

# Parents', Youth and Policymakers' Perspectives on the Mississippi Healthy Students Act of 2007: Baseline Findings

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## **EXECUTIVE SUMMARY AND KEY FINDINGS**

This report provides baseline data from parents, youth, state, district and local level policymakers to assess the current status of implementation of the Mississippi Healthy Students Act of 2007. There is consensus among all groups interviewed and/or surveyed that childhood obesity is a critical issue in Mississippi. Among policymakers there was also strong consensus that both the underlying causes, as well as the solutions are multi-faceted. As such, an increased understanding of various groups' perspectives on the topic is critical toward finding ways to counter the epidemic of obesity within Mississippi, particularly among our children. Each of these groups and a summary of key findings among each are reported below.

### ***Key Findings: Parents of Public School Students***

Beginning May 2009 through July 2009, telephone surveys were completed by 3,710 parents who had at least one child attending Mississippi public schools in academic year 2008-2009. Overwhelming parent support for various components of the Mississippi Healthy Students Act of 2007 was evident in the following areas:

- Parents were extremely supportive of physical education requirements for all students (96.6%)
- Parents were strongly supportive that schools offer only healthy foods to children and increase physical education (95.6%)
- Parents thought that the school is very important (66.9%) in the prevention of childhood overweight or obesity problems, with 27.5% reporting that this was somewhat important, while only 4.0% noted that the schools' role was a little important and 1.0%, not at all important

There was less awareness reported on other key components that promote healthy school environments, such as:

- Of the 3,710 parents responding, approximately one fourth (25.6%) stated that their child's school had a health committee, council or task force
- Respondents were aware of changes in vending machines, school lunch choices, or physical exercise requirements at their child's school (44.0%)

Within their home environments, parents reported the following:

- Almost two thirds (64.2%) stated that they or their families have tried to eat healthier within the last month
- More than one third (35.8%) reported that sodas were served to their families 4-7 days per week
- Almost two thirds (60.9%) note that there are limits on the amount of time that could be spent by their child watching television/playing video games or time using the internet
- More than one half (52.0%) reported that they have increased their child's exercise or physical activity

When asked about their support of *potential* new school policies, parents reported the following:

- Parents were extremely supportive (85.3%) of schools collecting information on children's height and weight and giving this report to parents

- Less than one half (46.5%) reported that public school facilities are available for individuals within the community to use for physical activity outside the school hours

### ***Key Findings: Youth***

During the same time frame that parents were interviewed (May 2009 through July 2009) telephone surveys were completed on 150 youth (age 14 and over) who attend public schools and whose parents gave permission to interview the youth. Given the small number of responses, no generalizations can be made; however, their answers do give voice to areas that impact child and youth obesity and in several areas are strikingly similar to some of the answers reported by adults.

- Almost two thirds (64.7%) stated that within the last month they had been trying to change what they eat to be healthier
- More than one third (37.3%) reported that sodas were served to their families 4-7 days per week

When asked about having a television or computer in their bedroom, youth were more than three (3) times as likely to have television (80.7%) compared to computer (26.0%).

### ***Key Findings: State and District Policymakers***

In addition to parents and youth, policymakers at the state level and district levels are clearly important to the success of the Mississippi Healthy Students Act of 2007 for the following reasons: 1) assessment of the implementation of said policy including, but not limited to feedback received from various constituent groups and 2) considerations to reinforce and/or

refine current policies needed to assist Mississippi in addressing the childhood obesity epidemic. For these groups of individuals, the primary methodology was a qualitative approach, although there were some questions that resulted in respondents providing quantitative responses. Researchers employed a mixed-method of interviews (i.e., telephone, face-to-face and electronic responses) with the following groups of policy and decision-makers: Mississippi State Department of Education Board Members, Mississippi State Board of Health members, Mississippi State Department of Health district health officers and some Mississippi legislators. All of these groups consistently ranked the prevention of childhood obesity as a very important issue in Mississippi. It should also be noted that the interview guides were tailored to each group of policymakers; thus the number of themes identified by each group varied dependent upon the questions that were asked to each group.

***Key Findings: Mississippi State Department of Education Board Members***

Of the nine State Board of Education members, seven agreed to complete an interview, yielding a response rate of 77.7%. Qualitative themes identified among this group of interviews included:

- Obesity as a Continuum of Health Concerns
- Economic Cost to Society
- Problem Implementing Current/Future Legislation---Time issues
- Government role vs. Personal responsibility
- Importance of Providing Healthy Cafeteria Meals/Cooking Techniques and Equipment
- Status of Progress to Date

- Importance of Parental Education and Involvement to Prevent Childhood Obesity
- Impact of Health on Academic Achievement
- Increased Awareness: Importance of making People Aware of the Problem
- Importance of Role Models for Children
- Disconnect between childhood obesity policies and implementation
- Collaboration among State agencies/communities to prevent childhood obesity

For more information on definitions and example quotes, please refer to the full report.

Among the quantitative findings from the interviews, the Mississippi State Board of Education members, as a group, had the following responses.

- On a scale of 1 – 5, with 5 being the most important, Mississippi Board of Education members, on average, reported that the prevention of childhood obesity was very important (4.6)
- Mississippi Board of Education members responded that our current policies could be more effective in addressing childhood obesity. On a scale of 1 to 5, with 5 being very effective, the average score was 3.2
- Board of Education members were asked to rank target areas by level of importance with 5 being the most important and 1 being the least important. Increasing children's physical activity received the highest average ranking (4.7). It was followed closely by increasing children's consumption of fruits and vegetables (4.6) and decreasing consumption of sugary beverages (4.6)
- Board of Education members ranked other variables that may have an impact on childhood obesity in Mississippi. A ranking of 5 means that the factor has a very large



impact on childhood obesity. A ranking of 1 means that it has no impact on childhood obesity. The 4 variables that received the highest average rankings are as follows:

- Child Care Centers (3.9)
  - Nutritional labeling (3.7)
  - Built environments (3.7)
  - Fat and trans fat restrictions (3.6)
- Approximately ½ of the Board of Education members surveyed felt that Mississippi is doing enough to strengthen school policies in the areas of nutrition (57%), health education (43%), and physical education (43%)
- One hundred percent (100%) of Board of Education member respondents believe that local government funds should be used to build and maintain places in the community where people can exercise
- One hundred percent (100%) of Board of Education Members surveyed reported that school facilities such as track, ball fields, and playgrounds should be made available to the community after school hours to promote physical activity
- The majority of Board of Education members who responded were in favor of collecting information in order to determine students Body Mass Index (BMI). For those who were in favor of collecting the information, all were in favor of sending it to the students' parents

### ***Key Findings: Mississippi State Department of Health Board Members***

Of the eleven State Board of Health members, eight agreed to complete an interview, yielding a response rate of 72%. Eight qualitative themes identified among this group of interviews included:

- Obesity as a Continuum of Health Concerns
- Cultural/Social Changes: Technology and Exercise
- Economic Cost to Society
- Importance of Providing Healthy Cafeteria Meals/Cooking Techniques and Equipment
- Status of Progress to Date
- Importance of Parental Education and Involvement to Prevent Childhood Obesity
- Disconnect between childhood obesity policies and implementation; Collaboration among state agencies/communities to prevent childhood obesity

Additional information on definitions and example quotes are found in the full report.

Among the quantitative findings from the interviews, the Mississippi State Department of Health Board members, as a group, had the following responses.

- On a scale of 1 – 5, with 5 being the most important, Board of Health members, on average, reported that the prevention of childhood obesity was very important (4.8)
- Board of Health members were asked to rank target areas by level of importance with 5 being the most important and 1 being the least important. Increasing children's physical activity, increasing children's consumption of fruits and vegetables, and

decreasing children's consumption of sugary beverages tied for the highest average ranking (4.4)

- Board of Health members ranked other variables that may have an impact on childhood obesity in Mississippi. A ranking of 5 means that the factor has a very large impact on childhood obesity. A ranking of 1 means that it has no impact on childhood obesity. The 4 variables that received the highest average rankings are as follows:
  - Media Policy Messages (4.2)
  - Built environments (4.0)
  - Body Mass Index Reporting (3.9)
  - Child care centers (3.7)
- One hundred percent of Board of Health members surveyed felt that it was important for schools to promote healthy lifestyles for both students and staff
- Approximately 87.5 percent of Board of Health members surveyed believed that local government funds should be used to build and maintain places in the community where people can exercise

***Key Findings: Mississippi State Department of Health District Health Officers***

Four of the five\* State Department of Health district health officers agreed to complete an interview, yielding a response rate of 80% \*At the time of the interviews, there was one vacancy among the district health officers. Qualitative themes identified among this group of interviews included:

- Obesity as a Continuum of Health Concerns
- Problems Implementing Current/Future Legislation - Time issues

- Status of Progress to Date
- Impact of Health on Academic Achievement

As noted earlier, additional information on definitions and example quotes are found in the full report.

Among the quantitative findings from the interviews, the Mississippi State Department of Health district health officers, as a group, had the following responses.

- On a scale of 1 – 5, with 5 being the most important, Mississippi district health officers, on average, reported that the prevention of childhood obesity was very important (4.8)
- District health officers ranked other variables that may have an impact on childhood obesity in Mississippi. A ranking of 5 means that the factor has a very large impact on childhood obesity. A ranking of 1 means that it has no impact on childhood obesity.

The 4 variables that received the highest average rankings were:

- Fat and trans fat restrictions (4.5)
- Built environments (4.3)
- Media policy (4.0)
- Child care centers (4.0)
- One hundred percent of district health officers surveyed believe that local government funds should be used to build and maintain places in the community where people can exercise

### ***Key Findings: State Legislators***

Twelve of the thirteen legislators contacted agreed to complete an interview, resulting in a response rate of 92.3%. Qualitative themes identified among this group of interviews included:

- Obesity as a Continuum of Health Concerns
- Economic Cost to Society
- Cultural/Societal Changes—Technology and Exercise
- Cultural/Societal Changes—Physical Education and/or Health Education in Schools
- Problems Implementing Current/Future Legislation - Funding
- Problem Implementing Current/Future Legislation - Personnel Issues
- Problem Implementing Current/Future Legislation - Time issues
- Government role vs. Personal responsibility
- Importance of Providing Healthy Cafeteria Meals/Cooking Techniques and Equipment
- Status of Progress to Date
- Importance of Parental Education and Involvement in Preventing Childhood Obesity
- Impact of Health on Academic Achievement
- Increase Awareness: Importance of making People Aware of the Problem
- Importance of Role Models for Children
- The Importance of Role Models for Children (teachers, legislators, parents, etc.)
- Disconnect between Childhood Obesity Policies and Implementation
- Collaboration among state agencies/communities to prevent childhood obesity

As with each of the other policymakers' themes, for more information on definitions and example quotes, please refer to the full report.

Among the quantitative findings from the interviews, the Mississippi legislators, as a group, had the following responses.

- On a scale of 1 – 5, with 5 being the most important, legislators, on average, reported that the prevention of childhood obesity was very important (4.4)
- The majority of legislators surveyed felt that schools should promote healthy lifestyles for students and staff
- Legislators, in general, feel that we should be doing more to strengthen school policies in the areas of nutrition, health education, and physical education
- Three components were included in this legislation: improving physical education, improving school nutrition, and increasing health education. Legislators were asked which component was the most important followed by which component was the next most important. Answers from 7 of the 12 legislators could be used to generate 1,2,3 rankings for the 3 components. Physical Education topped the rankings with an average of 1.7, followed by Health Education (1.9) and Nutritional Education (2.4)

### ***Key Findings: District Superintendents of Education***

Telephone surveys were conducted during July to mid-August, 2009 with 110 completing surveys.

- School superintendents reported that their school districts are making substantial progress in implementing the Mississippi Healthy Students Act of 2007, with one half

noting that their progress was at the 75% level, while 9.1% reported their districts are at the 100% level

- Seventy nine percent (79%) of superintendents responded that there is a health council within each school in their district
- School superintendents (23.6%) reported that their school districts have adopted a policy to prohibit the use of food or food coupons as a reward for good behavior or good academic performance
- School superintendents (90.0%) reported that their communities were either very supportive or somewhat supportive of promoting physical education, nutrition and health education in their schools
- School superintendents (76.4%) noted that they are in favor of collecting BMIs on children, and 95.2 % of those superintendents are in favor of sending BMI results home to parents
- School superintendents (64.5%) noted that providing staff wellness programs is very important

### ***Key Findings: Local School Board Members***

Paper surveys were conducted during July through October 23, 2009, with 160 completed surveys received.

- School board members reported that their school districts are making substantial progress in implementing the Mississippi Healthy Students Act of 2007, with 23.7% noting that their progress was at the 75% level, while 25.0% reported their districts are at the 100% level

- Thirty five percent of school board members (35.3%) reported that their district does have a health council within each school of their district
- Seventy seven percent (77.0%) of school board members reported that their school district adopted policies during the past year to specifically create a healthier environment or to prevent childhood obesity
- Seventy two percent (72.4%) of school board members reported that they have adopted policies within the last year to improve student nutrition
- School board members (21.2%) reported that their school districts have adopted a policy to prohibit the use of food or food coupons as a reward for good behavior or good academic performance
- School board members (61.3%) noted that they are in favor of collecting BMIs on children, and 73.6 % of those school board members are in favor of sending BMI results home to parents
- School board members (58.7%) noted that providing staff wellness programs is very important.

In sum, there is a strong awareness of childhood obesity as an important problem in Mississippi as well as an increased recognition that childhood obesity is systemic in origin and thus requires a multi-faceted approach in both prevention and reversal of it. Parents reported that they are trying to making healthy improvements within their households, and they also believe that the school system is a key stakeholder in making improvements also. Parents are supportive of nutritional changes in schools and an increase in physical education requirements. In addition,



there is strong support for both fitness and BMI assessments to be conducted with reports being sent to parents.

It is clear that those who set policy as well as those who serve as stakeholders agree that the schools play an important role in curbing the childhood obesity epidemic in the state. The passage of the Mississippi Healthy Students Act of 2007 is a strong beginning. All groups surveyed for this report recognize that Mississippi is making progress, but there is much more that needs to be done. Having baseline information will indeed assist in determining markers of change and hopefully improvement in preventing and reversing childhood obesity rates in subsequent years.

## INTRODUCTION AND BACKGROUND

### *Importance of the Study: Childhood/Adult Obesity Rates*

Children and adolescents living in the United States face increased health risks as the number of overweight in their age groups continues to climb year by year. Between 1980 and 2000, obesity rates among U.S. children doubled while those of adolescents tripled. Childhood and adolescent obesity can progress to adulthood overweight and obese. Additionally, the risk factors for adult diabetes, hypertension and cardiovascular disease increase if a child remains overweight through adolescence.<sup>1,2</sup>

The skyrocketing rates of childhood obesity are of particular concern to Mississippi's children and adolescents given recently released statistics of Mississippi's citizenry. According to the Trust for America's Health 2009 F as in Fat Report, Mississippi's adult obesity rate is 32.5% making it the highest in the country. Mississippi has maintained this ranking among adults for the past five years and is one of only four states in the country with an adult obesity rate over 30%. Among Mississippi's children, the obesity rate is even higher with 44.4% of Mississippi's children being overweight and/or obese.<sup>3</sup>

One important policy measure to combat these obesity statistics among Mississippi's children began in 2007 when the state legislature passed the Mississippi Healthy Students Act of 2007. The implementation of this legislation serves as a bellwether of the important roles and opportunities school environments have in preventing, curbing, and reversing Mississippi's childhood obesity rates. This legislation centers on three primary areas associated with the prevention of obesity: increasing physical activity, promoting sound nutrition and providing solid health education within all school districts in the state.<sup>4</sup>

Given the obesity ranking of both children and adults in Mississippi, understanding the antecedents to childhood obesity within children's environments is critical in the process to prevent, curb and reverse obesity rates in Mississippi. The research findings from the current evaluation of the Mississippi Healthy Students Act of 2007 is one way through which we can learn more about specific components of children and adolescents' home and school environments which influence their healthy choices.

In October, 2008, the Center for Mississippi Health Policy was awarded Robert Wood Johnson Foundation funding to facilitate the evaluation of the Mississippi Healthy Students Act of 2007. Mississippi State University's (MSU) Social Science Research Center (SSRC) was then awarded a subcontract to conduct parental and policymaker surveys. Key legislators, Mississippi State Board of Education members, Mississippi State Board of Health members, and Mississippi State Department of Health district health officers were interviewed by SSRC researchers in person or by phone. At the local level, superintendents of education and school board members were surveyed.

### ***Overview of Evaluation: Establishing a Baseline***

Our primary purpose in the first year of the evaluation was to obtain baseline data from which to make comparisons in subsequent years focusing upon how practices and policies change over time in a number of environmental contexts. Such contexts influencing the lives of children and adolescents include, but are not limited to: family/home, school, and community environments. Imbedded within these contexts, we sought to learn more about known variables which influence weight and fitness status such as nutrition, exercise and physical activity, screen time (TV, computer, et al.), and familial activity level.<sup>2,3,5,6</sup>

### ***Social Climate Approach***

In order to change social norms, particularly as it relates to the health of children, one necessary step in the process is to gauge the citizenry and key policymakers' knowledge, beliefs and practices on a particular topic. To this end, the SSRC employed a social climate approach. It considers one particular topic and measures how the knowledge, attitudes and beliefs of an array of individuals and institutions, separately and collectively over time, influence the norms of a society that are related to that topic. The evaluation of school-related policies of the Mississippi Healthy Students Act of 2007 and associated rules and regulations lend itself to using a social climate approach. In order to examine the social climate of childhood obesity and school-related policies, the SSRC utilized a variety of methods to gauge social norms among the following groups: 1) parents of public school children and adolescents attending public schools and 2) local and state-level policymakers, including legislators, State Board of Health and State Board of Education members, superintendents, school board members, and district health officers. This methodology is very similar to the one used by the Robert Wood Johnson Foundation (RWJF)-supported research team at the Fay W. Boozman College of Public Health, University of Arkansas in their evaluation of the Arkansas Act 1220 of 2003 to Combat Childhood Obesity.<sup>7</sup>

### **PARENTS AND ADOLESCENTS**

A parent survey was conducted to evaluate parental attitudes and changes in family environments and in children's health behaviors during the evaluation period. The overall purpose of the parent survey was to better understand how parents feel about and influence school health policies and to what extent family knowledge, attitudes, practices and constraints influence children's health and health behaviors, with special attention on variables influencing

children and adolescents' weight. In addition, we sought to understand more about their knowledge of the various components of the Mississippi Healthy Students Act of 2007, given that schools are important venues for conveying health information to the parents/families of school-aged children, as well as establishing and reinforcing health norms for children.

### ***Goals of the Parent Surveys***

The first goal of the parent survey was to determine parents' knowledge of and attitudes toward the Mississippi Healthy Students Act of 2007 and related policies that are being or have been implemented in Mississippi school systems.

Second, understanding the attitudes, practices and constraints within family environments around healthy eating and exercise was critical in knowing a) how receptive the parents/families may be toward school health policies, and in turn, how these families may influence the enforcement of local school policies and b) to what extent any emerging change (or lack thereof) in children's health may be attributed to family factors. By documenting nutrition and physical activity patterns in the home environment, correlates of changes in children's health can be more easily identified (e.g., it can be determined if changes, or a lack thereof, are likely due to nutrition and/or physical activity patterns, and to what degree any alterations occurred at school versus at home environment).

Given the rural landscape and cultural distinctions among various communities across the state, it is important to understand familial dietary and exercise patterns, parents' receptiveness to school policies and their ability to implement healthy behaviors within the home, as suggested by health messages that are received from the school environment. In order to make comparisons across the nine (9) Mississippi public health districts, a sample of 400 respondents per districts

was needed. Our sample consisted of 3,710 respondents. Survey instruments from other RWJF-sponsored evaluations in the states of Arkansas and West Virginia were reviewed, and some items were included in the Mississippi survey in order to facilitate state-by-state comparisons, as additional data is collected.

### ***Goals of the Adolescent Surveys***

Similar to the goals of the parents' survey, the adolescent survey sought to ascertain adolescents' knowledge of and attitudes toward the Mississippi Healthy Students Act of 2007 and related policies that are being or have been implemented in Mississippi school systems.

Second, understanding the attitudes, practices and constraints within the youths' family environments *from the youths' perspective* around healthy eating and exercise was critical in understanding similarities and/or differences that exist between parental reporting and youth reporting of factors influencing youth overweight and obesity.

### ***Methodology***

Please note: In each of the following sections, all methodologies were approved by Mississippi State University's Institutional Review Board for Human Subjects prior to the data collection and each member of the Research Team is trained in Human Subjects protection.

