

Running Head: Nutrition in Schools

## **Nutrition in Schools**

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### **Nutrition Affects Learning**

Recent studies have confirmed what we have suspected for a long time: hunger and poor nutrition DO negatively affect cognitive ability. The following is a sampling of the research results:

- Fourth graders who had the least protein intake in their diets also had the lowest achievement scores.
- Iron deficiency in infancy may cause a permanent loss of IQ later in life. Iron deficiency and anemia lead to shortened attention span, irritability, fatigue, and difficulty with concentration.
- Another study with well-nourished students found that skipping breakfast adversely affected students' speed and accuracy on problem-solving tests.
- Children who are hungry or undernourished may also have more difficulty fighting infection. They are, therefore, more likely to become sick, miss school, and fall behind in class (Troccoli, 1993).

### **How (Un)Healthy Are Our Students?**

In America today, hunger is less of an issue than malnourishment, which often manifests itself as obesity. Sixty-five percent of Americans are overweight and thirty percent are obese. Nearly one-third of children and teens are overweight and one-sixth are obese. (The figures for Mississippi are even higher than the national averages.) Many people do not realize they or their children fall into these groups. The Center for Disease Control and Prevention (CDC) has even gone as far as to declare obesity an epidemic in our society (Parker, 2005). The CDC also reported that nearly half of all American youths are not vigorously active on a regular basis, and participation in physical activity declines with age and/or grade (American Council for Fitness and Nutrition, 2005).

Besides discrimination, obesity is associated with Type 2 diabetes, as well as a host of serious health problems. Currently, the average American consumes an astounding 180 pounds of sugar a year. Teenagers consume even more: 300 to 400 pounds per year. Americans drink 56 gallons of soda per person per year – with an average of one teaspoon of sugar per one *ounce* of soda (Parker, 2005).

Many studies indicate teens are the most poorly nourished age group of Americans. Their nutrition is endangered by conditions related to being a teenager in our society, including

concern about weight gain, snacking, tendency to skip breakfast, tendency to skip other meals because of extracurricular activities, and prejudices against school lunches (Parker, 1989).

### **Nutrition and the Poor**

The burden of hunger, obesity, and diabetes falls disproportionately on the poor. Many families avoid real hunger but do not have *access* to healthy food choices. First of all, fats and sweets tend to be the lowest cost options available. And then when supermarkets close down in poor neighborhoods, people are forced by proximity and lack of transportation to shop at convenience stores, fast food chains, and gas stations that feature high sugar and high fat snacks, high sugar sodas, and not nearly enough fresh fruits, vegetables, and meats. Popular “super discount” stores lack these fresh options as well (Parker, 2005).

In our society, we often dismiss this paradox as “personal choice” or lack of health education when a closer look reveals a lack of opportunity to purchase foods needed for a healthy, balanced diet. Fortunately for schoolchildren, free and reduced lunch and breakfast programs were specifically written into law as one way to address these malnourishment problems. Whether schools continue to do so is the subject of this paper.

### **Historical Context of School Meal Programs**

School feeding programs in the United States began with charitable organizations in the 1890s in Philadelphia and Boston. However, funding was sporadic, so these programs did not become a regular component of schools until the Great Depression. Public Law 320, approved in 1935, authorized the USDA to remove price-depressing surplus foods from the market through government purchase and dispose of them in such a way as not to interfere with normal sales (e.g. in school cafeterias). The creation of the Works Progress Administration during the same year provided the funding for program operations.

The National School Lunch Act of 1946 gave food service programs a permanent place in schools by ensuring continuous funding for school lunches. Then in 1966, Congress enacted the Child Nutrition Act “to meet more effectively the nutritional needs of our children.” The school breakfast program was established as a pilot project under this legislation. The National School Lunch Act was recently amended in 2002 so schools would have to serve meals that adhered to the Dietary Guidelines for Americans, which limit total and saturated fat and provide specific minimum levels of vitamins and nutrients (Gunderson, 2003).

