹⁵⁹ Overweight boys tended to have more absences than normal weight boys.¹⁶⁰ Research conducted by Datar, Sturm, and Magnabosco indicated that overweight children in kindergarten had lower math and reading test scores than normal weight kindergarteners.¹⁶¹ In 2001, Falkner, et. al. reported that his study of 4,742 males and 5,201 females in 7th, 9th, and 11th grade revealed that obese girls were held back a grade more than normal weight

¹⁵⁴ Joy Bauer, *What America Eats: Foods to Make Kids Smart*, PARADE (Aug. 24, 2008) (stating that for a child to perform at their optimum level, meals should consist of high-fiber carbohydrates plus some lean protein. This food combination leads to an awake and alert student. High quality carbohydrates such as fruit, vegetables, and whole grains are rich in fiber and prevent blood sugar from soaring and then crashing like it does with sugary carbs).

¹⁵⁵ J.M. Mond et al., *Associations Between Obesity and Developmental Functioning in Pre-School Children: A Population-Based Study*, 31 INT. J. OBESITY 6, 1068 (2007).

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ Ashlesha Datar & Roland Sturm, *Childhood Overweight and Elementary School Outcomes*, 30 INT. J. OBESITY 6, 1449 (2006).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ Ashlesha Datar, Jennifer Magnabosco & Roland Sturm, *Childhood Overweight and Academic Performance: National Study of Kindergartners and First-Graders*, 12 OBESITY RESEARCH 1, 58 (2004).

girls, while obese boys were more likely to drop-out of school.¹⁶² A study of young women, ages 18 to 23, also indicated that obese young women were less likely to pursue higher education.¹⁶³ University of Texas at Austin sociologist Robert Crosnoe calls this the “college effect.”¹⁶⁴ Crosnoe also found that obese girls were less likely than obese boys and normal weight girls to attend college.¹⁶⁵ He attributed this to the greater impact body image has on a girl’s self-esteem than it does with boys.¹⁶⁶ Additionally, being ostracized for being overweight by other students and teachers also reduced an obese girl’s pursuit of higher education.¹⁶⁷ However, if an obese girl attended a school in which “heavy girls represented at least 200/0 of the student body,” she was more likely to attend college.¹⁶⁸ In general, studies have consistently shown that overweight girls complete fewer years of school, overall, than normal weight girls.¹⁶⁹

Among the many health risks associated with obesity, pediatric sleep experts also report that obesity can cause Obstructive Sleep Apnea (OSA).¹⁷⁰ OSA is a condition in which individuals stop breathing when they sleep.¹⁷¹ OSA can cause chronic fatigue in obese children since they are awakened throughout the night to breathe.¹⁷² As such, obese

¹⁶² N.H. Falkner et al., *Social, Educational, and Psychological Correlates of Weight Status in Adolescents*, 9 OBESEITY RESEARCH 1, 32 (2001).

¹⁶³ K. Ball, D. Crawford & J. Kenardy, *Longitudinal Relationships Among Overweight, Life Satisfaction, and Aspirations in Young Women*, 12 OBESEITY RES. 6, 1019 (2004).

¹⁶⁴ Coco Masters, *Overweight Kids: College Less Likely*, TIME, July 2007.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ Steven. L. Gortmaker, A. Must, J.M. Perrin, A.M. Sobol & W.H. Dietz, *Social and Economic Consequences of Overweight in Adolescence and Young Adulthood*, 349 NEW ENG. J. MED. 14, 1008 (1993).

¹⁷⁰ AASM Advises Those Student-Athletes Who Are Overweight and at Risk for Developing OSA to Visit a Sleep Clinic for Evaluation and Treatment, AM. ACADEMY OF SLEEP MED. (Aug. 31, 2007), <http://www.aasmnet.org/articles.aspx?id=561>.