#### ***Telephone survey of parents and children***

Surveys were conducted by the Wolfgang Frese Survey Research Laboratory of the Social Science Research Center at Mississippi State University. The Mississippi Department of Education provided the telephone numbers of all parents in the state of Mississippi who had at

least one child enrolled in a public school during the 2008-2009 school year. From this database of approximately 360,000 telephone numbers, a random sample of 26,000 numbers was drawn. The data collection period spanned from early-May to late-July of 2009.

Adolescents who were 14 years of age or older were also surveyed, if parents gave their permission. A total of 150 adolescents answered questions about nutrition standards and vending machines, physical education and physical activity, and health education and health knowledge. It should be noted that the research team did not initially plan to interview adolescents for Year 1; however, once it was determined that adolescents would be surveyed, the initial interviews occurred prior to the end of the academic school year. Once the school year was completed, the response rate of the adolescents went down tremendously; thus it was not a matter of the parents not agreeing that their adolescent be interviewed, but rather adolescents not being as accessible once the spring semester ended.

The sampling error for the total dataset (binomial response option with 50/50 split) is no larger than + or – 3.5% with a 95% confidence interval. Telephone numbers were dialed a maximum of eight times. There was a cooperation rate of 74.6% and a Council of American Survey Research Organizations (CASRO) response rate of 47.8%

## ***Findings***

### *Parents' awareness of school district policies*

Of the 3,710 adults who answered the survey, there was a general awareness and support of school policies related to decreasing childhood obesity and overweight.

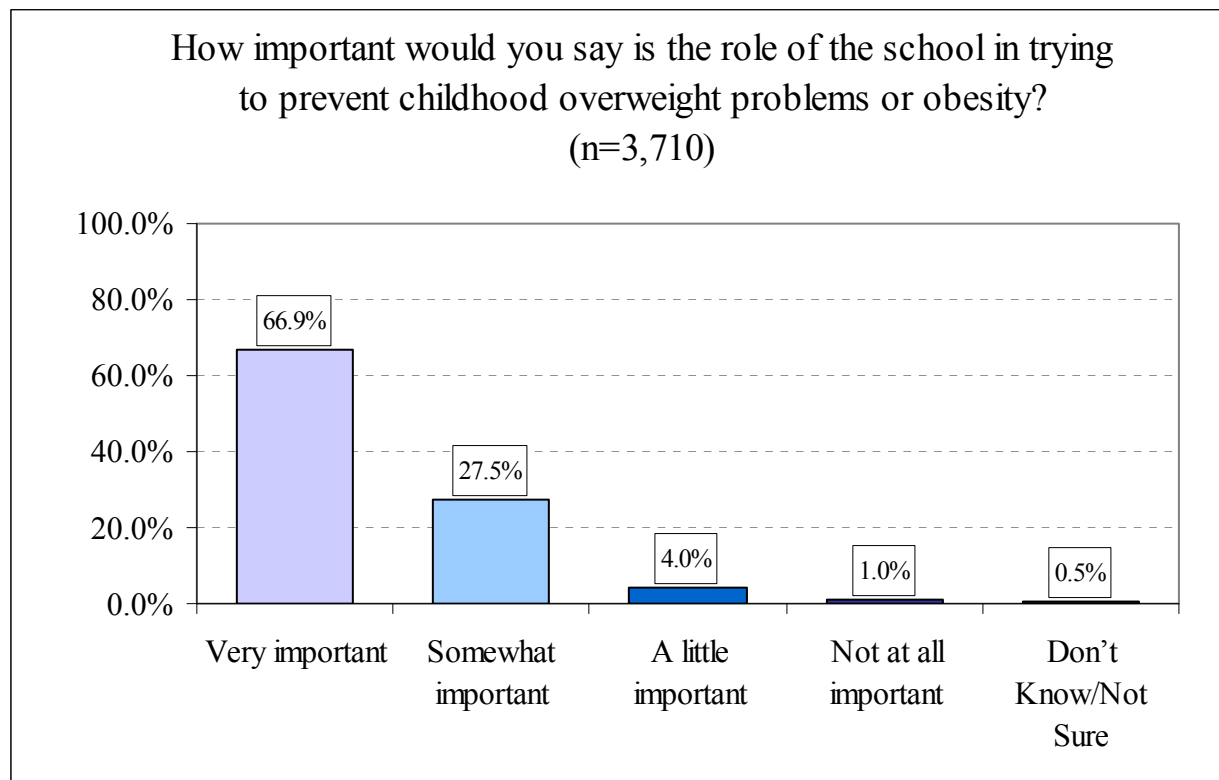
- Parents were extremely supportive that schools should require physical education to all students (96.6%)
- Parents were strongly supportive that schools offer only healthy foods to children and to increase physical education (95.6%)
- Parents thought that the school is very important (66.9%) in the prevention of childhood overweight or obesity problems, with 27.5% reporting that this was somewhat important, while only 4.0% noted that the school's role was a little important and 1.0%, not at all important

Table 1. Number and percent of parents (n=3,710) who responded "Yes" to the following questions regarding support for school policies

Question	n Yes	% Yes
Do you think schools in your community should require physical education for all students?	3,584	96.6%
State laws now require schools to offer only healthy foods to children and to increase physical education. Do you support this?	3,546	95.6%



Figure 1. Role of School in Prevention of Childhood Overweight or Obesity Problems



However, when parents were asked about specific changes within the school environment in the following areas (all components of the Mississippi Healthy Students Act of 2007), parents reported the following:

Table 2. Specific Changes in Child's School Environment

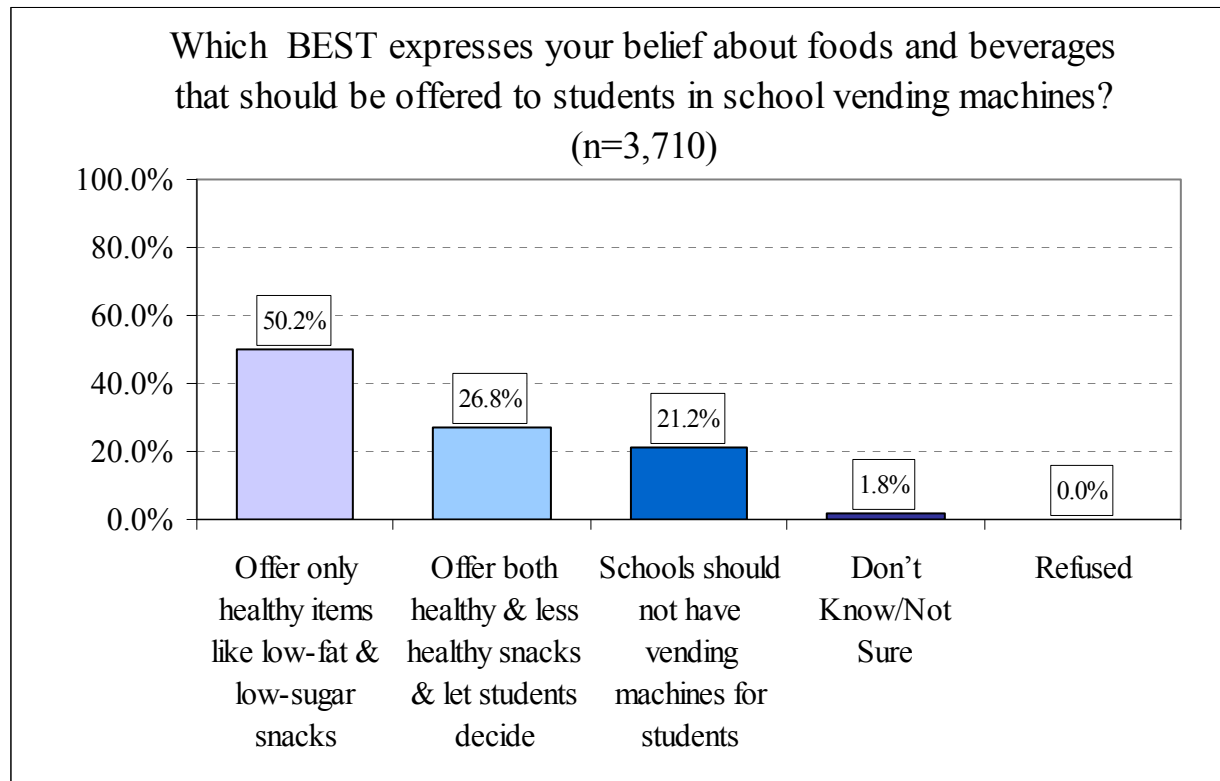
Question	Yes		No		Don't Know/ Not Sure		Refused	
	n	%	n	%	n	%	n	%
Are you aware of any changes in vending machines, school lunch choices, or physical exercise requirements at her/his school?	1,634	44.0%	1,959	52.8%	114	3.1%	3	0.1%
In the last year, has your ___ grader 's school adopted any policies to prevent childhood obesity?	1,485	40.0%	1,495	40.3%	729	19.6%	1	0.0%
Does her/his school have a health committee, council or task force?	951	25.6%	1,401	37.8%	1,357	36.6%	1	0.0%

Among various health department districts there were differences reported by parents when answering “Does your child’s school have health committee, council, task force?” The map (Figure 4) demonstrates the largest difference between District II (16.6%) and District III (32%) of parents reporting “Yes”.

Please note for each of the maps in this report: Three group ranges were chosen to geographically illustrate the survey results for nine Mississippi health districts. These ranges represent a relative high, medium and low percentage range for respondents answering “yes” to each question. The classification method for determining the class intervals of these data is the Jenks’ natural breaks method. This standard grouping method is part of ESRI’s (Environmental Systems Research Institute) ArcMap® software. In general terms, the breaks in data are

determined statistically by finding relatively large differences in adjacent values. Subsequently, each value is placed in one of the three categories.

Figure 2. Parents' beliefs about what should be offered to students in school vending machines

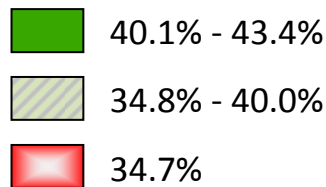


### Figure 3. In the Past Year, Has Your \_\_\_\_ Grader's School Adopted Any Policies to Prevent Childhood Obesity?

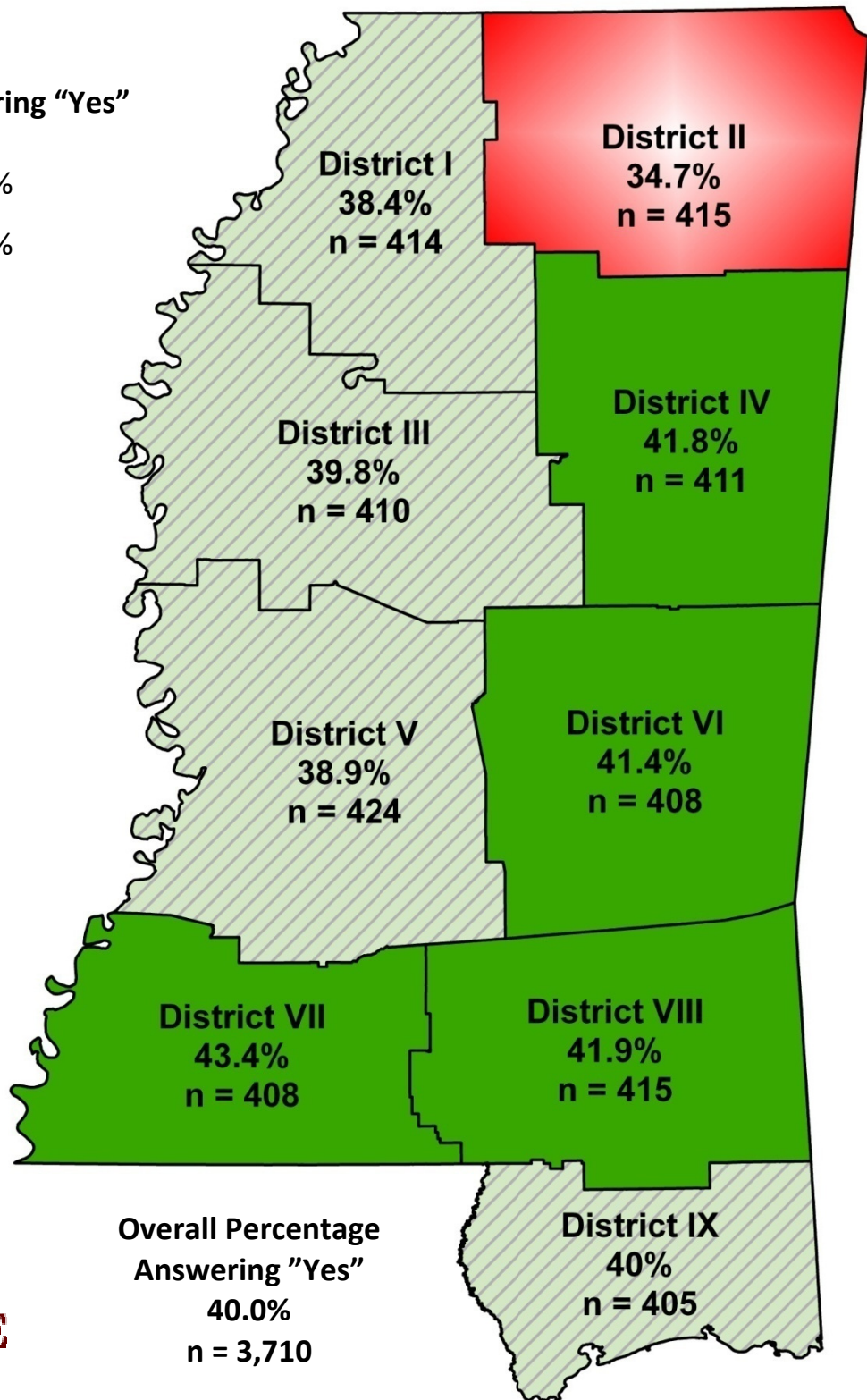
Percentage of Parents Answering "Yes"

By Mississippi Public Health District

Percentage Answering "Yes"



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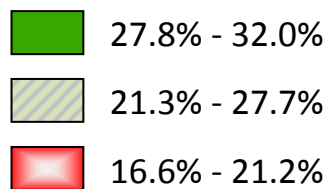


## Figure 4. Does His/Her School Have a Health Committee, Council or Task Force?

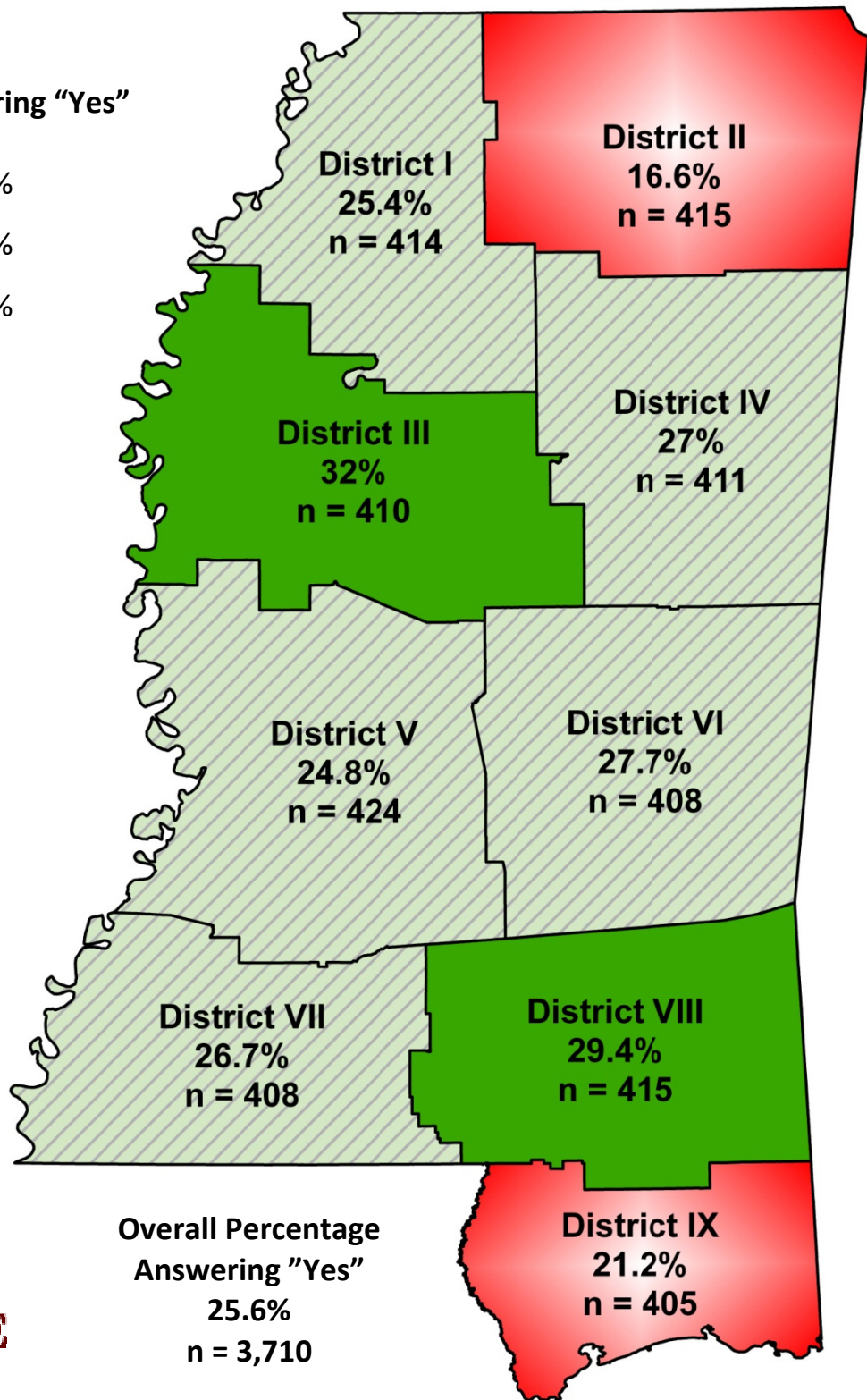
Percentage of Parents Answering "Yes"

By Mississippi Public Health District

Percentage Answering "Yes"



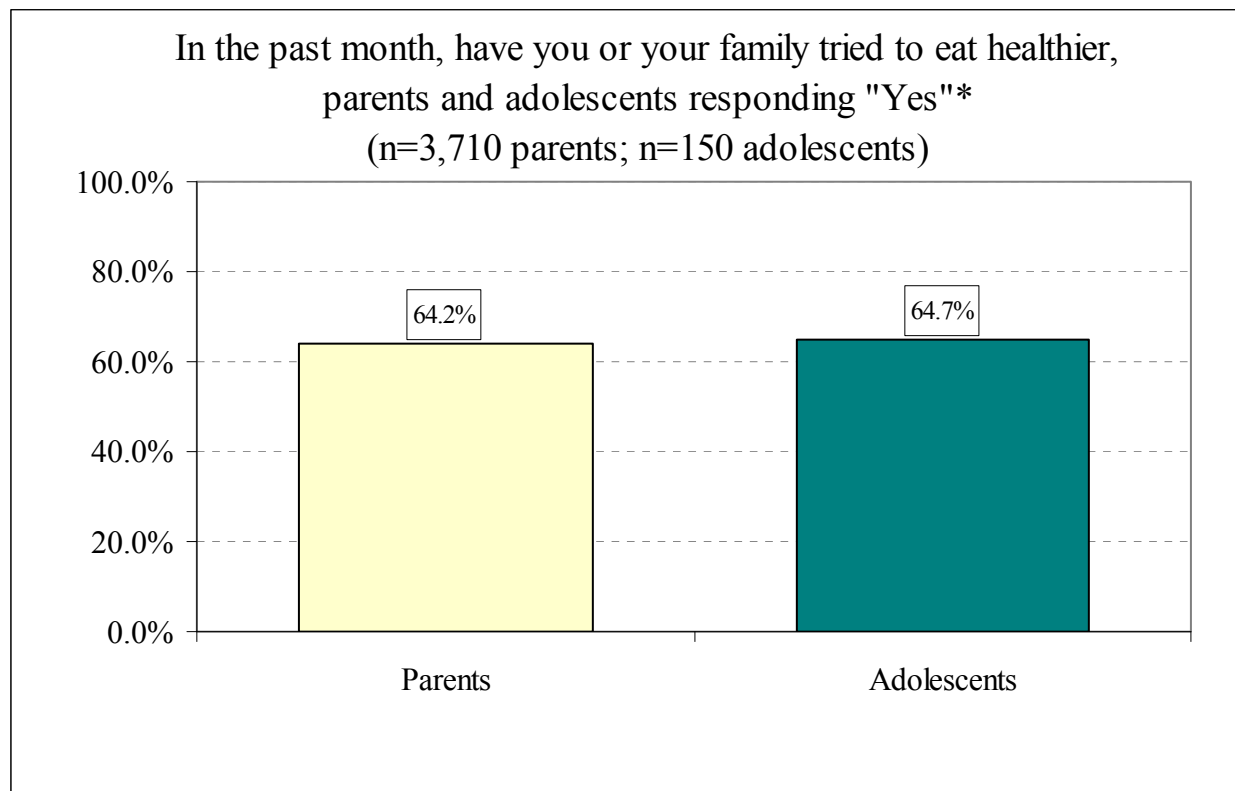
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*Family nutrition practices/knowledge*

