

Body Mass Index (BMI) - 1st, 3rd, and 5th Grade Students Spartanburg County, South Carolina

Introduction

The rising rate of childhood obesity¹ is a major public health threat for our children. Currently one-third (33.6%) of American children and adolescents are either obese or at risk of becoming obese². In order to assess the healthy weight status of students in Spartanburg County, body mass index (BMI) data were collected during the 2011-2012 school year. The purpose of this report is to highlight the percent of obese or overweight 1st, 3rd, and 5th grade students in Spartanburg County, South Carolina.

Methodology

Body Mass Index (BMI) is a number calculated from a person's weight and height. BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems.

BMI is calculated by multiplying a common conversion factor of 703 by weight in pounds (lb) divided by height in inches (in) squared. In other words,

$$BMI = 703 \times (Weight (lbs) \div Height^2 (in^2))$$

The weight status of children was determined by using growth charts developed by the Centers for Disease Control and Prevention. The growth charts show the distribution of BMI across a range of ages for a reference population. Children were classified as obese if their BMI-for-age was in the 95th percentile or above. Children were classified as overweight if their BMI-for-age was between the 85th and 94th percentile.

Demographic and health data were provided by selected individuals within each school district. Information Technology staff played a key role in consolidating data. Height and weight measurements were collected during the school year of 2011-2012. Several preliminary planning meetings were held, and coordinated in conjunction with a Mary Black Foundation Initiative featuring SPARK, a research-based program that promotes evidence-based Physical Education Health programs to teachers. SPARK 'Stars' were identified in each school district, and served as primary points of contact. In an effort to promote consistency, digital scales were provided, along with specific protocol on how to measure height and weight for each child.

Note:

83.4% of 1st graders were measured (2607 of 3125)

84.0% of 3rd graders were measured (2627 of 3129)

84.4% of 5th graders were measured (2648 of 3136)

Key Findings

- 33.4% of 1st Graders were obese or overweight.
- 38.0% of 3rd Graders were obese or overweight.
- 39.1% of 5th Graders were obese or overweight.
- Differences/Disparities exist between White, African-American, and Hispanic children.
- Differences/Disparities exist between socioeconomic status (SES) groups.

Conclusions

- Childhood obesity is a severe problem in Spartanburg County.
- Efforts should continue to monitor BMI in children.
- The community should be made aware of the situation in order to seek resources, implement evidence-based programs, and improve outcomes.

Actions for Prevention of Childhood Obesity³

Immediate actions involving stakeholders from multiple settings are needed to address the epidemic.

Local Governments

- Expand and promote opportunities for active living and healthy eating in the community through changes to ordinances, policies, capital improvement programs, and other planning practices.

Communities

- Provide opportunities for healthy eating and physical activity in existing and new community programs.
- Support legislation and other local and state-level action promoting healthy eating and physical activity.
- Seek resources in order to help implement and/or maintain programs to promote and support healthy eating and physical activity in the community.

Schools

- Implement school wellness policies that promote healthy eating and active living for both students and teachers.
- Improve the nutritional quality of foods and beverages served and sold in schools and as part of school-related activities.
- Routinely track BMI and offer appropriate counseling and guidance to children and their families.

Families

- Implement interventions to reduce the amount of time children spend doing sedentary activities such as viewing television, playing video games, and using a computer.
- Monitor and discuss BMI information with family health care providers.
- Engage in and promote healthy eating and active lifestyles together as families.

¹-*Obesity* is defined as a child who has a body mass index (BMI) for age at or above the sex-specific 95th percentile of the BMI charts developed by the Centers for Disease Control and Prevention (CDC) in 2000. *At risk for obesity* is defined as a child with a BMI for age at or above the sex-specific 85th percentile but less than the 95th percentile of the CDC BMI charts. In most children, a BMI level at or above the 95th percentile indicates elevated body fat that reflects the presence or risk of related chronic diseases.

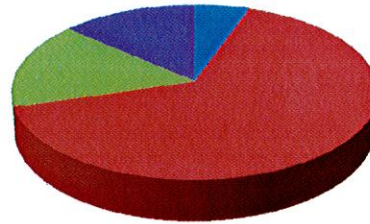
²-Save the Children. *Change Program: Creating Healthy, Active, and Nurturing Growing-up Environments*. June 2007. www.savethechildren.org/newsroom/2007/rural-childhood-obesity

³- Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. Report Brief, September 2004. <http://iom.edu/report.asp?id=22596>

Spartanburg County School District Five

grade 1 493

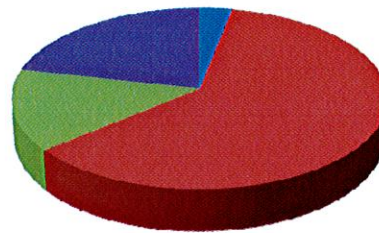
under weight	27	
normal weight	320	
over weight	79	16%
obese	67	13.60%



- under weight
- normal weight
- over weight
- obese

grade 3 517

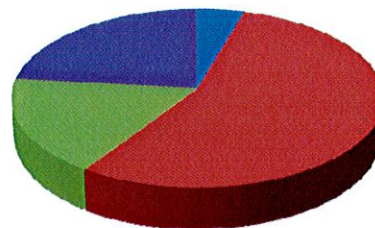
under weight	16	
normal weight	315	
over weight	75	14.50%
obese	111	21.50%



- under weight
- normal weight
- over weight
- obese

grade 5 526

under weight	24	
normal weight	288	
over weight	92	17.50%
obese	122	23.20%



- under weight
- normal weight
- over weight
- obese