¹⁷¹ *Id.*

¹⁷² *Id.*

children are less alert and attentive in class.¹⁷³ Consequently, obese children suffering from OSA have poor academic achievement, especially in math and reading.¹⁷⁴ But, children do not need to have OSA or sleep apnea to be at risk of obesity. Lack of sleep due to busy schedules, in general, has been cited as a factor that contributes to obesity in children. A study conducted by Dr. Julie Lumeng of the University of Michigan revealed that “every additional hour per night a third-grader spends sleeping reduces the child’s chances of being obese in the sixth grade by 40 percent.”¹⁷⁵ Dr. Eve Van Cauter, an endocrinologist at the University of Chicago, says the reason for this is associated with two hormones that regulate a person’s appetite: ghrelin, which tells our bodies we are hungry, and leptin, which tells us when we are full.¹⁷⁶ When a child, or adult, does not get enough sleep, the body produces more ghrelin and less leptin.¹⁷⁷ Thus, students with intense class schedules may be at a greater risk of obesity. The National Sleep Foundation has promulgated guidelines to ensure children are getting the rest they need without the added weight.¹⁷⁸

- 1) Preschoolers: 10-13 hours
- 2) Elementary School/Pre-Teens: 9-11 hours
- 3) Teens: 8-10 hours

Another factor related to an overweight child’s disinterest in academics is low self-esteem. Studies reveal that the degree of low self-esteem in overweight children is worse than for individuals suffering from other chronic diseases: “. . . a startling level of despair among obese children, with

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ Associated Press, *Study Links Lack of Sleep and Obesity in Children*, CBS NEWS (November 5, 2007), <http://www.cbsnews.com/news/lack-of-sleep-may-lead-to-fatter-kids/>.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *How Much Sleep Do We Really Need?*, NAT’L SLEEP FOUND., <http://www.sleepfoundation.org/how-sleep-works/how-much-sleep-do-we-really-need> (last visited June 16, 2016).

many rating their quality of life as low as that of young cancer patients on chemotherapy.”¹⁷⁹ In addition, Dr. Jeffrey Schwimmer, a pediatric gastroenterologist at the University of California in San Diego, reports that “overweight children were more likely to miss school than healthy, mostly normal weight kids . . . because they suffered more weight-related physical ailments and endured more teasing at school.”¹⁸⁰ In another instance, researchers in Philadelphia found that over the school year, obese children missed an average of 12 days of school compared to 1 day for normal weight children.¹⁸¹ Their study attributes these absences to health problems related to their obesity; a desire to avoid school on days that physical education is offered; and, a general dislike of school due to teasing and bullying because of they are overweight.¹⁸²

XIII. Prevention: “Oh, Mom do I have to...”

Parents also have a role in regulating their children’s health. Parents can enforce reasonable bed times and more physical activity. One study of third and fourth grade students suggests reducing the amount of time children watch television, videos, and play video games is an effective way to combat childhood obesity.¹⁸³

Some legislators have even proposed monitoring a child’s BMI by sending letters home with their report cards.¹⁸⁴ The New York Times did a story earlier this year about “the practice of reporting students’ body mass scores to

¹⁷⁹ Associated Press, *Despair Acute for Obese Children, Study Finds*, L.A. TIMES (April 9, 2003), <http://articles.latimes.com/2003/apr/09/nation/na-obese9>.

¹⁸⁰ *Id.*

¹⁸¹ Andrew B. Geier et al., *The Relationship Between Relative Weight & Attendance Among Elementary Schoolchildren*, 15 OBESITY 8, 2157 (2007).

¹⁸² *Id.*

¹⁸³ Thomas Robinson, MD., *Reducing Children’s Television viewing to Prevent Obesity: A Randomized Controlled Trial*, 282 JAMA 16, 1561 (1999).