- Both parents and youth noted changes in trying to eat healthier
- Parents and youth reported similar number of days per week that sodas were served to their family. About 70% of both parents and youth reported that sodas were served at least 1 day each week
- When asked, “How many servings of fruits and vegetables should an individual eat, the vast majority of adults (78.3%) and youth (82.7%) reported 1-4, while less than twenty percent of both groups (18.3% adults and 15.3% youth) answered correctly to 5 or more servings
- The majority of parents (86.5 %) report that their child regularly eats breakfast, with 69.1 % eating breakfast at home
- Less than one half (41.3%) of parents reported that they sit down to an evening meal together each night of the week

Figure 5. Attempts to Eat Healthier



\*Parents were asked “In the past month, have you and your family been trying to change your diet to a healthier eating pattern; Adolescents were asked, “In the past month, have you been trying to change what you eat to be healthier”

Figure 6. Number of Sodas Served within the Past Week

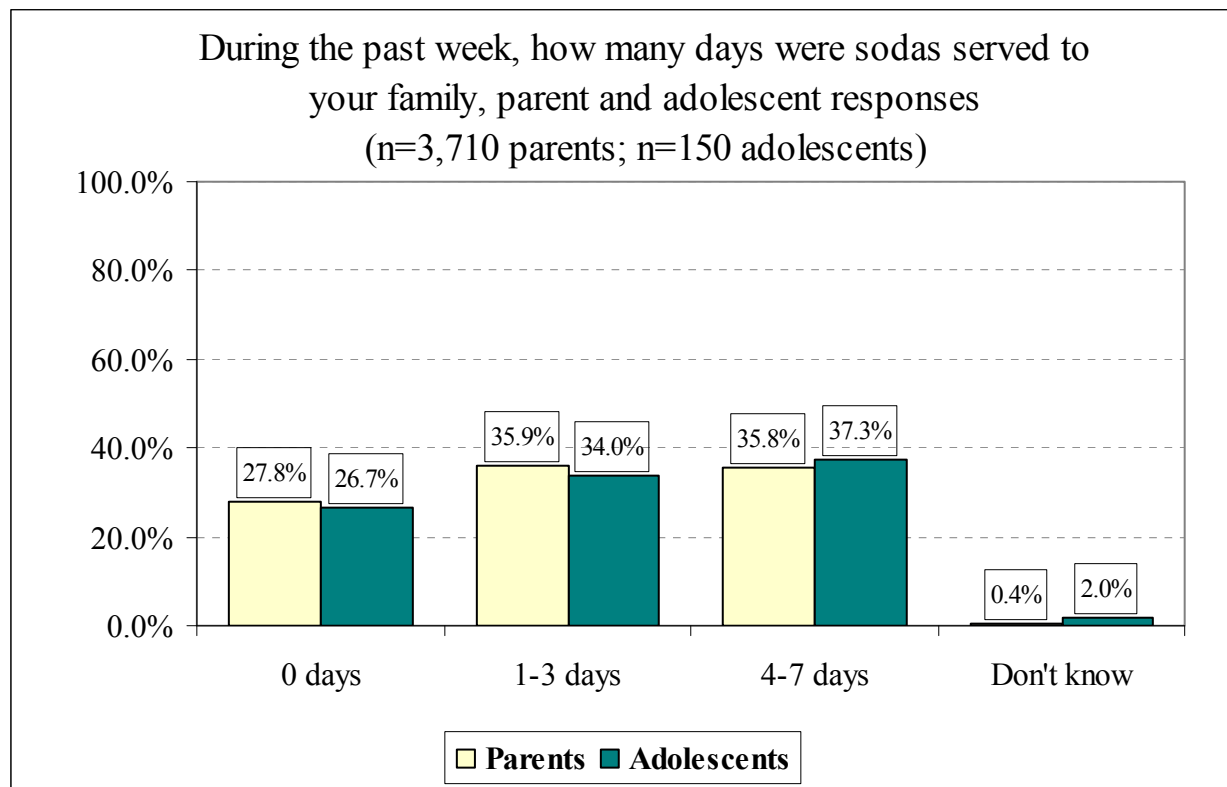




Figure 7. Number of Servings of Fruits and Vegetables Needed each Day for Good Health

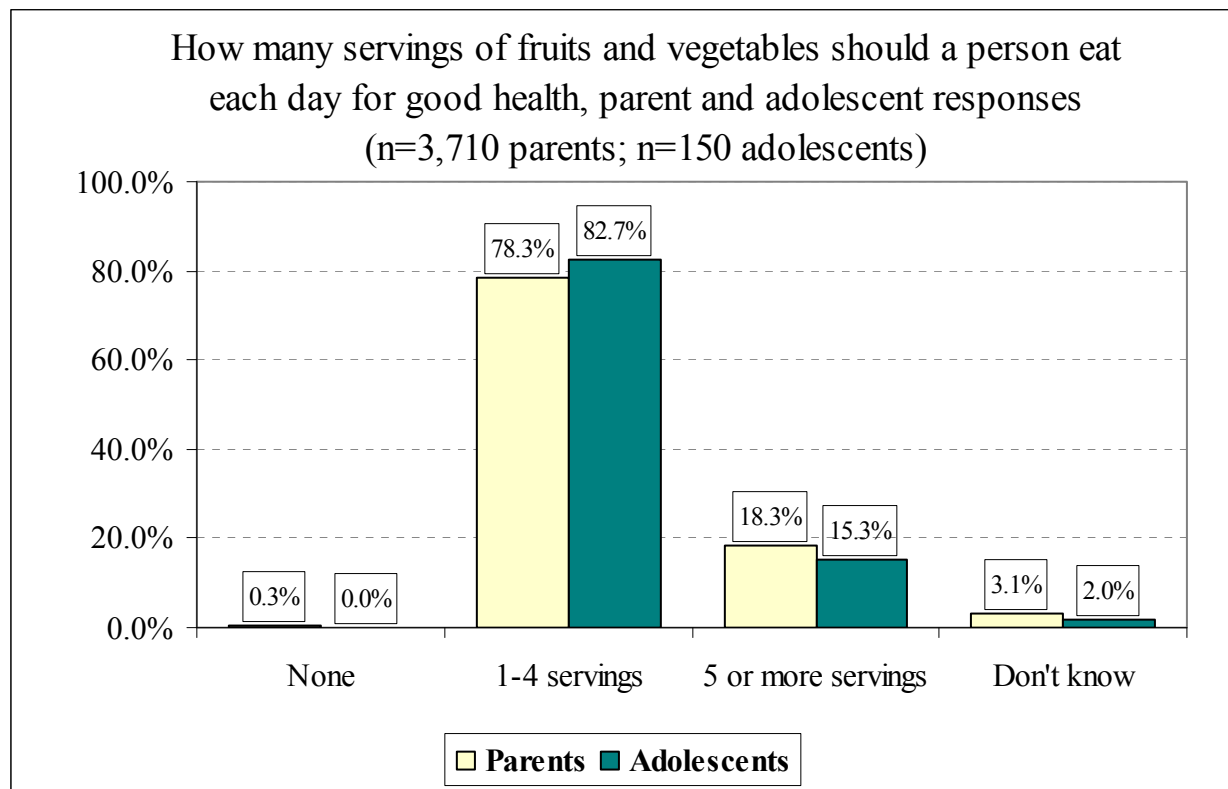


Figure 8. Percentage of children who regularly eat breakfast

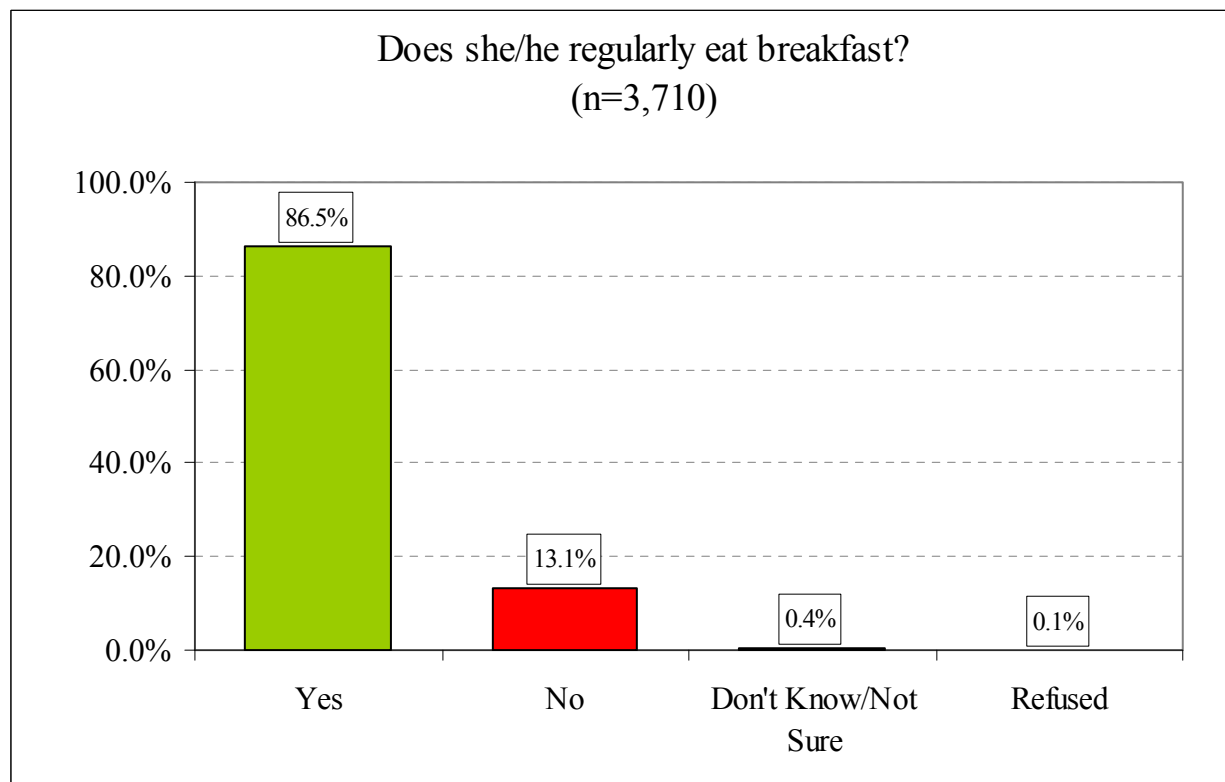
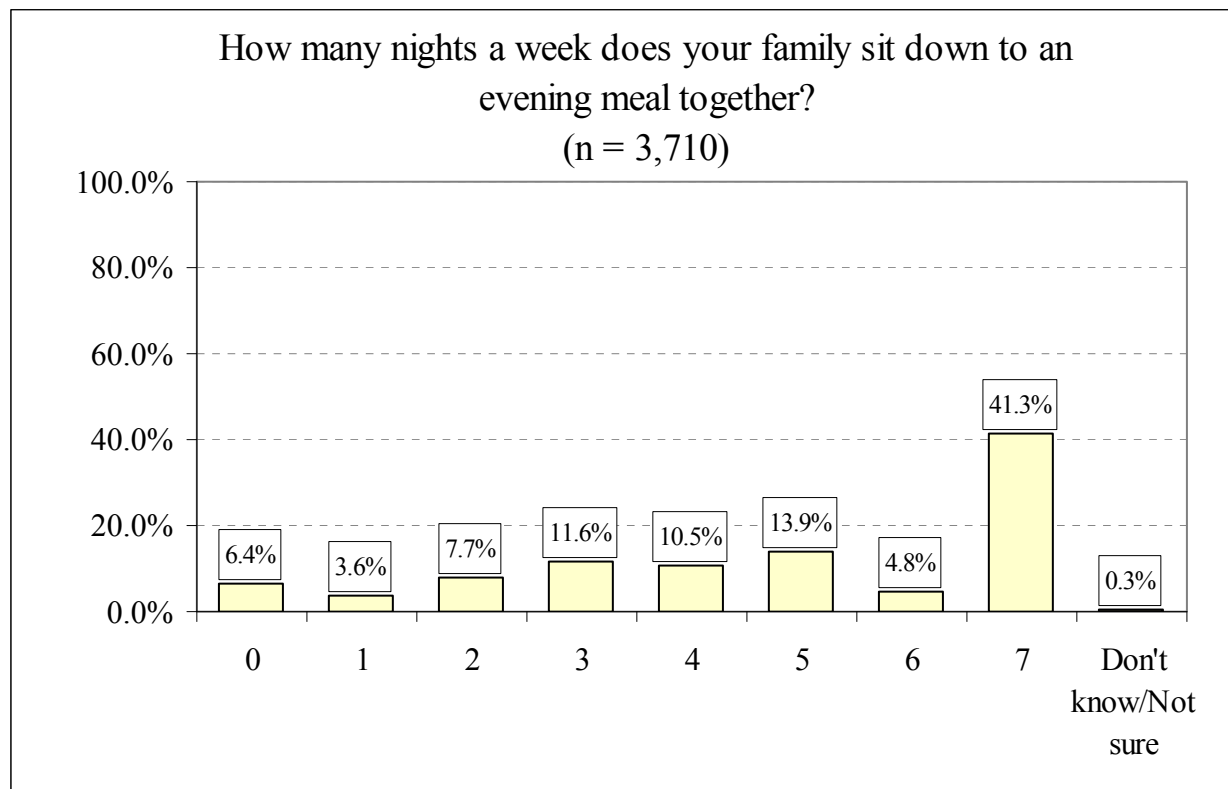


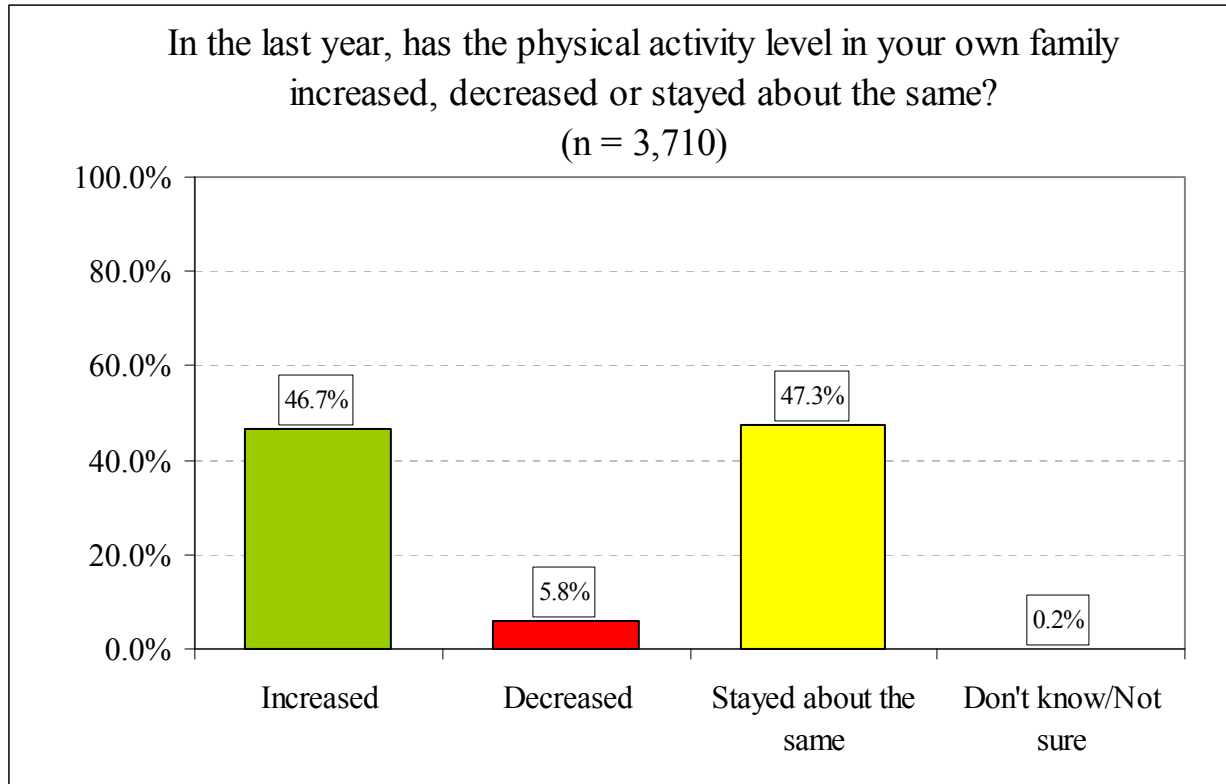
Figure 9. Number of nights/week that family eats evening meal together



### *Family/child activity levels*

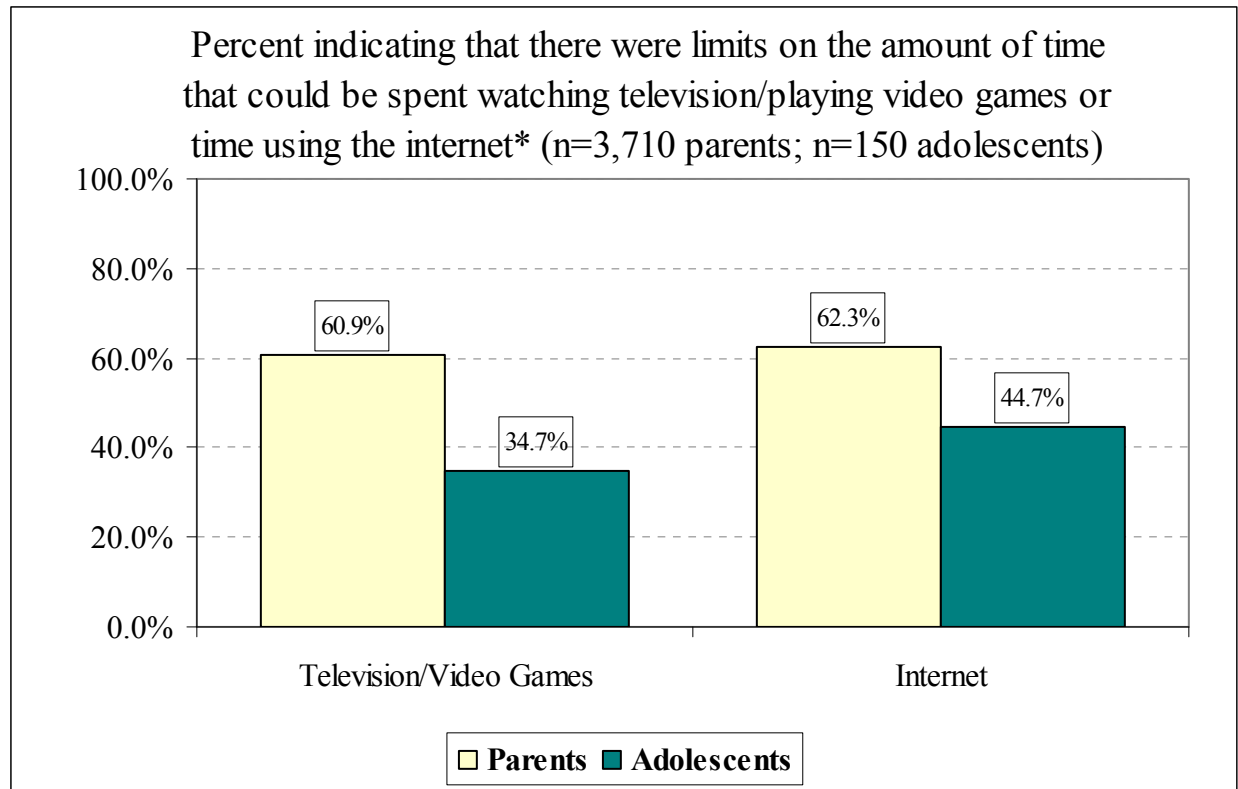
Almost an equal percentage of parents reported that the physical activity level in their family increased (46.7%) compared with those who stayed about the same (47.3%).