### **School Lunch and Breakfast**

Mississippi participates in all eight of the USDA child nutrition programs. They are the following:

- National School Lunch Program
- After School Care Snack Program
- School Breakfast Program
- Special Milk Program
- Child and Adult Care Food Program
- Summer Food Service Program for Children
- Food Distribution Program
- Nutrition Education and Training Program

This paper concentrates on the school lunch and school breakfast programs. Appendix A and B contain more information about all programs.

School lunches are required to meet one-third of recommended daily allowances. They usually offer five items from each of the food groups: milk (no substitute), meat, vegetable/fruit, and grains/bread. School breakfasts only include four items (Mississippi Child Nutrition Programs, 2000). For a detailed description of the nutritional guidelines for school lunches and breakfasts, see Appendix C. According to national studies, school lunches meet requirements for nutrients such as protein, vitamins, calcium, and iron, but do not yet meet the required 30 percent limit for calories from fat (United States General Accounting Office, 2003).

Public law includes a regulation called “Offer vs. Serve” that allows students to select only at least three of the food items in lunches and breakfasts. The intent of this measure was to reduce waste. However, “Offer vs. Serve” does not mean leaving off milk in elementary school or preplating certain food items. School districts must implement “Offer vs. Serve” at lunch in high school, but not at breakfast (Mississippi Child Nutrition Programs, 2000).

### **Competitive Foods**

Despite efforts to improve the nutritional quality of meals offered through federal programs, other foods not provided by these programs are often available to children at school through a la carte lines in the cafeteria, vending machines, school stores, fundraising, and other venues. These foods are referred to as competitive foods. The nutritional value of these foods is often low (see Appendix D) and largely unregulated by the federal government.

Over 80 percent of school districts reported offering a la carte lines in their middle and high schools in the 1999-2000 school year. 74 percent of middle schools and 98 percent of high schools had vending machines and school stores/snack bars. One quarter of schools had vending machines in or near the cafeteria. In 82 percent of schools, organizations such as clubs and sports teams sold food at school or in the community to raise money.

Preliminary small-scale research suggests that the presence of competitive foods in schools is related to a decrease in fruit and vegetable consumption and an increase in calories obtained from fat.

According to the courts, USDA can only regulate food served in the cafeteria and other food service areas during school meal times, but not anywhere else on a school campus or at any other time. As a result, more than half of the states have taken up efforts to further restrict the sale of competitive foods in schools, usually by limiting the times and types of competitive foods available (United States General Accounting Office, 2004). Mississippi is one of them. The current bill, MS HB 748, would require that only water, natural juices, fruit, and nonprocessed snacks may be sold in vending machines in all schools (National Conference of State Legislatures, 2005).

### **A Good System Can Become Even Better**

Providing nutritious meals to students is only the first step for food service programs in schools. Students must also choose - or have no other option but - to eat the nutritious food.

To enact change in schools, we must recognize and work around the barriers to providing nutritious meals and encouraging healthy eating. One barrier to providing more nutritious food is the possible loss of needed revenue if schools introduce healthier foods or ban vending machines. One barrier to encouraging healthy eating is the lack of time for nutrition education when schools are so focused on meeting state academic standards.

Schools across the nation have taken a variety of innovative steps to overcome barriers. Some schools have modified recipes to lower the fat content of popular foods such as pizza (United States General Accounting Office, 2003). In addition, some schools have established school food policies to restrict unhealthy choices (see Appendix E for examples).

Teachers can promote healthy eating habits, too. One method is to offer non-food rewards and fundraisers (Mississippi Child Nutrition Programs, 2005). Suggestions are included in Appedix F.

### **Concluding Remarks**

In 2001, the U.S. Surgeon General issued a call to action to prevent and decrease overweight and obesity among all Americans, especially children. In this statement, schools were identified as one of the key settings to address these issues since a large portion of a child's day is spent in school (United States General Accounting Office, 2004). Whether one agrees or not, the fact remains that our public schools have shouldered the responsibility of feeding our schoolchildren, especially our poorest, and in doing so, schools can provide a more equal education for all.

Obviously, eating well is only one side of the coin when it comes to improving student health and tackling the obesity and malnutrition problems. Eating nutritious foods should also be accompanied by more physical activity, and even more ambitiously, a change in our collective attitudes towards food.

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