¹⁸⁴ Jodi Kantor, *As Obesity Fight Hits Cafeteria, Many Fear a Note From School*, N.Y. TIMES (January 8, 2007).

parents . . .” in Delaware, South Carolina, and Tennessee.¹⁸⁵ However, the article cautions that those schools that report BMIs to identify overweight children should also maintain healthier food options and promote physical education.¹⁸⁶ Dr. David Ludwig, director of the Optimal Weight for Life Program at Children’s Hospital Boston, made this observation:

“It would be the height of irony if we successfully identified overweight kids through BMI screening and notification while continuing to feed them atrocious quality meals and snacks, with limited if any opportunities for physical education in school.”¹⁸⁷

Former Arkansas Governor Mike Huckabee has received both fame and criticism for his proposals to weigh children and send their BMI reports home.¹⁸⁸ His hope is to create a healthier and more active generation by increasing awareness about the prevalence of obesity in our nation.¹⁸⁹ He reminds us that policies regulating “littering, seat-belt use, smoking and drunken driving” were once unpopular as well.¹⁹⁰ One study suggests encouraging overweight children to interact and play with “healthy and physically active peers” as a measure to combat obesity.¹⁹¹ Texas has attempted to remove unhealthy foods and sodas from many school cafeterias.¹⁹² Yet, some students experiencing withdrawal symptoms find ways to get the food and sodas anyway. One high school senior reported “sneaking into the teacher’s

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ William Kristol, *Arkansas Leader’s War on Fat is Turning Into Culture Battle*, N.Y. TIMES (September 10, 2006).

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ Cheryl Wittenauer, *Kids Have Trouble Keeping Weight Off*, USA TODAY (October 10, 2007).

¹⁹² Michelle DeLaRosa, *School Food Healthier But Junk’s Still There*, SAN ANTONIO EXPRESS-NEWS (December 10, 2007) at 1A.

lounge” to get her drink of choice: Dr. Pepper.¹⁹³ Ms. Audri Gavina drinks an average of “three to four 20-ounce bottles every day.”¹⁹⁴ The 18 year old stated she gets a headache when she does not drink soda.¹⁹⁵

Students who have a nutritious breakfast are less at risk of being overweight. In fact, skipping breakfast can increase the chances of obesity in children, as there is a school of thought that believe that this tends to cause children to eat more throughout the day.¹⁹⁶ Studies also show that students who eat breakfast perform better academically.¹⁹⁷ Data from the U.S. Department of Agriculture’s School Breakfast Program (SBP) indicates that a breakfast increases a child’s cognitive abilities, and reduces disciplinary problems.¹⁹⁸ School officials in Wisconsin found that they did not have any school dropouts, expulsions, weapons, drugs, or suicides after fresh vegetables, fruits, and other healthy foods were added to the school menu.¹⁹⁹

XIV. Conclusion

While we cannot pinpoint only one reason that children become obese, we must begin by looking at how each component contributes to the problem, and sincerely

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ Claudia Hammond, *Does skipping breakfast make you put on weight?*, BBC NEWS, Mar. 5, 2013, at 1.

¹⁹⁷ *Breakfast & the Brain: How Eating Breakfast Impacts School Performance*, EXTENSION (Mar. 31, 2016), <http://articles.extension.org/pages/68837/breakfast-and-the-brain:-how-eating-breakfast-impacts-school-performance>.

¹⁹⁸ J. Larry Brown, William H. Beardslee & Deborah Prothrow-Stith, *Impact of School Breakfast on Children’s Health and Learning*, SODEXO FOUND. (Nov. 17, 2008), http://us.stop-hunger.org/files/live/sites/stop-hunger-us/files/HungerPdf/Impact%20of%20School%20Breakfast%20Study_tcm150-212606.pdf.