Figure 10. Change in family physical activity level in the last year



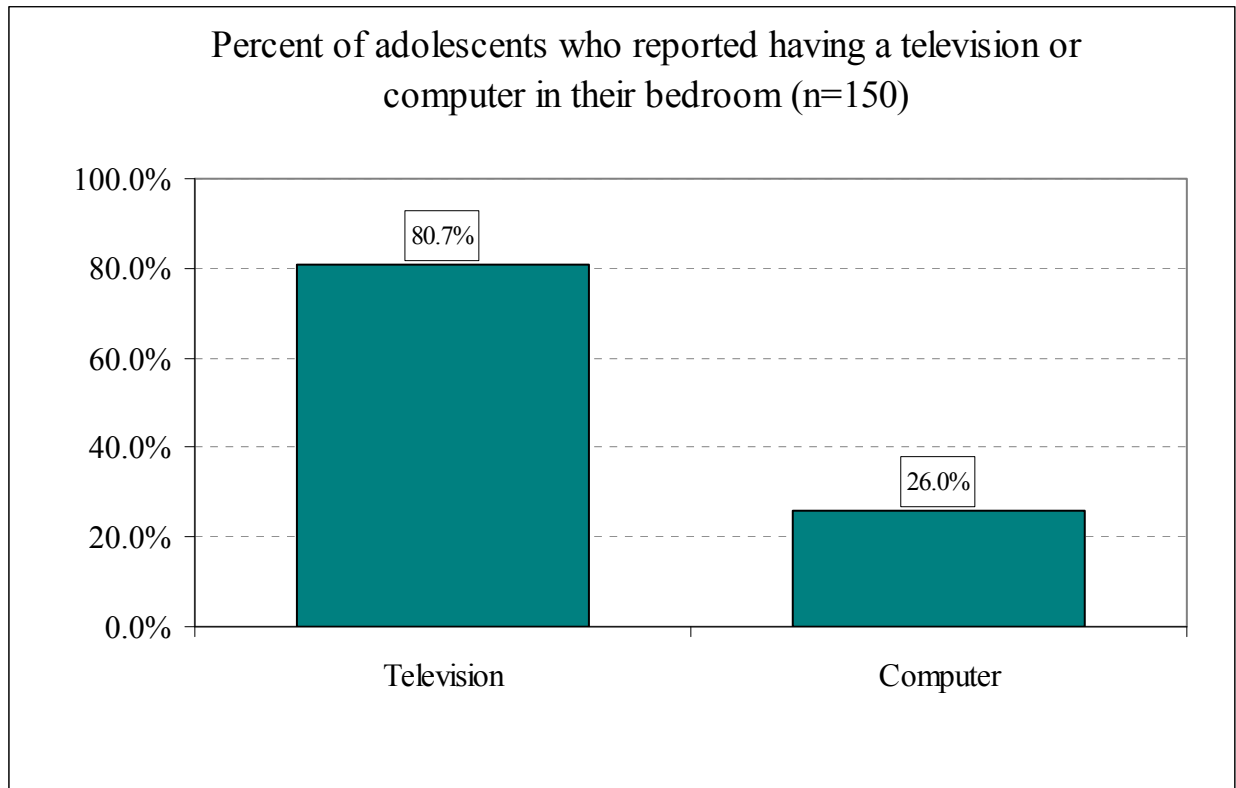
Although both parents and youth reported that parents limited their children and youth's screen time (i.e., watching TV, playing video games, using Internet), 26.0% youth also noted they had a computer in their bedroom, and 80.7% of youth reported having a TV in their bedroom.

Figure 11. Percentage indicating that there are limits on child/adolescents' screen time



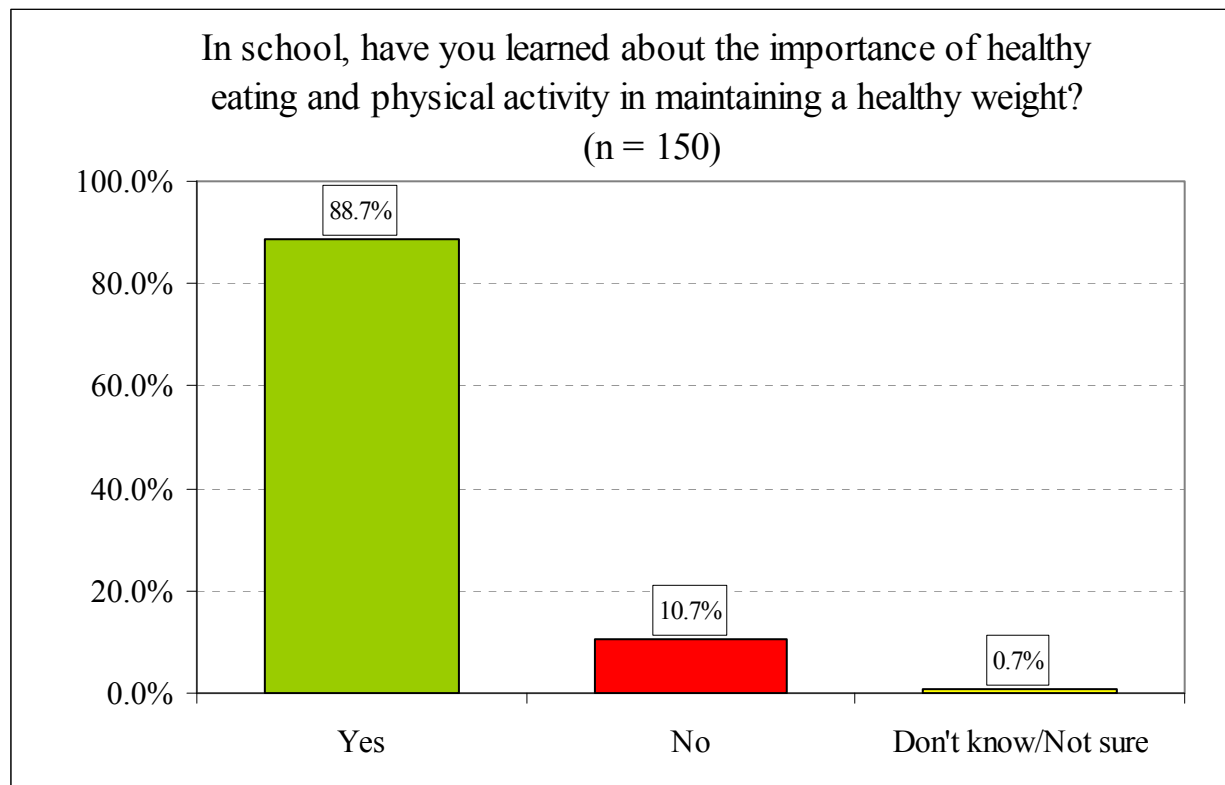
\*Please note that adolescents are being asked if *their* time is limited and parents are being asked if the time of a *different child* in the household is limited (i.e., child under age 14). Even though responses were for different children and parents may have different restrictions for their children, it's possible that the parents were responding about a household rule that applies to all children. These results should be interpreted with caution.

Figure 12. Percent of adolescents with TV or computer in their Bedroom



A high percentage of adolescents (88.7%) reported that they have learned in school the importance of healthy eating and physical activity in maintaining a healthy weight.

Figure 13. Percent of adolescents reporting that they learned about importance of healthy eating and physical activity at school



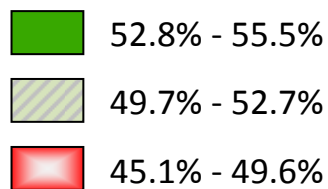
Slightly more than half (52%) of the parents reported that they have increased their child's exercise within the past year and 60.1% stated they had signed their child up for sports or exercise class. Twenty five (25%) of parents stated that they have taken action to address their child's weight gain or weight loss.

## Figure 14. In the Past Year, Have You Increased His/Her Exercise or Physical Activity?

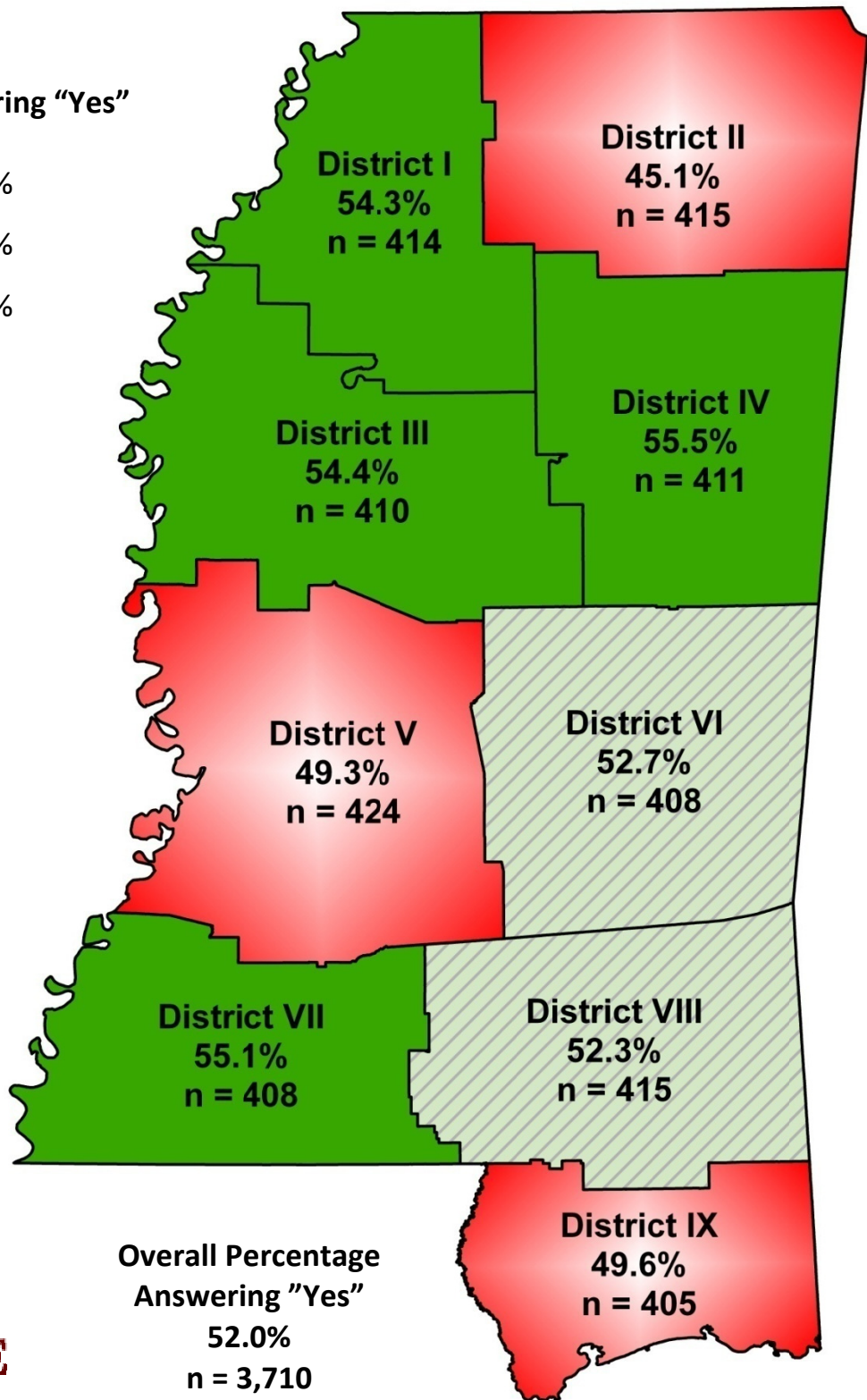
Percentage of Parents Answering "Yes"

By Mississippi Public Health District

Percentage Answering "Yes"



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### *Body Mass Index (BMI)*

Parents in the telephone survey were asked “How tall are you without your shoes on?” (in inches) and also “How much do you weigh without shoes?” With this self-reported information, we calculated Body Mass Index.<sup>8</sup> Body Mass Index (BMI) is the indicator used by the Centers for Disease Control for determining overweight and obesity among the general public. The calculation used by the CDC to determine BMI is the following:<sup>8</sup>

$$\text{weight (lb)} / [\text{height (in)}]^2 \times 703$$

After calculating the BMI, the interpretation of weight status is determined by using the following categories:<sup>8</sup>

Table 3. BMI Categories

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and Above	Obese

Overall, the data show that the state as a whole is definitely overweight and could be at risk for being obese. Our survey revealed that in 8 out of 9 (88%) Mississippi health districts, the average BMI shows a weight status of “Overweight” for adults. One health district (District III) shows an average BMI of 30.5 which is obese.

In many cases, there is little difference between the average BMI of the overweight districts and the obese district. Though there are adults in the normal weight range as indicated



by the minimum BMIs in the table below, the median (the 50<sup>th</sup> percentile) BMI in each district is in the overweight category.

Table 4. BMI by Public Health District

Body Mass Index of Adults by Public Health District					
District	n	Mean	Median	Minimum	Maximum
District I	385	28.5	27	17	58
District II	377	28.1	27	16	67
District III	380	30.5	29	14	62
District IV	384	29.7	29	16	65
District V	387	28.5	27	16	59
District VI	371	28.7	28	16	56
District VII	373	29.6	28	17	56
District VIII	379	29.2	28	18	68
District IX	372	27.6	27	17	50
Total	3,408	28.9	28	14	68

#### *Parents' support of future policies*

Among parents, the following findings are of interest:

- Overwhelmingly supportive of schools collecting heights and weights and giving a report of that information to parents (85.3%). The support ranged from 91.5% in District III to 78.8% in District IX. While certainly not causative, it is interesting to note that District III parents also responded the highest among districts in noting an awareness that their child's school had a health committee, council or task force.
- Less than half (46.5%) of the parents surveyed that public school facilities are available to use for physical activity outside the regular school hours
- Dependent upon the grade level of children, parents varied on the number of days/week they believe that student should be required to have physical education.

For example, in elementary schools, 51.5% noted 5 days/week, in middle schools increased to 61.5% and high schools, 54.2% for 5 days/week.

- Among all respondents, approximately almost two thirds reported having a park nearby for their child to play. The range among the nine public health districts was from a low of 50.5% to a high of 72.2% in two public health districts.

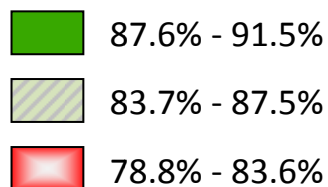
Table 5. Number and percent of parents (n=3,710) who responded "Yes" to the following questions regarding school policies

Question	n Yes	% Yes
Some schools collect information on children's height and weight and give reports to parents. Are you in favor of this?	3,165	85.3%
Are public school facilities available for individuals in the community to use for physical activity outside of school hours?	1,726	46.5%

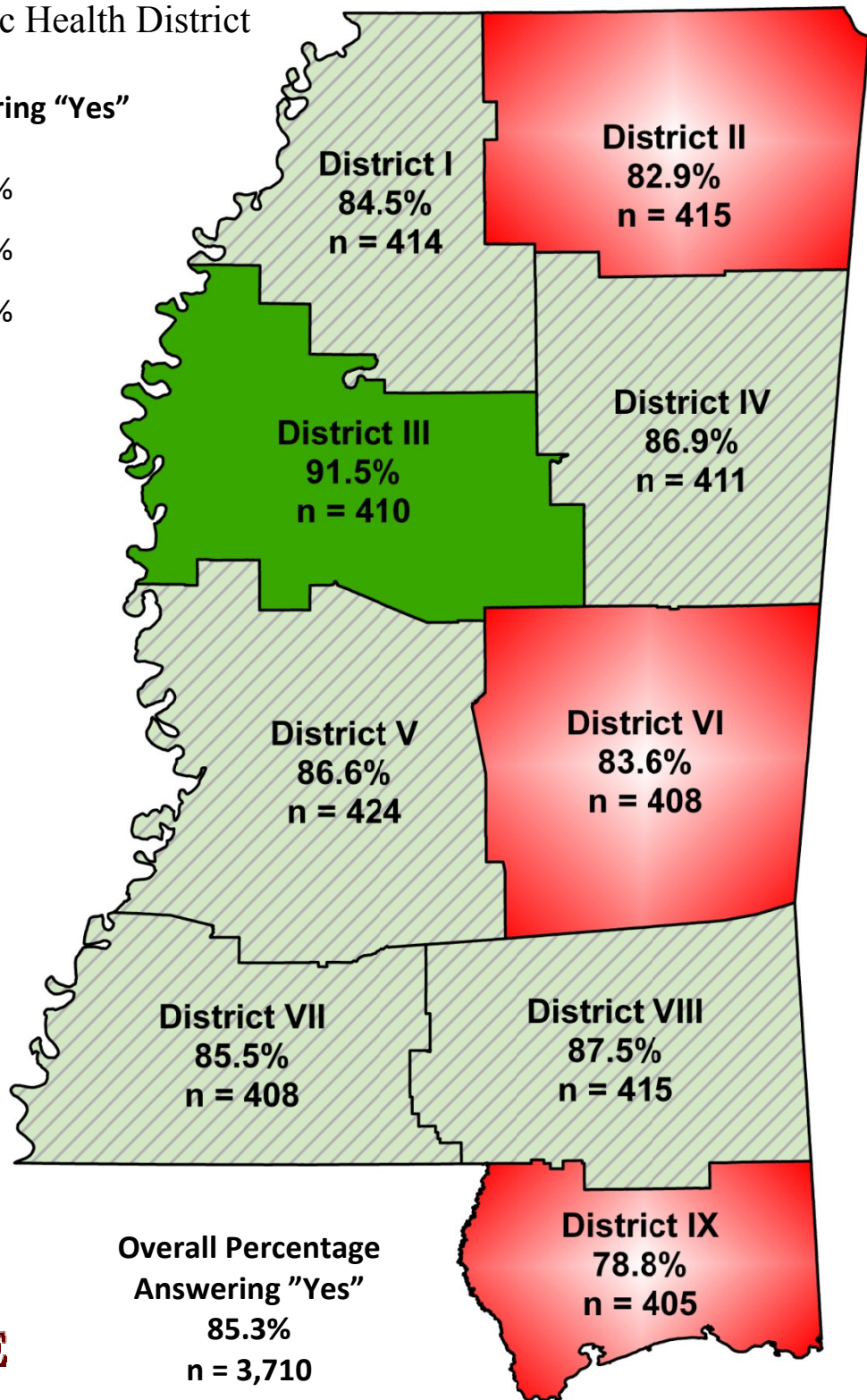
## Figure 15. Some Schools Collect Information on Children's Height and Weight and Give Parents a Report. Are you in Favor of This?