¹⁹⁹ Leila Arboretum Society, *Edible Schoolyard and Slow Food Curriculum to Combat Childhood Obesity*, BATTLE CREEK ENQUIRER (March 13, 2007).

assess how schools themselves contribute to the problem. It is only by evaluating the current situation and then taking steps to fight obesity that the schools can take back control over their lunchroom and avoid the courtroom. Lawmakers must consider the implications that obesity-related lawsuits would have on our schools because it is the school systems that have allowed the fast food and beverage industry to manipulate children in the school lunchroom. Only by making immediate and drastic changes will the school systems be able to possibly dodge this liability.

The history of the school food programs show that policy changes have been successful in the past in addressing issues important at the time. Since the 1990s, the policy and actions of the school food programs have expanded and recognized the interrelationship of diet to health, especially chronic diseases, by serving healthy foods to children that are high in essential nutrients and are low in nutrients such as fat, cholesterol, and sodium.²⁰⁰ While these policies were slow to start, they have eventually worked to safeguard the health and well-being of our nation's children.

It is now time to address the issues of competitive foods and lack of physical education with policy that puts the health and well-being of children at the forefront, not profits. Research shows that there is a direct link between proper nutrition and children's lives – their ability to learn, play, grow and develop.²⁰¹ The research speaks for itself; it is time to do something. Children's health can no longer be sacrificed for extra dollars. There must be new policy initiated in order to eliminate competitive foods so that the healthy school food programs are given a chance to succeed. Once available, without competition, school administrators may effectively help children learn how to choose healthier foods. And by

²⁰⁰ Kristin Franco, *Optimizing Nutritional Health for Children Through School-Based Initiatives*, 101 J. ACAD. NUTRITION & DIETETICS 8, 873 (2001).

²⁰¹ Center on Hunger, Poverty & Nutritional Policy, *Statement on the Link between Nutrition and Cognitive Development in Children* Center on Hunger, Poverty and Nutrition Policy, TUFTS U. SCHOOL OF NUTRITION SCIENCE & POL'Y (1998), <http://eric.ed.gov/?id=ED374903>.

helping children make better food and exercise choices, we can help them lead longer, healthier lives.

Childhood obesity is a problem that will not be easily solved. There are numerous causes but, if not treated, the end result can be fatal. Clearly, there is a correlative effect between childhood obesity and academic development or academic problems. Childhood obesity may affect one's child performance in school due to increased absenteeism as a result of obesity-related diseases. Childhood obesity also causes fatigue, which affects a child's cognitive abilities and minimizes their attention to what is being taught in class.²⁰² Low self-esteem and lack of interest in school activities are symptoms of childhood obesity that contribute to poor academic performance as well.²⁰³ In addition, obese children who are ridiculed for being overweight by peers tend to drop-out of school more often than normal weight children.²⁰⁴ Among girls, in particular, childhood obesity also diminishes their interest in pursuing higher education.²⁰⁵

As a nation, this problem will have to be addressed from all aspects of society: parents, schools, government, as well as the medical field. Parents have to emulate healthy eating patterns in the home. It is imperative that they also "manage the critical issues of self-esteem that can be so disabling for overweight kids."²⁰⁶ Lawmakers are intently watching this issue as they examine the extensive body of research, which indicates the myriad factors that contribute to this growing epidemic as they attempt to fashion a solution to this problem. Such factors consist of race, socio-economic status, genetics, educational level, and geographic location. The medical field is struggling as doctors' deal with the various effects of childhood obesity on a daily basis. But perhaps the most significant influence is educators, who serve

²⁰² Amanda Gardner, *Does obesity affect school performance?*, CNN, Jun. 14, 2012, at 1.

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ Jeffrey Kluger, *How America's Children Packed on the Pounds*, TIME, Jun. 23, 2008.

as role models and mentors, and must navigate the terrain of a society that idealizes thin but denounces fat. The true victory will come when we are able to effectively communicate to children that they should strive to be as healthy as possible. If we as a society take all these factors into serious consideration, we might see the day where children are no longer faced with obesity-related health and academic issues. When that happens, we will have eliminated a major source of deficiency in children's academic performance.