Percentage of Parents Answering "Yes" By  
Mississippi Public Health District

Percentage Answering "Yes"



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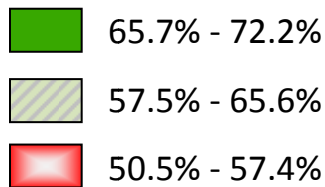


## Figure 16. Do You Have a Park Nearby Where Your Children Can Play?

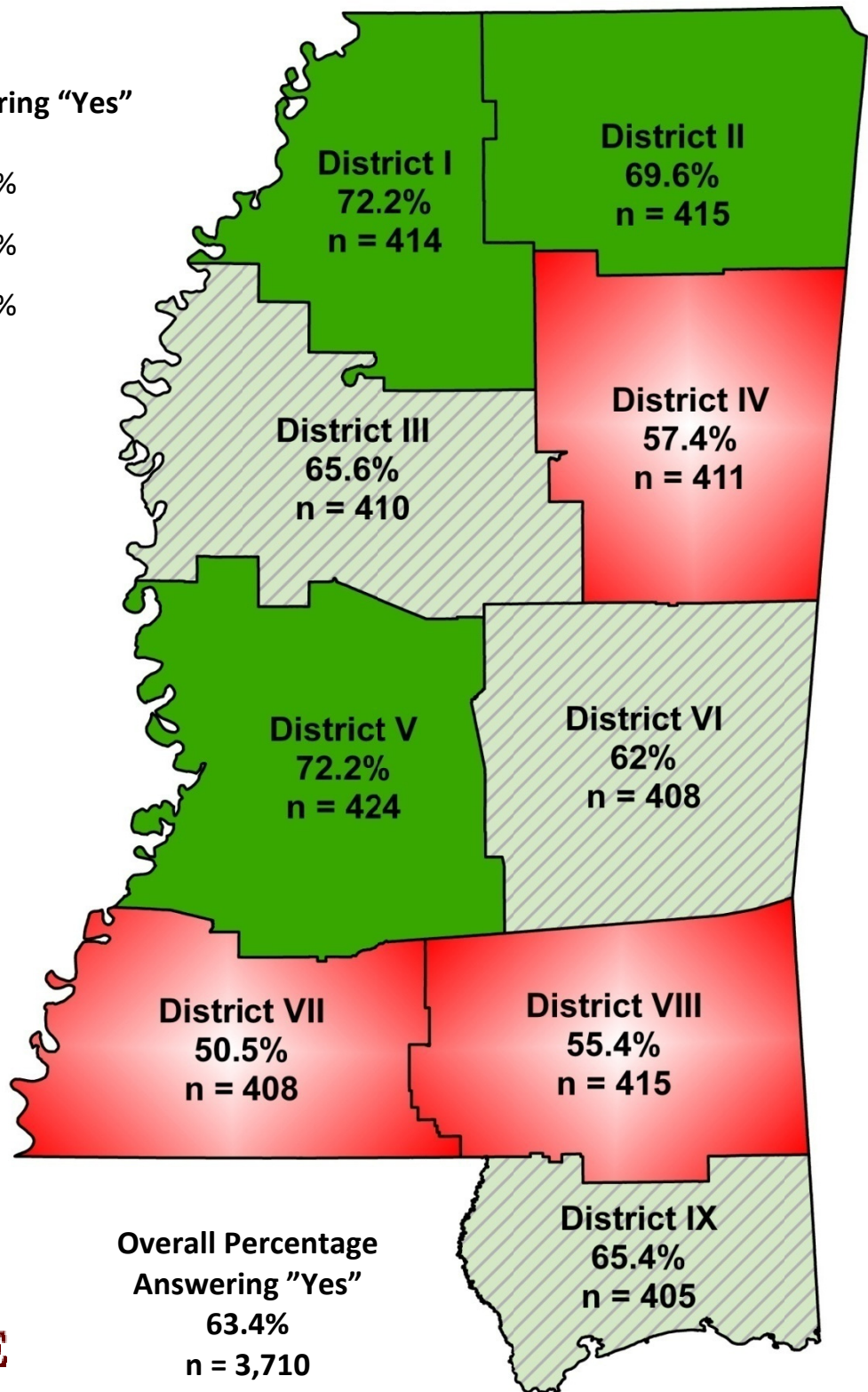
Percentage of Parents Answering "Yes"

By Mississippi Public Health District

Percentage Answering "Yes"



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**POLICYMAKERS: STATE BOARD OF EDUCATION MEMBERS, STATE BOARD OF  
HEALTH MEMBERS, MISSISSIPPI STATE DISTRICT HEALTH OFFICERS, AND  
STATE LEGISLATORS**

***State Board of Education Members***

*Methodology*

An interview guide was developed in concert with staff from the Center for Mississippi Health Policy, the SSRC research team and, when available, survey instruments from other RWJF school evaluation states of Arkansas and West Virginia. The full interview guide is attached (see Appendix A). A mixed- method of telephone and face-to-face interviews were conducted from May 2009 – mid-August 2009. The State Board of Education Members were asked primarily open-ended questions about their views on the roles of the Mississippi Department of Education, feedback they have received from their constituents on the components of the Mississippi Healthy Students Act of 2007, as well as feedback regarding additional legislation/policies needed. Interviews were transcribed, and recognized qualitative analyses were used to determine major categories and themes.

For exploratory qualitative research, when the major purpose is to assess fresh insights on a particular topic, a “negotiated” approach to qualitative analyses has been suggested as the “approach of choice.”<sup>9</sup> For this evaluation, the particular topic of interest was the recently passed Mississippi Healthy Students Act of 2007. Given our interest in the ideas, feedback and insights from an array of policymakers, the SSRC research team used an adaptation of this negotiated

approach to qualitative analyses, meaning that a team of researchers reviewed the interview transcriptions and conducted analyses, rather than having one analyst for all groups.

Four members of the research team analyzed the qualitative interviews. Initially, one member of the team was assigned to each of the four groups (State Board of Education Members, State Board of Health Members, District Health Officers, and Mississippi Legislators) to search for themes. A theme was defined as a response topic that was mentioned by more than one respondent in the group and mentioned on more than one question. Once researchers completed their independent analyses of the groups, the findings were shared with the remaining team members and common themes, definitions, and example quotes were identified. Then, team members reviewed their assigned groups again, searching for any of the agreed upon themes that they may not have discovered during their initial analyses. At any time that there were question(s) regarding a certain theme, researchers would consult with one another to reach agreement. In the end, at least two team members agreed upon the themes and example quotes that were identified for each of the four groups.

Also included were some quantitative measures/rankings on physical education, school nutrition, and health education. Basic descriptive statistics were used to analyze the questions that respondents were asked to either rank or score their answers. See Appendix B for tables and figures reflecting these rankings.

Out of nine (9) Board of Education members, seven (7) consented to do an interview, yielding a response rate of 77.7%.

## *Findings*

- **Theme: Obesity as a Continuum of Health Concerns**

- *Definition:* Long-term impact of obesity/childhood obesity as it relates to the health of individuals and the public
- *Example Quotes:*
  - “...much of our health care budget goes to obesity related diseases [such as] high blood pressure, heart problems, [and] diabetes. So, the more you have young people [understanding] the dangers of obesity, the better it’s got to be.” [when asked their thoughts on improving physical education, improving school nutrition, and increasing health education]
  - “Obesity is becoming one of the most serious health problems for our children that is costing them a long healthy life...” [when asked if there was anything they would like to share about their experience and knowledge regarding childhood obesity legislation]

- **Theme: Economic Cost to Society**

- *Definition:* Concern about the potential financial burden on others/society created by unhealthy individuals, including cost of health insurance
- *Example Quotes:*
  - “...you know, you see reports...that much of our health care budget goes to obesity related diseases [such as] high blood pressure, heart problems [and] diabetes...” [when asked to share their thoughts on improving physical education, improving school nutrition, and increasing health education]

- “...look, this is going to come at an extremely high cost to taxpayers in the future if people don’t learn to eat healthier.” [when asked about other policies that need to be enacted]
- **Theme: Problems Implementing Current/Future Legislation – Time Issues**
  - *Definition:* Time constraints to the implementation of current or future policy (limited time in school day and requirements for academic performance)
  - *Example Quotes:*
    - “[Increasing health education] is limited by the number of minutes in a day and the other core subjects that must be taught” [when asked about their thoughts on increasing health education]
    - “Availability and management of time [and] availability of monetary resources.” [when asked what makes it most difficult for the schools in Mississippi to meet physical education and nutrition requirements]
- **Theme: Government Role vs. Personal Responsibility**
  - *Definition:* Government can only do so much and then it’s up to the individual
  - *Example Quotes:*
    - “You do away with doughnuts, but kids don’t buy the stuff we put out there; they bring their own. Too much policy; not enough action.” [when asked how effective Mississippi’s current policies are on childhood obesity.]
    - “...if [we] give people food stamps, [they] will buy potato chips” [when asked about the impact of child care centers, nutrition labeling, media policy, farmer’s markets, BMI, built environments, etc. on the prevention of childhood obesity]



- **Theme: Importance of Providing Healthy Cafeteria Meals / Cooking Techniques and Equipment**
  - *Definition:* Number of meals eaten at school and importance for making them healthy; and any discussion of cooking techniques or new equipment in cafeterias
  - *Example Quotes:*
    - “I believe that for many children that the meals they get at school are much of the nutrition that they get during the school day. We’ve got either 1 or 2 meals to provide to most students, so we can and need to play a very large role in proper nutrition.” [when asked to give their thoughts on improving school nutrition]
    - “...we have regulated the vending machines and the soft drink machines [but] ironically, we have not done anything to regulate what is an approved meal in the cafeteria...We haven’t gotten down to insisting that those menus be as healthy as say for example a snack machine. Now we have really made a big effort to go to the oven fryers...” [when asked if they see a role for the State Department of Education in obesity prevention]
- **Theme: Status of Progress to Date**
  - *Definition:* Assessment of the childhood obesity prevention policies and implementation of said policies
  - *Example Quotes:*
    - “...because from my exposure of what’s going on nationally, our policies are good; there’s still room for improvement; we need to stay aware of what’s going on and what works.” [when asked how effective Mississippi’s current policies are on childhood obesity.]

- “...I think we are making headway. You can’t make a drastic change overnight. I do think we need to continue to make the changes as we can.” [when asked to give their thoughts on improving school nutrition]
- “I think we’ve made good improvement here recently. How effective those policies will end up being, it’s probably a little early to tell...” [when asked how effective Mississippi’s current policies are on childhood obesity]
- **Theme: Importance of Parental Education and Involvement in Preventing Childhood Obesity**
  - *Definition:* The importance of educating parents/caregivers on proper nutrition and exercise and/or the importance of having parents reinforce proper nutrition and exercise at home
  - *Example Quotes:*
    - “Yes, primarily it’s a matter of education for parents because it’s their responsibility.” [when asked about the possible role for the State Department of Education in obesity prevention]
    - “Hopefully, we can not only do a good job when the children are our responsibility, but we can help communicate the problem and the solutions to parents and others” [when asked about the possible role for the State Department of Education in obesity prevention]
    - “Schools can only do so much. We can preach it and we can teach it, but when ‘Mama’ picks the kids up from school and stops by McDonalds on the way home or buys Kentucky Fried for dinner, we are really fooling ourselves that we are making a big impact because I don’t think we are.” [when asked thoughts on 3

components of legislation, improving physical education, improving school nutrition, and increasing health education]

- **Theme: Impact of Health on Academic Achievement**

- *Definition:* Respondent discusses the link between better health and better performance in school

- *Example Quotes:*

- “...It’s very important for children’s development, for them to have an opportunity to release energy; they will have better focus [and] nutrition.” [when asked about thoughts on physical education, a component of the legislation]
- “A well nourished student is going to do best in their school work, so I would say the link is going to be if a student is well nourished, then obviously, they are going to perform well in the classroom.” [when asked to what extent there is a positive link between implementation of Coordinated School Health Programs in the school district and the academic performance of the students]

- **Theme: Increased Awareness / Importance of Making People Aware of the Problem**

- *Definition:* Responses that refer to how people have become more aware of the problem of childhood obesity and the need to make people more aware

- *Example Quotes:*

- “The people that I speak with have said that they recognize that this is an important area, our taking steps to try to address childhood obesity and health and [the] healthy eating habits of our children” [when asked “Among individuals and

school districts with whom you interact, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]

- “...I certainly applaud [the] recognition that this is needed...and we would like to do it as much as [we] can to promote physical education/physical activity for the students.” [when asked about their thoughts on improving physical education]
- “No one is saying to people... ‘Look, this is going to come at an extremely high cost to the taxpayers in the future if people don’t learn to eat healthier.’ I don’t think they’ve gotten the message yet.” [when asked about other policies that need to be enacted]
- **Theme: Importance of Role Models for Children (teachers, legislators, parents, etc.)**
  - *Definition:* Respondent refers to the importance of children having role models in the form of teachers, parents, etc. who teach them healthy lifestyles
  - *Example Quotes:*
    - “...anything you teach kids should be mirrored by teachers” [when asked if they think it’s important for schools to promote healthy lifestyles for staff]
    - “[other places, groups and organizations] can educate and show by example healthy eating habits and healthy foods and healthy preparation of foods” [when asked what other places, groups and organizations have an important role in decreasing childhood overweight and/or obesity in Mississippi]
- **Theme: Disconnect between childhood obesity policies and implementation**
  - *Definition:* Dissonance between legislation and policies passed with actual implementation at the local level
  - *Example quotes:*

- “Many schools are giving up instructional time to focus on [it] and the focus must be on academics. Or, some just ignore [it].” [when asked “Among individuals and school districts with whom you interact, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]
- “...I think at this point, we probably need to focus on implementation of the policies that we’ve just put in place.” [when asked if Mississippi has done enough to strengthen school policies on nutrition, health education, and physical education]
- **Theme: Collaboration among state agencies/communities to prevent childhood obesity**
  - *Definition:* Multi-faceted interventions and prevention strategies are needed to prevent various factors related to childhood obesity
  - *Example Quotes:*
    - “Yes, I certainly do. I don’t believe that we can be the only player or even the most important player, but I certainly think we have a role to play...” [when asked if they see a role for the State Department of Education in obesity prevention]
    - “There is no question that it needs to be emphasized in all facets of life. All agencies and organizations should be involved. We should all be well aware of the dangers of obesity, and we should work toward that end.” [when asked what other places, groups, and organizations have an important role in decreasing childhood overweight and/or obesity in Mississippi”]

## ***State Board of Health Members***

### *Methodology*

The research team was successful in conducting interviews with 8 of the 11 board members, yielding a 72% response rate. A mixed method of telephone, face-to-face and email interviews was used. These were conducted from May 2009 to mid-August 2009. The State Board of Health Members were asked open-ended questions about the roles of the State Department of Health (local and district), feedback from their constituents on the Mississippi Healthy Students Act of 2007, and feedback regarding additional legislation/policies needed. The full interview guide is attached (see Appendix A). Interviews were transcribed, and recognized qualitative analyses were used to determine major categories and themes.

Also included were some quantitative measures/rankings on physical education, school nutrition, and health education. Basic descriptive statistics were used to analyze the questions where respondents were asked to rank or score questions (see Appendix B).

### *Findings*

- **Theme: Obesity as a Continuum of Health Concerns**
  - *Definition:* Long-term impact of obesity/childhood obesity as it relates to the health of individuals and the public
  - *Example Quotes:*
    - "...the complications of childhood/adolescent obesity track into adulthood. These complications include hypertension, hyperlipidemia, asthma, some cancers, and diabetes to name a few." [when asked, On a scale of 1 to 5 with 5 being most

important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi”?

- “... you’ve got hypertension, diabetes...all kinds of disease that are weight and nutrition related.” [when asked “Again on a scale of 1 to 5, with 5 being very effective and 2 being very ineffective, how would you rank Mississippi’s current policies on childhood obesity?”]

- **Theme: Cultural / Societal Changes – Technology and Exercise**

- *Definition:* Cultural/societal changes in the nature of technology, especially as it pertains to children’s recreational activities and exercise

- *Example Quotes:*

- “I can remember when physical education in the school that I went to was mandatory. You actually had to have a doctors’ excuse stating why you couldn’t take physical education. I think that technology has been absolutely fantastic for our children, but it has taken away the physical activity that they once enjoyed...having play time and, not so much couch time. ..The physical education is excellent for children because it not only gets them invigorated physically, it also invigorates the mind.” [when asked “As you will recall, there are three (3) major components of the Mississippi Healthy Students Act of 2007..improving physical education, improving school nutrition and increasing health education...What are your thoughts on each of these areas?”]
- [talking about a child they know]...”[his/her] time in front of the television set is way too much” [when asked about decreasing children’s screen time as a target area that can be addressed by public health]

- **Theme: Economic Cost to Society**

- *Definition:* Concern about the potential financial burden on others/society created by unhealthy individuals, including cost of health insurance

- *Example Quotes:*

- “Without a doubt, it [childhood obesity] would be a 5 because childhood obesity is going to lead into adult obesity which leads into all the health hazards that go along with being obese. And it is going to increase all the medical expenses for anybody who has to pay insurance regardless of whether it is government or private insurance. Expenses are going to just keep going out the roof.” [when asked “On a scale of 1 to 5 with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?”]
- “. . .the cost of health care is growing so exponentially that we’ve got to have a system that is about creating healthy people as opposed to making it [health care] for sick people. . . . So yes, we’ve got to have a health care system that is based on healthy people as opposed to sick people. And so to do this, we must start with the youth.” [when asked “Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?”]
- “I think that if we can change the way children make their life choices, you’re [going to] change the face of health care in this country. I think that it is paramount; it is something that we have got to do immediately because we can’t just continue paying for the high cost of health care without an immediate intervention. And that intervention has to be children, and the way they make



lifestyle choices.” [when asked “Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?”]

- **Theme: Importance of Providing Healthy Cafeteria Meals / Cooking Techniques and Equipment**

- *Definition:* Number of meals eaten at school and importance for making them healthy; and any discussion of cooking techniques or new equipment in cafeterias
- *Example Quotes:*
  - “...the schools of the state have control of our children for the majority of their day, the majority of their meals, the majority of their food intake. Even if everything they’re getting at home is awful, if we do right between 7:30 in the morning and 3:30 in the afternoon and we can live a healthy lifestyle and give healthy foods, it will have a dramatic impact on children...” [when asked about their thoughts on improving physical education, improving school nutrition, and increasing health education]
  - “Ensure that healthy foods are offered and encouraged, including fresh fruits and veggies. Minimal offerings of fried foods, processed meats, starches, and sugar.” [when asked “what other policies need to be enacted?”]

- **Theme: Status of Progress to Date**

- *Definition:* Assessment of the childhood obesity prevention policies and implementation of said policies
- *Example Quotes:*
  - “I really think we’re making some strides in nutrition because a lot of our schools in K-12...in Mississippi are moving toward taking out all of the deep fryers and

really baking, hopefully, most of the food given to children...taking out so many of the sweets, soft drinks; and putting in the water and some of the Gatorade and the health drinks.” [when asked “As you will recall, there are three major components of the Mississippi Healthy Students Act of 2007, improving physical education, improving school nutrition and increasing health education.. What are your thoughts on each of these areas?”]

- “I am extremely pleased that we are limiting offerings in school vending machines, but we need to do much more. We need to require physical education in our schools and get our students moving 1 hour per day. We need to ensure all healthy food choices in our schools, and we need to include parents in education regarding physical activity and healthy food choices.” [when asked “Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?”]

- **Theme: Importance of Parental Education and Involvement to Prevent Childhood Obesity**

- *Definition:* The importance of educating parents/caregivers of children on proper nutrition and exercise and/or the importance of having parents reinforce proper nutrition and exercise at home
- *Example Quotes:*
  - “It [discussion of obesity and BMIs with parents of school children] is perfectly appropriate if the school nurse in a private setting discusses obesity and discusses it with the parents. I think we’ve got to do that, and you shouldn’t be afraid that you’re going to offend anybody.” [when asked “Is there anything else you would

like to share about your experience and knowledge regarding childhood obesity legislation?”]

- “So many of them [children] are in single parent homes with no guidance or direction about their eating habits.” [when asked “On a scale of 1 to 5 with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?”]
- “It [prevention of childhood obesity] gets down to families—parents, number 1 and teachers number 2...” [when asked “Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?”]
- **Theme: Disconnect between childhood obesity policies and implementation**
  - *Definition:* Dissonance between legislation and policies passed with actual implementation at the local level
  - *Example quotes:*
    - “You can’t come down from Washington or Jackson and make things happen. You’ve got to have people on the ground making it happen. If it’s not happening on the ground, it’s not happening.” [when asked “Do you see a role for the local and/or district health departments to promote the Mississippi Healthy Students Act of 2007?”]
    - “. . .legislation by itself and on its own is not going to be a solution to anything. It’s the implementation of the legislation and the transfer of the legislative responsibility to local communities and to local environments...”

[when asked “Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?”]

- “...we probably have some good policies, but they sort of don’t meet the test on implementation. We have committee meetings, and we have people expound about diet, nutrition, exercise, but we fail [in] implementing it, by the fact that the kids get heavier and heavier each year.” [when asked, “Again on a scale of 1 to 5, with 5 being very effective and 2 being very ineffective, how would you rank Mississippi’s current policies on childhood obesity?”]
- **Theme: Collaboration among state agencies/communities to prevent childhood obesity**
  - *Definition:* Multi-faceted interventions and prevention strategies are needed to prevent various factors related to childhood obesity
  - *Example Quotes:*
    - “...there [are] still of lot of people that are doing things that aren’t connected and the alliances aren’t there. A lot of communities have done it right. There [are] a lot of poor communities that haven’t had access to it and aren’t doing anything. You know, people may be building walking tracks and sidewalks in some wealthy communities. Well there [are] real communities where there’s not a sidewalk in the whole town. There’s no place to walk at all. So, I think there needs to be a continued emphasis on trying to bring all of these approaches across the state and [hit] those areas that don’t have, perhaps, the money to build walking tracks and places to exercise.” [when asked “Again on a scale of 1 to 5, with 5 being very effective and 2 being very ineffective, how would you rank Mississippi’s current policies on childhood obesity?”]

- “. . . the State Department of Health and the State Department of Education are now on the same page. The groups [are meeting together] to talk about obesity and coordinate school health.” [when asked “Do you see a role for the State Department of Health in obesity prevention?”]

### ***Mississippi State District Health Officers***

#### *Methodology*

There are six public health officers in Mississippi, supervising a total of 9 public health districts. During the time of the interviews, there was a retirement of one public health officer. Four of the five remaining district health officers were interviewed from May 2009 to mid-August 2009, reflecting an 80% response rate. The interviews were conducted using a mixed method of face-to-face and telephone interviews. They were asked primarily open-ended questions about the roles of the State Department of Health (local and district), feedback from their constituents on the Mississippi Healthy Students Act of 2007, and feedback regarding additional legislation/policies needed. The full interview guide is attached (see Appendix A). Interviews were transcribed, and recognized qualitative analyses were used to determine major categories and themes. Also included were some quantitative measures/rankings on physical education, school nutrition, and health education. Basic descriptive statistics were used to analyze the quantitative items.

#### *Findings*

- **Theme: Obesity as a Continuum of Health Concerns**

- *Definition:* Long-term impact of obesity/childhood obesity as it relates to the health of individuals and the public
- *Example Quotes:*
  - “... we’re seeing, medically, more type II diabetes in our children which used to be something that only used to happen to people who were over 30 or 40. [And,] that’s alarming because diabetes is such a devastating thing.” [when asked, “How did you become aware of/interested in the topic of childhood obesity?”]
  - “This is a time bomb waiting to go off if we let these kids grow to adolescence and young adults being obese. We have terrible diabetes, hypertension, [and] heart disease problems now. We don’t have enough doctors and hospitals to take care of the problem, so we’ve got to do something.” [when asked, “On a scale of 1 to 5, with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is for Mississippi?”]
- **Theme: Problems Implementing Current/Future Legislation – Time Issues**
  - *Definition:* Time constraints to the implementation of current or future policy (limited time in school day and requirements for academic performance)
  - *Example Quotes:*
    - “We don’t have time to study health education; we have to study for an exam...” [when asked about their thoughts on increasing health education]
    - “Feedback that I’ve gotten...was that now everybody is so focused on the things that make you pass the tests and rank well on the tests, that they’re sometimes missing the things that help us in everyday life.” [when asked if they thought Mississippi has done enough to strengthen school policies on health education]

- **Theme: Status of Progress to Date**

- *Definition:* Assessment of the childhood obesity prevention policies and implementation of said policies

- *Example Quotes:*

- “I think they’re on their way, but I think they’re not there yet: really think we need to get back to having activity out there every day and then offering a shower.” [when asked, “Do you think that Mississippi has done enough to strengthen school policies in the following areas? Nutrition, Health Education and Physical Education?”]
- “I think we have such a big problem, that it is not easily addressed. It is going to take a lot of time, and a lot of effort, and a lot of resources to target it more poignantly. I think, perhaps, it is a step in the right direction, but more is going to be needed as time goes by.” [when asked, “Among individuals and health department districts with whom you interact, what has been your impression of the reaction to the Mississippi Healthy Students act of 2007?”]

- **Theme: Impact of Health on Academic Achievement**

- *Definition:* Respondent discusses the link between better health and better performance in school

- *Example Quotes:*

- “...the healthier children are, it is my true, true belief that they will do better in school and achieve higher levels of education and, therefore, our entire community, our workforce in Mississippi will benefit too, from having healthier

people in the state.” [when asked their thoughts on improving physical education and school nutrition, and increasing health education]

- “...somehow it’s got to become...equally important that...kids are physically fit as they are in education at these schools [because] they go hand in hand” [when asked, “Among individuals and health department districts with whom you interact, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]

### ***State Legislators***

#### *Methodology*

Interviews were conducted with 12 Mississippi state legislators from January to August 2009. A purposive sample included 6 representatives and 6 senators, reflecting diversity in party affiliation and constituent demographics. A total of 11 legislators gave face-to-face interviews, and 1 provided information via email. Thirteen (13) legislators were originally contacted and 12 responded for a response rate of 92.3%. The interviews consisted of primarily open-ended questions about the roles of the Mississippi legislature, feedback from their constituents on the Mississippi Healthy Students Act of 2007, and feedback regarding additional legislation/policies needed. The full interview guide is attached (see Appendix A). Also included were some quantitative measures/rankings on physical education, school nutrition, and health education. Basic descriptive statistics were used to analyze the questions where respondents were asked to rank or score questions. See Appendix B for tables and figures reflecting these rankings.



## *Findings*

- **Theme: Data, Statistics, and Reports Bring about Interest/Concern**
  - *Definition:* Data, statistics, and reports on childhood obesity raise awareness and bring about interest and concern.
  - *Example Quotes:*
    - “...you never like to see your state ranked consistently last” [when asked “Please tell me how you became interested in the topic of childhood obesity.”]
    - “...we know that we have the most obese state in the nation” [when asked “Among individuals and school districts you represent, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]
- **Theme: Obesity as a Continuum of Health Concerns**
  - *Definition:* Long-term impact of obesity/childhood obesity as it relates to the health of individuals and the public
  - *Example Quotes:*
    - “It’s one of the leading causes of onset diabetes. Ultimately, in adulthood it leads to cardiovascular problems.” [when asked to rank how important the prevention of childhood obesity is in Mississippi]
    - “...obesity is probably one of the greatest public health problems we have now in our state.” [when asked how they became interested in the topic of childhood obesity]
- **Theme: Cultural / Societal Changes – Technology and Exercise**

- *Definition:* Cultural/societal changes in the nature of technology, especially as it pertains to children's recreational activities and exercise
- *Example Quotes:*
  - “[Kids] sit around on their computers and their games, and they munch and don’t get the right dietary things and so we’re seeing the results of that now.” [when asked “Please tell me how you became interested in the topic of childhood obesity?”]
  - “And now kids sit in front of the computer or are playing video games in the house all day.” [when explaining the importance of physical education after being asked to determine which of the three major components of the legislation was most important]
- **Theme: Cultural / Societal Changes – PE and/or Health Education in Schools**
  - *Definition:* Respondent indicates that when they were in school, physical education and health education were different in schools
  - *Example Quotes:*
    - “When I was a kid, we took 15 minutes in the morning and 15 minutes in the afternoon. We did [describes exercises that were done at school]” [when asked if Mississippi has done enough to strengthen the school policies on physical education]
    - “...when we were in school...we learned all about our muscular [and] our skeletal [systems]. When you were in the first grade, you learned about your big bones, your big major organs. We don’t do or teach any of those things now...” [when

asked if they thought it was important for schools to promote healthy lifestyles for students and staff]

- **Theme: Economic Cost to Society**

- *Definition:* Concern about the potential financial burden on others/society created by unhealthy individuals, including cost of health insurance
- *Example Quotes:*
  - “realizing that this is going to be a drain on our tax dollars in the future as well” [when asked how they became interested in the topic of childhood obesity]
  - “If we can ever get that all the way down to school kids, we’re gonna save this state multiple billions of dollars over the years, and have a healthy interactive kid” [when asked “Is there anything else you’d like to share about your experience or knowledge regarding childhood obesity?”]

- **Theme: Problems Implementing Current/Future Legislation – Funding**

- *Definition:* Financial constraints on implementation of present or future legislation, from both the side of legislators and those who would use the funds
- *Example Quotes:*
  - “...it’s unfortunate we’re in a low resource year, but I think the [House/Senate] will be amenable to any plans that come forward” [when asked about the general consensus of the [House/Senate] on maintaining improvements made by the Mississippi Healthy Students Act of 2007]
  - “...you can pass the legislation all you want, but if the funding doesn’t follow it then you are just passing an additional burden to the local school district”

[when asked their impression about the reaction that individuals they represent have had to the Mississippi Healthy Students Act of 2007]

- **Theme: Problems Implementing Current/Future Legislation – Personnel Issues**

- *Definition:* Limited personnel resources constrain implementation of present/future policy; need training for personnel

- *Example Quotes:*

- “We passed...another unfunded mandate that kids...have 30 minutes of physical education, but we don’t pull the funding with that to give the school the funding they need to hire physical education teachers and playground equipment and things like that.” [when asked about the consensus of the House/Senate on maintaining improvements made by the Mississippi Healthy Students Act of 2007]
- “...teachers say they already have enough to do, and they don’t need to do anything else, [and that] it’s not in their job description” [when asked “what other policies need to be enacted?”]

- **Theme: Problems Implementing Current/Future Legislation – Time Issues**

- *Definition:* Time constraints to the implementation of current or future policy (limited time in school day and requirements for academic performance)

- *Example Quotes:*

- “...we have had some push back from school administrators [who are saying] ‘Look, you’re taking more and more hours out of our day, and you’re mandating that we do things that are non-classroom. At the same time you’re demanding higher standards from us in academic performance...’” [when asked about the

consensus of the House/Senate on maintaining improvements made by the Mississippi Healthy Students Act of 2007]

- "...teachers say they already have enough to do and they don't need to do anything else [and that] it's not in their job description. They have to work it into the curriculum, so it isn't being done" [when asked "what other policies need to be enacted?"]

- **Theme: Government Role vs. Personal Responsibility**

- *Definition:* Government can only do so much and then it's up to the individual
- *Example Quotes:*
  - "But most folks, at some point, have to take it upon themselves too. Institutionally, we can only do so much." [when asked how they would rank where Mississippi is on addressing childhood obesity policies]
  - "...you can only legislate this so much. People are going to have to take it and run with it from there..." [when asked about the general consensus of the [House/Senate] on maintaining improvements made by the Mississippi Healthy Students Act of 2007]

- **Theme: Importance of Providing Healthy Cafeteria Meals / Cooking Techniques and Equipment**

- *Definition:* Number of meals eaten at school and importance for making them healthy; and any discussion of cooking techniques or new equipment in cafeterias
- *Example Quotes:*

- “...simply by making healthier food available. In particular, making it available where it’s easy for cafeterias to provide it...” [when asked “what other policies need to be enacted?”]
- “The nutritious meals I think [are] very important. We have so many students in Mississippi that depend on the school cafeteria, not just for one meal, but for two meals a day. [For] many of those students, that’s the only meals they get...we don’t need to offer hamburger and French fries that have been fried in a deep-fat fryer” [when asked to rank the importance of the 3 major components of the legislation – and referring to school nutrition]
- **Theme: Status of Progress to Date**
  - *Definition:* Assessment of the childhood obesity prevention policies and implementation of said policies
  - *Example Quotes:*
    - “...I don’t think we’re through because I think what we realize is that this is the first prong...that is, getting a handle on nutritional requirements, what these kids are actually eating. But, you’ve got to put a physical education requirement to it. And you’ve got to look generally at a child’s health care...I think we just started [and] that we’re on to a good start. We have nothing to apologize for, but I think there’s more work to be done.” [when asked “what other policies need to be enacted?”]
    - “I think we could do more. There are some provisions under some recent federal legislation that will help substitute deep fat fryers with ovens. I really do think we ought to get rid of every deep fat fryer in the state or at every school in the state.

So, I think there [are] some things we could do, [but] it's not going to happen overnight. We've made a lot of progress, but it does take money" [when asked if Mississippi has done enough to strengthen the school policies on health education and physical education]

- **Theme: Importance of Parental Education and Involvement in Preventing Childhood Obesity**

- *Definition:* The importance of educating parents/caregivers on proper nutrition and exercise and/or the importance of having parents reinforce proper nutrition and exercise at home
- *Example Quotes:*
  - "...I think parents have been generally receptive to it. If they'd just follow through at home, it would make it way more effective." [when asked their impression of the reaction of individuals and school districts they represent regarding the Mississippi Healthy Students Act of 2007]
  - "...I don't think it's fair to put all of the burden of the problem of dealing with childhood obesity on the backs of the schools. Ultimately it's the responsibility of the parents to deal with some of these issues." [when asked if they thought it was important for schools to promote healthy lifestyles for students/staff]

- **Theme: Impact of Health on Academic Achievement**

- *Definition:* Respondent discusses the link between better health and better performance in school
- *Example Quotes:*

- “...we know that if a child feels better they learn better” [when asked about ranking the 3 components]
- “...we’re going to have to realize sooner or later that a healthy child makes a healthy adult. They’re probably not going to go to prison; they’re going to go to college. They’re not going to drop out...” [when asked about what other policies need to be enacted]
- **Theme: Increased Awareness / Importance of Making People Aware of the Problem**
  - *Definition:* Responses that refer to how people have become more aware of the problem of childhood obesity and the need to make people more aware
  - *Example Quotes:*
    - “...I think that people have become much more aware of the problems that are associated with being overweight. Whether it’s nutritional information that’s available in a restaurant, whether it’s the number of health clubs...” [when asked the role of other groups in promoting healthy lifestyles for children]
    - “...when you’re changing...human behavior, there’s a broad spectrum of things that you have to do, but one of the things is simply to make people aware of the problem, and I would say the number one thing that’s happened about childhood obesity...is that at least [people] now understand it’s a problem and are thinking about it clearly” [when asked if there was anything else they wanted to share about their experience or knowledge regarding childhood obesity]
- **Theme: Importance of Role Models for Children (teachers, legislators, parents, etc.)**
  - *Definition:* Respondent refers to the importance of children having role models in the form of teachers, parents, etc. who teach them healthy lifestyles



- *Example Quotes:*
  - “Teachers as a whole have a real role in that in setting the example is a good thing for teachers to do and other staff members of the school.” [when asked about the role of other groups in promoting healthy lifestyles for children]
  - “I think that it’s important that we not only set the standard but live an example for those students.” [when asked if they thought it was important for schools to promote healthy lifestyles for students / staff]
- **Theme: Disconnect between childhood obesity policies and implementation**
  - *Definition:* Dissonance between legislation and policies passed with actual implementation at the local level
  - *Example quotes:*
    - “The [school health] councils are supposed to be created, and of course all of the [school] districts...have not created the councils...” [when asked “Among individuals and school districts you represent, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]
    - “The mandates say that you cannot serve snack foods that are minimally nutritional in value. The fact of the matter is many schools are selling those snack foods during break time in order to fund activities...” [when asked “Among individuals and school districts you represent, what has been your impression of their reaction to the Mississippi Healthy Students Act of 2007?”]
    - “...I think [for] the policies we have introduced, teachers say they already have enough to do and they don’t need to do anything else. It’s not their job

description, [and] they have to work it into the curriculum, so it isn't being done."

[when asked "What other policies need to be enacted?"]

- **Theme: Collaboration among state agencies/communities to prevent childhood obesity**

- *Definition:* Multi-faceted interventions and prevention strategies are needed to prevent various factors related to childhood obesity

- *Example Quotes:*

- "The more organizations approaching this from...different perspectives, the better" [when asked "What is the role of other groups in promoting healthy lifestyles for children?"]
- "...I don't see anything wrong with our churches, our pastors, our Sunday schools talking about the importance of being healthy, the importance of not being overweight." [when asked about policies outside of the school setting that can be used to prevent childhood obesity]
- "...all of us, no matter what our role, are stakeholders in this" [when asked about policies outside of the school setting that can be used to prevent childhood obesity]
- "One of the biggest things we could do in not only childhood obesity, but for everyone is the whole aspect of walkability in this state. We have all seen Haley's commercials on 'Let's Go Walking.' Well, there's no place to walk in half our towns...if we provide [money] to different communities to pursue walkability, we would see a lot of this obesity stop" [when asked "Is there anything else you'd like to share about your experience or knowledge regarding childhood obesity?"]

Policymakers were also asked about their impression of the reactions of those they serve or interact with regarding the Mississippi Healthy Students Act of 2007. The following table summarizes their responses:

Table 6. Policymakers' impression of the reaction that those they serve or interact with have had toward the Mississippi Healthy Students Act of 2007

Reaction Category	Legislators	District Health Officers	Board of Health	Board of Education
Positive	7 of 12	3 of 4	4 of 8	5 of 7
Schools aren't implementing	2 of 12	0 of 4	0 of 8	1 of 7
Problems implementing (\$, time, personnel)	2 of 12	0 of 4	2 of 8	1 of 7
Not helpful/bureaucratic layer	1 of 12	0 of 4	0 of 8	0 of 7
Policies need more attention/not strong enough	1 of 12	2 of 4	0 of 8	0 of 7
Little or no interaction/interest shown	6 of 12	1 of 4	3 of 8	1 of 7

Note: Responses could have been scored as representing more than 1 reaction category (e.g., a single response could contain statements that were scored as "problems implementing" as well as "schools aren't implementing"), so the sum of the numbers for the reaction categories within an interview group may not equal the number of policymakers interviewed for that group.

## **POLICYMAKERS: DISTRICT SUPERINTENDENTS AND SCHOOL BOARD MEMBERS**

A recent *Health and Leadership Special Report* by the American School Board Journal documents not only the importance and success of school leaders in addressing the childhood obesity crisis in the United States, but also emphasizes the integral roles that parents and communities play in working together in partnerships with schools.<sup>10</sup> This was also evident in the results of the surveys from Mississippi public school superintendents and school board members.

The importance of solid childhood obesity prevention policies are only as good as the implementation of said policies. Without the systemic implementation of sound policies within the schools, hopes of transforming changes in children's overweight and obesity trends within

the state of Mississippi are greatly diminished. This section of our report focuses upon the school superintendents and school board members at the local level, providing a lens through which local policy makers view the implementation of the Mississippi Healthy Students Act of 2007.

### ***Methodology***

#### *Telephone survey of public school superintendents*

The survey was conducted by the Wolfgang Frese Survey Research Laboratory of the Social Science Research Center at Mississippi State University. From a list of 152 school superintendents, four were excluded from the study because they supervised independent schools that were not considered to be part of a school district. Five more cases were used to pilot test the survey. The final population included 143 school superintendents. The data collection period spanned from late-July to mid-August of 2009. There were 110 superintendents who completed the survey for a response rate of 76.9%. Given that this was not a random sample, margin of error must not be calculated. The data from this survey represent a census with a minimal non-response rate.

#### *Survey of school board members*

Initially, researchers had received approval from MSU's Institutional Review Board (IRB) to conduct a web-based survey for school board members, along the same time-frame as the telephone survey of superintendents. However, this method had to be discarded because researchers were unable to obtain personal contact information for members of local school boards. (School board members do not maintain offices within school districts.) Therefore

researchers had to submit an alternate method to MSU's IRB for data collection, as described below.

Paper surveys were mailed to superintendents of 152 public school districts in Mississippi. Superintendents were asked to distribute these surveys to school board members at the next scheduled school board meeting, collect the completed surveys, and return them to researchers in a pre-paid return envelope. These surveys were mailed in late July 2009 and were requested by mid-August. The response rate at mid-August was 31.5% of school districts (48/152) and 18.4% (142/769) for individual school board members. Given the less than optimal response rate, the SSRC research team worked with the Mississippi Office of Healthy Schools and the executive director of the Mississippi School Boards Association to send an email reminder from their respective offices to all school board members, encouraging those who had not completed to do so, and return to us by the final cut-off date, October 23, 2009. The final response rate is 34.8% of school districts (53/152) and 20.8% for individual school board members (160/769). It should be noted that of the 53 school districts that returned surveys, 12 of those districts returned only 1 survey, possibly indicating that those districts may have responded collectively instead of individually.

## ***Findings***

### ***Implementing the Healthy Students' Act of 2007***

School superintendents reported that their school districts are making substantial progress in this area, with one half noting that their progress was at the 75% level, while 9.1% reported their districts at are the 100% level. Interestingly, when asked about the level of feedback that

school superintendents and school board members had received from parents on implementing the Mississippi Healthy Students Act of 2007, the majority reported either “none” or “minimal.” Among superintendents the combined categories of “none” or “minimal” were 71.9% and among school board members, the same two categories accounted for 64.5%. Seventy nine (79) percent of superintendents also responded that there is a health council within each school in their district.

Figure 17. Progress on implementation of the Mississippi Healthy Students Act of 2007

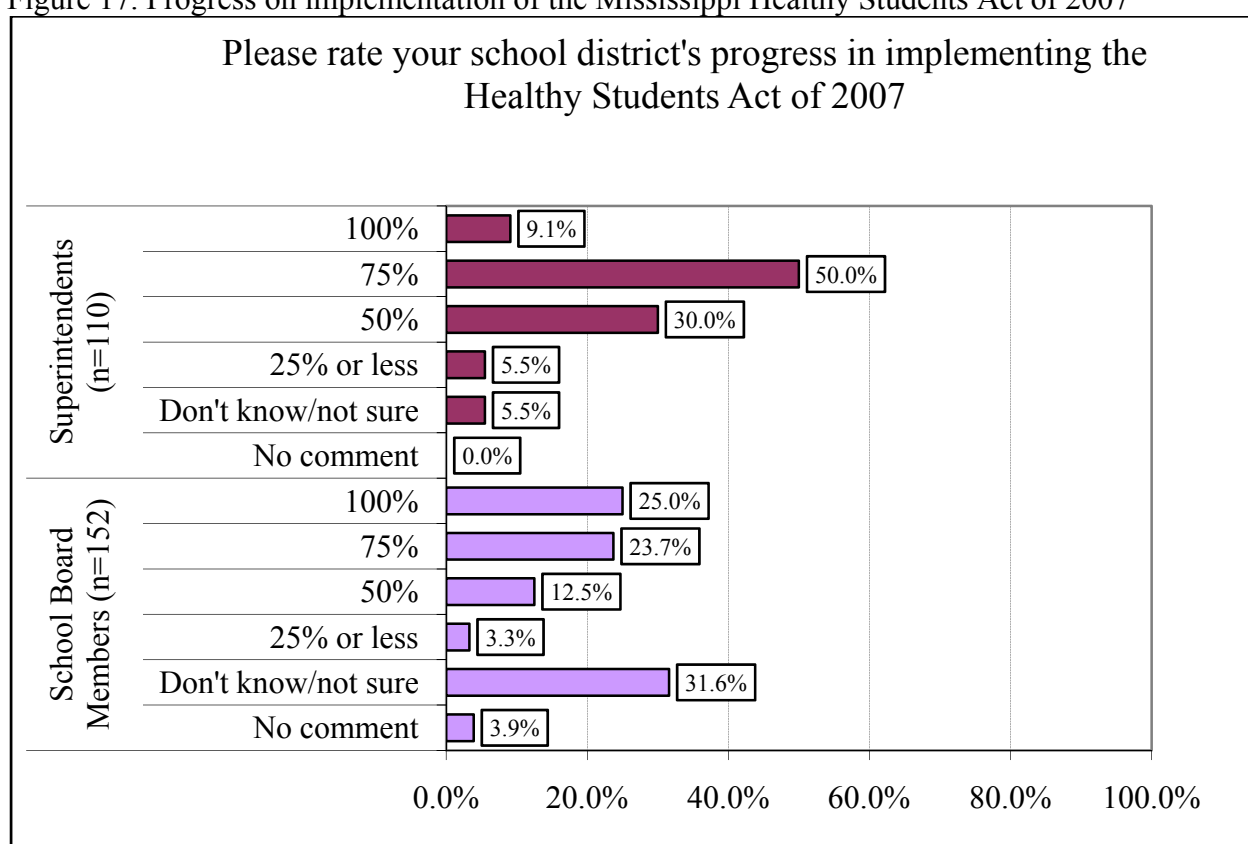


Figure 18. Parent feedback on implementing the Mississippi Healthy Students Act of 2007

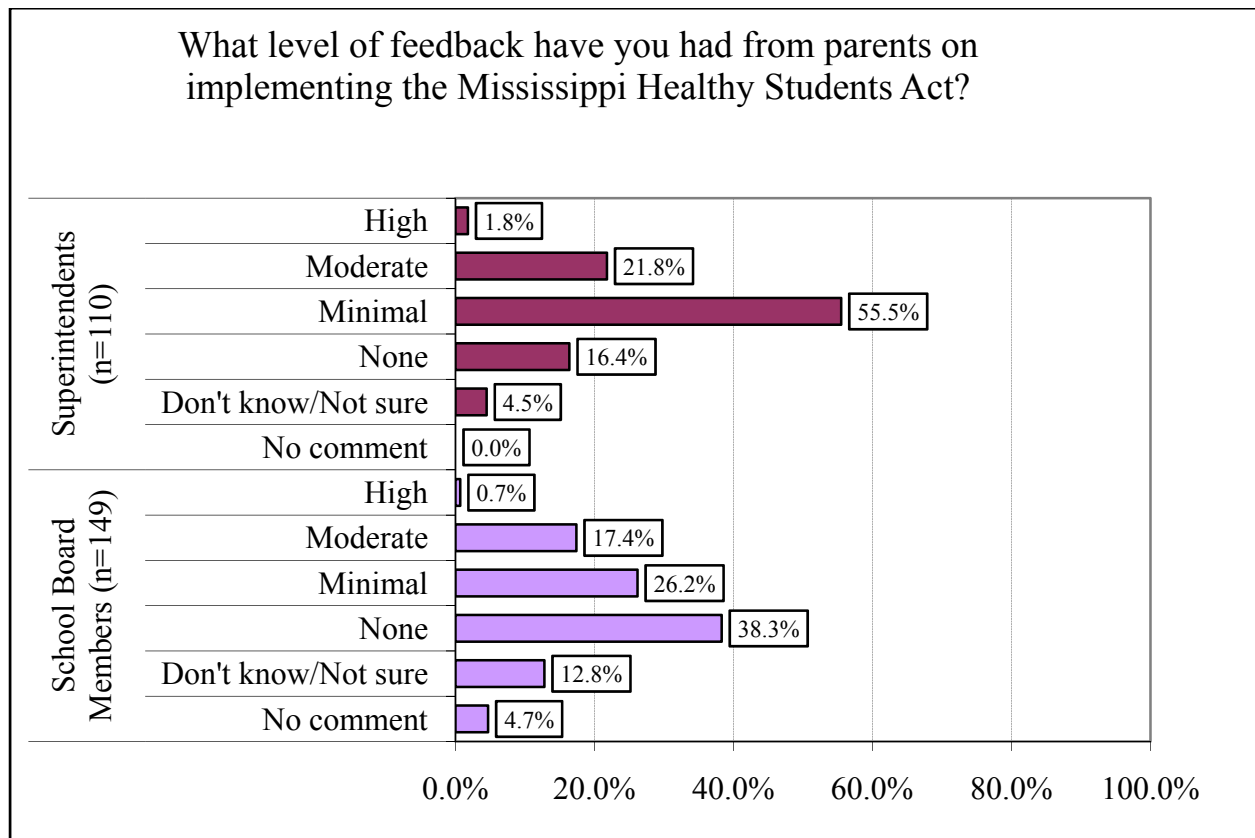
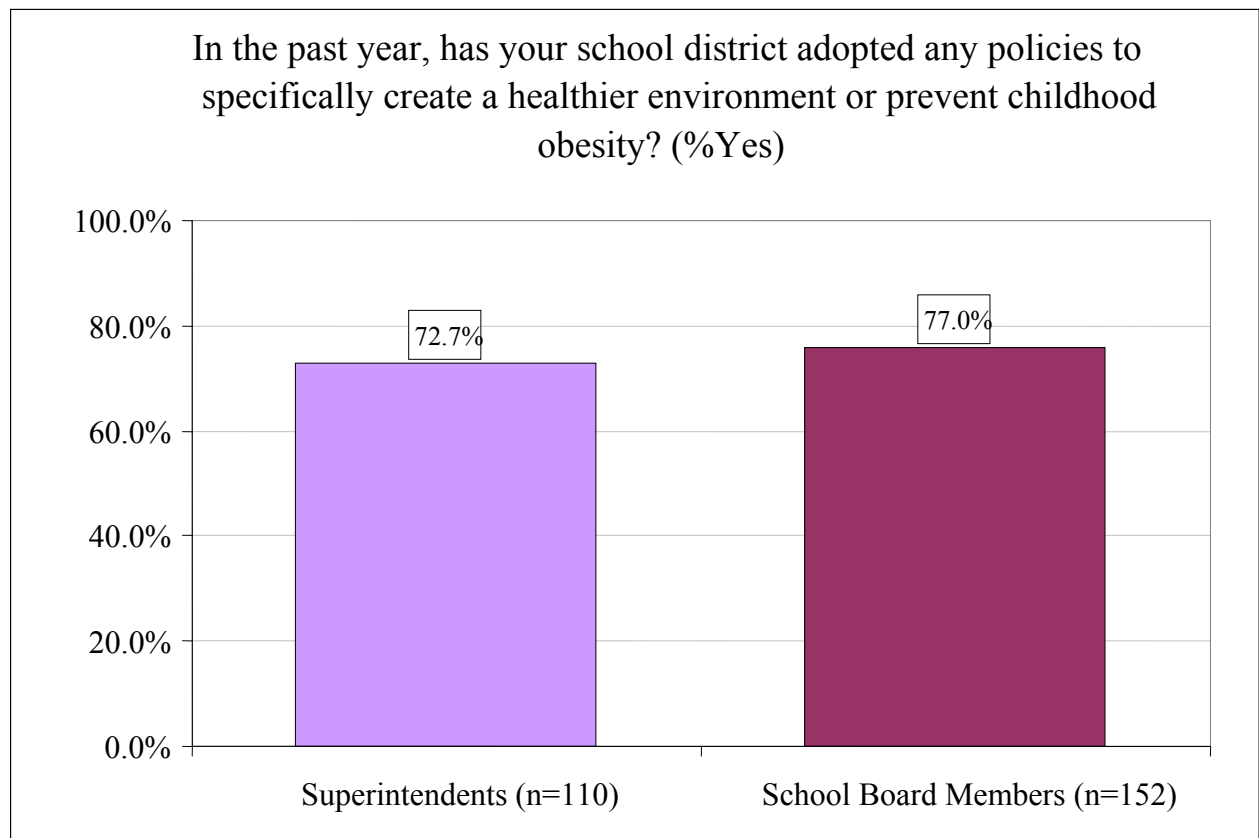


Figure 19. Adopted policies to prevent childhood obesity



*School board policies: school nutrition and physical activity*

Approximately three fourths of school board members (77.0%) and district superintendents (72.7%) reported that their school district adopted policies during the past year to specifically create a healthier environment or to prevent childhood obesity.

**School nutrition**

When asked if specific policies were adopted by the school board within the last year to improve student nutrition, 72.4% of school board members and 69.1% of superintendents responded affirmatively. Approximately one fifth of school board members (21.2%) and school superintendents (23.6%) reported that their school districts have adopted a policy to prohibit the



use of food or food coupons as a reward for good behavior or good academic performance. The majority of school board members and school superintendents reported that their districts have a district-wide fundraising policy. Of those who reported that they do have a district-wide fundraising policy, 42.3% of school board members and 31.8% of school superintendents noted that it does *not* include nutrition guidelines.

Table 7. School district policy on prohibiting using food as a reward

Has your school district adopted a policy stating that schools are prohibited from using food or food coupons as a reward for good behavior or good academic performance?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes, we prohibit	34	21.2%	26	23.6%
No, but we recommend against	27	16.9%	30	27.3%
We do not have a policy	56	35.0%	48	43.6%
Don't know/Not sure	34	21.2%	6	5.5%
No comment	6	3.8%	0	0.0%
Total	157	100.0%	110	100.0%

Table 8. School has a district-wide fundraising policy

Does your district have a district-wide fundraising policy?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	99	64.7%	88	80.0%
No	32	20.9%	20	18.2
Don't know/Not sure	18	11.8%	2	1.8%
No comment	4	2.6%	0	0.0%
Total	153	100.0%	110	100.0%

Table 9. Nutritional guidelines included in fundraising policy

Does the fundraising policy include nutrition guidelines?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	33	26.8%	51	58.0%
No	52	42.3%	28	31.8%
Don't know/Not sure	34	27.6%	9	10.2%
No comment	4	3.3%	0	0.0%
Total	123	100.0%	88	100.0%

Figure 20. Importance of preventing childhood obesity

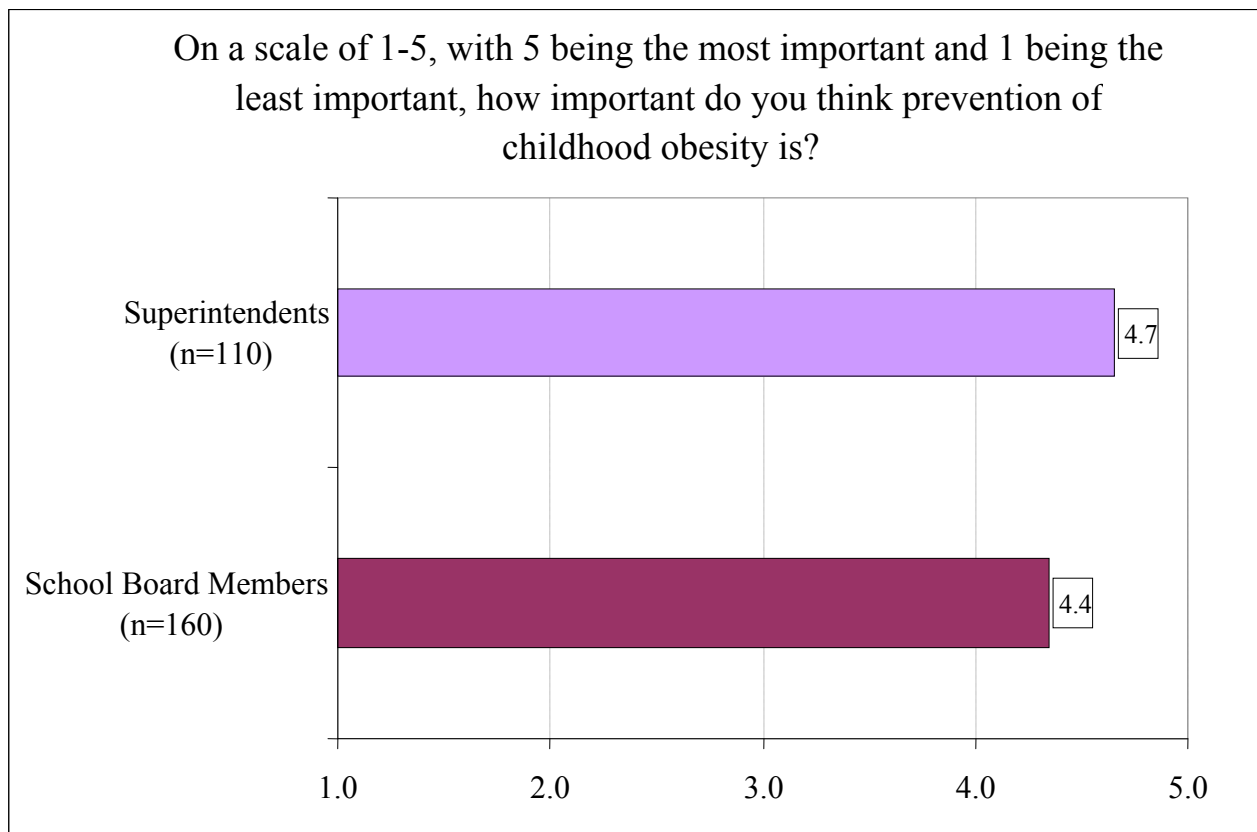
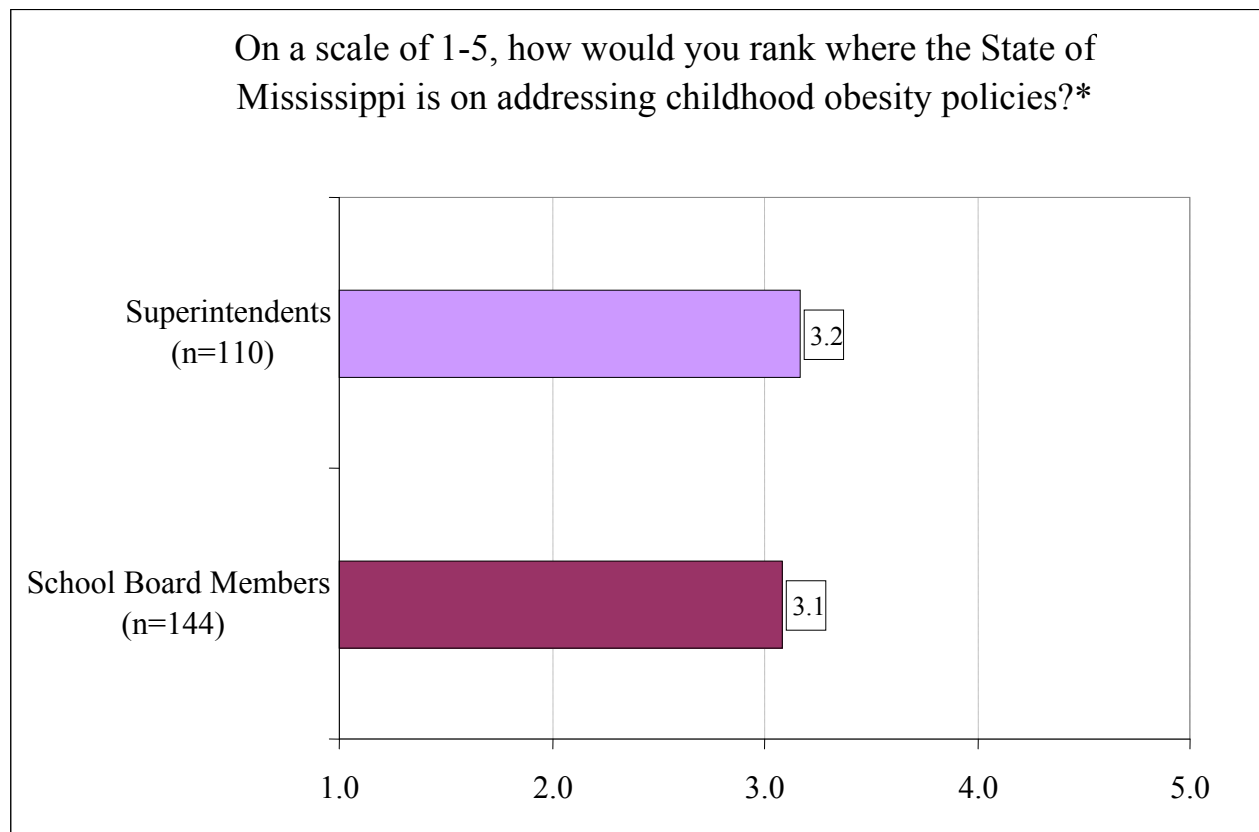


Figure 21. How Mississippi ranks on addressing childhood obesity



\*Superintendents were asked, "...with 1 being Mississippi has only enacted minimal policies to address childhood obesity to 5 being Mississippi is doing all it can." School Board Members were asked, "...with 1 being Mississippi's policies are not at all effective in addressing childhood obesity and 5 being Mississippi's policies are very effective in addressing childhood obesity.

## Physical activity

Approximately two thirds of school board members (55.9%) and superintendents (61.8%) stated yes, when asked the question, “Has your school board adopted any policies within the last year to increase student physical activity?”

Table 10. Policies adopted in the past year to increase student physical activity

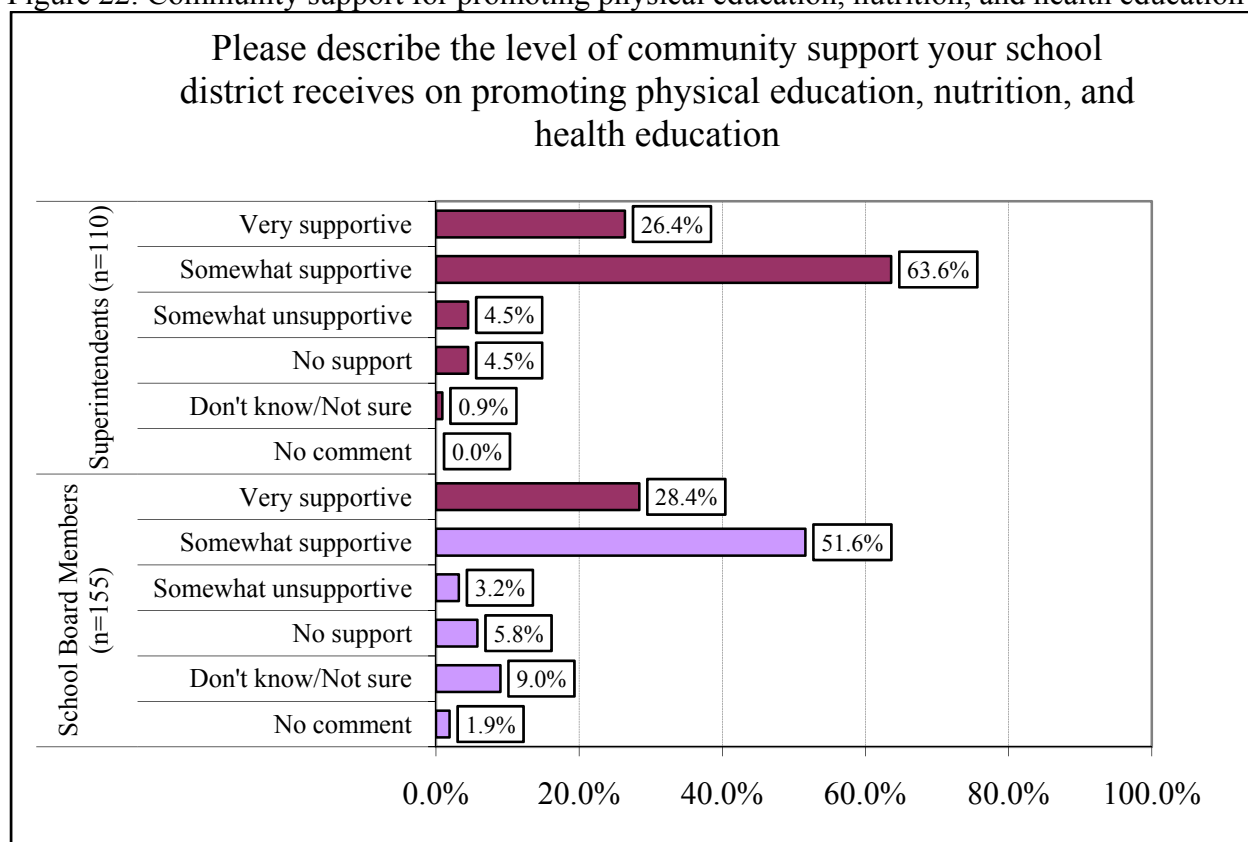
Has your school board adopted any policies within the last year to increase student physical activity?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	80	55.9%	68	61.8%
No	40	28.0%	38	34.5%
Don't know/Not sure	21	14.7%	4	3.6%
No comment	2	1.4%	0	0.0%
Total	143	100.0%	110	100.0%

## *Level of community support*

Both school board members and district superintendents of education noted their communities were either very supportive or somewhat supportive of promoting physical education, nutrition and health education in their schools.

Both school board members and superintendents noted that their school district is making progress in the implementation of the Mississippi Healthy Students Act of 2007, although there was almost one third of the school board members who reported “not knowing” or were “not sure” of the progress their districts had made.

Figure 22. Community support for promoting physical education, nutrition, and health education



### *Fitness testing and informing parents*

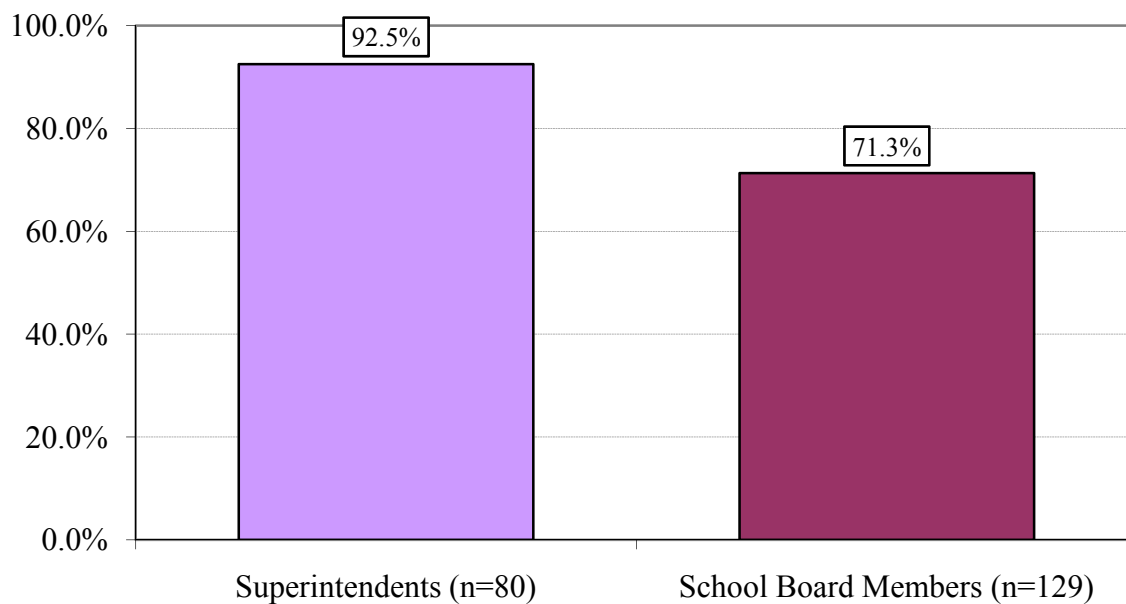
Superintendents (72.7%) reported that schools in their district conduct fitness testing. Both school board members and superintendents stated they are in favor of sending this [fitness testing results] to children's parents.

Table 11. Fitness testing at school

Do schools in your district conduct fitness testing?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	55	35.0%	80	72.7%
No	32	20.4%	21	19.1%
Don't know/Not sure	68	43.3%	9	8.2%
No comment	2	1.3%	0	0.0%
Total	157	100.0%	110	100.0%

Figure 23. Approve of sending fitness testing results to parents

Are you in favor of sending this information to children's parents? (% Yes)



### *Body Mass Index (BMI) testing and informing parents*

The majority of both superintendents (76.4%) and school board members (61.3%) noted that they are in favor of collecting BMIs on children, and 95.2% of superintendents and 73.6% of school board members are in favor of sending BMI results home to parents.

Figure 24. Approve of BMI collection

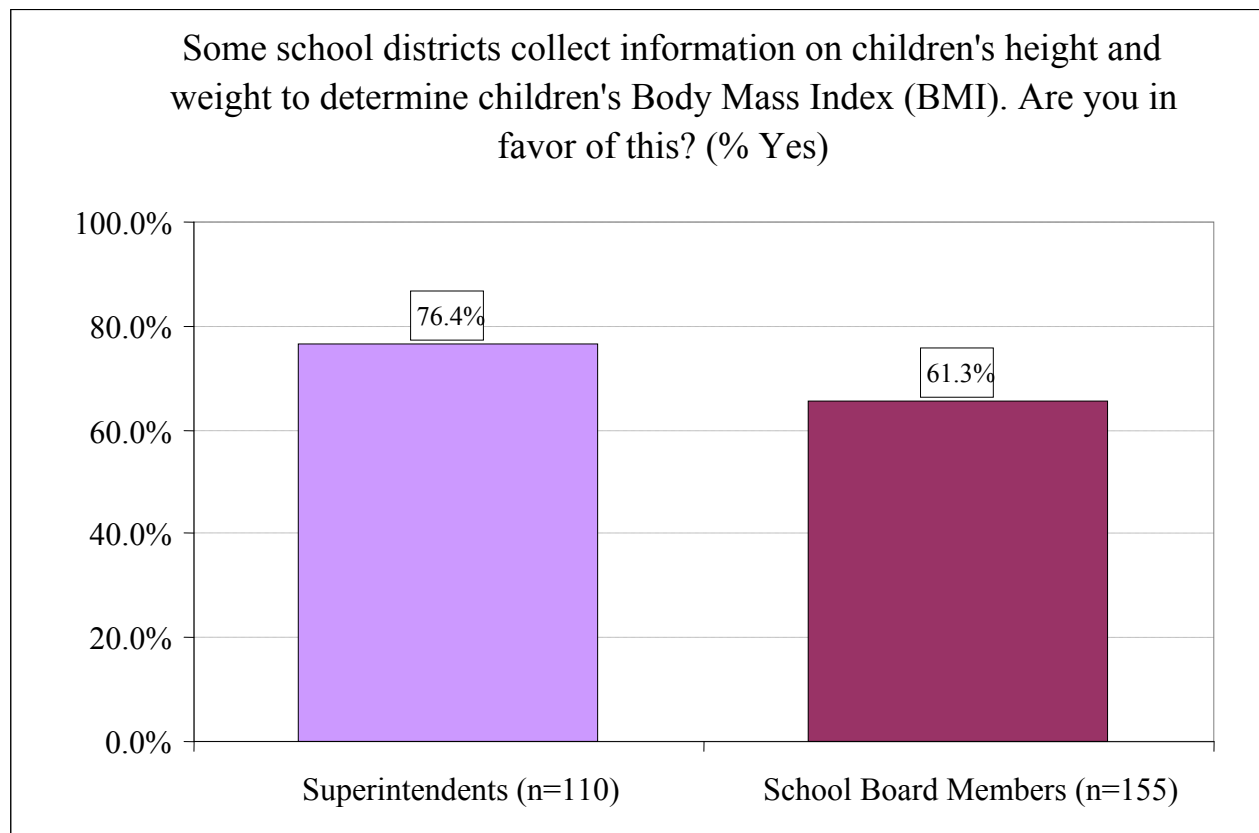


Table 12. Approve of BMI collection

Some school districts collect information on children's height and weight to determine children's Body Mass Index (BMI). Are you in favor of this?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	95	61.3%	84	76.4%
No	25	16.1%	23	20.9%
Don't know/Not sure	29	18.7%	3	2.7%
No comment	6	3.9%	0	0.0%
Total	155	100.0%	110	100.0%

### *Staff wellness programs*

When asked their opinion of the importance of providing staff wellness programs in their schools, 89.4% of school board members responded either very important or moderately important, and 96.3% of superintendents responded either very important or moderately important.

Table 13. Importance of staff wellness programs

In your opinion, how important is it to provide staff wellness programs? Would you say:				
Response	School Board Members		Superintendents	
	n	%	n	%
Very important	88	58.7%	71	64.5%
Moderately important	46	30.7%	35	31.8%
Not important at all	2	1.3%	4	3.6%
Don't know/Not sure	8	5.3%	0	0.0%
No comment	6	4.0%	0	0.0%
Total	150	100.0%	110	100.0%

For a more detailed breakdown of each of the responses and response categories by both school board members and superintendents reported in this section, please see Appendix C.



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**APPENDIX A:**

**INTERVIEW GUIDES FOR POLICYMAKERS (STATE BOARD OF EDUCATION,  
STATE BOARD OF HEALTH, DISTRICT HEALTH OFFICERS, AND LEGISLATORS)**

## State Board of Education Interview Guide

### Introduction—1<sup>st</sup> Telephone Contact:

Hello. My name is \_\_\_\_\_. I'm from Mississippi State University, and I'm calling regarding a project that is designed to evaluate the Mississippi Healthy Students Act of 2007. As you may recall, this research is sponsored by the Center for Mississippi Health Policy and funded by the Robert Wood Johnson Foundation.

As a part of this research, we would like to interview \_\_\_\_\_, regarding his/her opinions about childhood obesity policies.

Any information we gather will only be released as group information and will not be attributed to any individual Board member. Is there a time when I may speak with \_\_\_\_\_ for about 20 minutes in the next two (2) weeks?

Objectives (if asked to describe the study/project in more detail):

1. To learn State Board of Education members and others' perspectives on the passage and implementation of the Mississippi Healthy Students Act of 2007.
2. To understand State Board of Education members and others' knowledge, attitudes and support for ways to prevent obesity among Mississippi's children.

### Interview Script/Guide:

Name: \_\_\_\_\_

Hello, Dr/Mr/Ms \_\_\_\_\_. Thank you for agreeing to participate in this interview. We are interested in learning about your opinions on the childhood obesity legislation in the Mississippi Healthy Students' Act of 2007. As you know, this legislation affected physical education, nutrition and health education in the schools. We are also interested in your perspectives on additional policies that could assist in the prevention of obesity among Mississippi's children. We believe that the results of our research will be helpful to improve programs throughout the state of Mississippi.

We would like to have your permission to tape this interview. Any information we gather will be kept confidential and will not be attributed to any individual lawmaker. The tape will be used only to help with the transcription of the interview, and there will be no identifying information on these tapes. Your name will not be used. Your participation in this interview is completely voluntary, and you do not have to answer any question that you choose not to.

Do I have your permission to record this interview?

(Note to interviewer: If yes, proceed. If no, use longer form with spaces for notes.)

May I begin?

1. On a scale of 1 to 5, with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?

1      2      3      4      5

2. As you will recall, there are three (3) major components of the legislation:

- Improving physical education
- Improving school nutrition
- Increasing health education

What are your thoughts on each of these areas?

3. Again on a scale of 1 to 5, with 5 being very EFFECTIVE and 1 being very INEFFECTIVE, how would you rank Mississippi's current policies on childhood obesity?

1      2      3      4      5

4. Among individuals and school districts with whom you interact, what has been your impression of their reaction to the MS Healthy Students Act of 2007?

(Probe/follow-up, if needed: For example, have you heard anything from school personnel? Parents?)

5. Have you personally been involved with a local school health council in your community? If yes, in what role?

6. Do you see a role for the State Department of Education in obesity prevention?

- Yes
- No

If yes, go to question #7. If no, go to question #8.

7. Please rank the following target areas that can be addressed by the Department of Education, by level of importance, with 5 being the most important and 1 being the least important.

Increasing physical activity	1	2	3	4	5
Increasing consumption of fruits & vegetables	1	2	3	4	5
Decreasing consumption of high-calorie, dense foods	1	2	3	4	5
Decreasing children's screen time (TV viewing, computer screen time)	1	2	3	4	5
Decreasing consumption of sugary beverages	1	2	3	4	5

8. Do you think that Mississippi has done enough to strengthen school policies in the following areas?

- Nutrition?
- Health education?
- Physical education?

9. If No to any of these in Q#8, then go to 9A

9A. What other policies need to be enacted?

If yes to all questions, then go to Q # 10.

10. Do you think it is important for schools to promote healthy lifestyles for the following groups?

- Students?
- Staff?

11. To what extent do you think the schools in the state are implementing the minimum requirements of Coordinated School Health Programs? Please rank with 5 being they are doing a good job and 1 being they are not doing a very good job.

1      2      3      4      5

12. Many things can have an impact on the prevention of childhood obesity. Please rank the following things that exist outside of the school setting, with a ranking of 5 meaning that it has a very large impact and a ranking of 1 meaning that it has no impact.

Child care centers

1      2      3      4      5

Nutrition labeling

1      2      3      4      5

Media policy (restrictions on advertising, promoting positive messages)

1      2      3      4      5

Farmers' markets

1      2      3      4      5

Body Mass Index (measuring children's height and weight) reporting

1      2      3      4      5

Built environment (sidewalks, parks, green space, bike lanes)

1      2      3      4      5

Local Food Policy Council

1      2      3      4      5

Fat and trans fat restrictions

1      2      3      4      5

Location of Supermarkets (proximity to where residents live)

1      2      3      4      5

13. Do you think local government funds should be spent to build and maintain places in your community where people can exercise?



- Yes
- No

14. Do you think schools should make school facilities, such as gym tracks, ball fields, or playgrounds, available to the community after school hours to promote physical activity/education programs? (Superintendent Survey)

- Yes
- No

15. Besides schools, what other places or groups/organizations if any, do you think have an important role in decreasing childhood overweight and/or obesity in Mississippi?

16. Do you have children living at home?

- Yes
- No

If Yes, What are their ages? , If No, go to Q. 17

Have you heard any discussion/comments about changes within their school in the areas of physical education, school nutrition, health education?

17. Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation? (Probe/Follow-up if needed: How is this an education concern)?

18. How do you think we should measure the success of this legislation?  
(Probe/Follow-up, if needed: For example, fitness testing, decrease in % of children who are obese, etc.)

19. Who do you rely on to get information on childhood obesity in Mississippi?

20. Some schools districts collect information on children's *height and weight* to determine children's Body Mass Index (BMI). Are you in favor of this?

- Yes
- No
- Not Sure

21. If yes, are you in favor of sending this information to children's parents?

- Yes
- No
- Not Sure

22. School districts are required to conduct fitness testing in certain grades. Are you in favor of sending the results of this testing to students' parents?

- Yes
- No
- Not Sure

23. Some school districts have adopted policies stating that schools are prohibited from offering "junk" foods (foods which provide calories primarily through fats or added sugars and have minimal amounts of vitamins and minerals) in the following settings:

What are your thoughts on each of the following?

	<b>Prohibit</b>	<b>Recommend Against</b>	<b>No Policy</b>
At student parties			
In after-school or extended day programs			
At staff meetings			
At meetings attended by families			
In school stores, canteens or snack bars			
In vending machines			
At concession stands			

24. Generally speaking, what if anything, makes it most difficult for the schools in Mississippi to meet Physical Education and Nutrition requirements?

25. To what extent do you believe there is a positive link between implementation of Coordinated School Health Programs in the school district and the academic performance of the students?

- Not at all
- Somewhat
- A fair amount
- A great deal

26. In your opinion, how important is it to provide staff wellness program(s)?

- Very important
- Moderately important
- Not important at all

27. Generally speaking, how would you rank the effectiveness of School Councils, with 5 being very EFFECTIVE and 1 being very INEFFECTIVE?

1      2      3      4      5

Thank you so much for your time. We know how busy you are, but are pleased that you made time to speak with me and share important information.

Would you like to receive findings from this study? (If so, obtain email or mailing address.)

Thanks again!

## Mississippi State Board of Health Members' Interview Guide

### Introduction: 1<sup>st</sup> Telephone Contact:

Hello. My name is \_\_\_\_\_. I am from Mississippi State University and am calling regarding a project to evaluate the Mississippi Healthy Students Acts of 2007, the Act passed for improving nutrition and physical education in the schools. This research is sponsored by the Center for Mississippi Health Policy and funded by the Robert Wood Johnson Foundation.

As a part of this research, we would like to interview \_\_\_\_\_, regarding his/her experience with childhood obesity policy.

Any information we gather would only be released as group information and would not be attributed to any individual lawmaker. Is there a time when I may speak with \_\_\_\_\_ for about 20 minutes in the next two (2) weeks?

Objectives (if asked to describe the study/project in more detail):

1. To learn (State Board of Health Member's) perspectives on the passage and implementation of the Mississippi Healthy Students Act of 2007.
2. To understand (State Board of Health Member's) knowledge, attitudes and support for ways to prevent obesity of Mississippi's children.

### Interview Script/Guide:

Name: \_\_\_\_\_

Dr/Mr/Ms\_\_\_\_\_, thank you for agreeing to participate in this interview. We are interested in learning your opinions on the childhood obesity legislation of the Mississippi Healthy Students' Act of 2007. As you know, this legislation improved physical education, nutrition and health education in the schools. We are also interested in your perspectives on additional policies to assist in the prevention of obesity among Mississippi's children. We believe that results of our research will be helpful to improve programs throughout the state of Mississippi.

We would like to have your permission to tape this interview. Any information we gather will be kept confidential and will not be attributed to any individual lawmaker. The tape will be used only to help with the transcriptions of the interviews and no identifying information will be on these tapes. Your name will not be used.

Do I have your permission to record this interview?

Note to interviewer

If yes, proceed.

If no....use longer form with spaces (for notes)

May I begin?

1. Please tell me how you became aware of/interested in the topic of childhood obesity?

2. On a scale of 1 to 5, with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?

3. As you will recall, there are three (3) major components of the Mississippi Healthy Students Act of 2007,

- Improving physical education
- Improving school nutrition and
- Increasing health education

What are your thoughts on each of these areas?

4. Again on a scale of 1 to 5, with 5 being very EFFECTIVE and 1 being very INEFFECTIVE, how would you rank Mississippi's current policies on childhood obesity?

5. Among individuals and health department districts with whom you interact, what has been your impression of their reaction to the MS Healthy Students Act of 2007? For example, have you heard anything from school personnel? Physicians, school nurses?

6. Have you personally been involved with a local school health council in your community? If yes, in what role?

7. Do you see a role for the State Department of Health in obesity prevention?

8. If yes to Q#7, please rank the following target areas that can be addressed by public health, by level of importance, with 5 being most important and 1 being least important:

Increasing physical activity	1	2
3      4      5		

Increasing consumption of fruits & vegetables	1	2
3      4      5		

Decreasing consumption of high energy dense foods	1	2
3      4      5		

Decreasing children's screen time (TV viewing, computer time)	1	2
3      4      5		

Encouraging breastfeeding	1	2
3      4      5		

Decreasing consumption of sugary beverages	1	2
3      4      5		

9. Do you see a role for the local and/or district Health Departments to promote the MS Healthy Student Act of 2007?

10. Do you think that Mississippi has done enough to strengthen school policies in the following areas?

Nutrition?

Health education?

Physical education?

11. If NO to any of these on Q#10, then what other policies need to be enacted?

12. Many things can have an impact on the prevention of childhood obesity. Please rank the following things that exist outside of the school setting, with a ranking of 5 meaning that it has a very large impact and a ranking of 1 meaning that it has no impact.

Child care centers

1      2      3      4      5

Nutrition labeling

1      2      3      4      5

Media policy (restrictions on advertising, promoting positive messages)

1      2      3      4      5

Farmers' markets

1      2      3      4      5

Body Mass Index (measuring children's height and weight) reporting

1      2      3      4      5

Built environment (sidewalks, parks, green space, bike lanes)

1      2      3      4      5

Local Food Policy Council

1      2      3      4      5

Fat and trans fat restrictions

1      2      3      4      5

Location of Supermarkets (proximity to where residents live)

1      2      3      4      5

13. Do you think local government funds should be spent to build and maintain places in your community where people can exercise?

- Yes
- No

14. Does anyone in your close family work in the school setting?

- Yes
- No

If YES, have you heard any discussion/comments about changes in their school regarding the areas of physical education, school nutrition, health education?



15. Do you have children living at home?

- Yes
- No

If YES, what are their ages?

Have you heard any discussion/comments about changes in their school regarding the areas of physical education, school nutrition, health education?

16. Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?

Thank you so much for your time. We know how busy you are, and we are pleased that you made time to share this important information.

Would you like a copy of the report or to be put on a mailing list for the report?

## **District Health Officers Interview Guide**

### **Introduction: 1<sup>st</sup> Telephone Contact:**

Hello. My name is \_\_\_\_\_. I'm from Mississippi State University, and I'm calling regarding a project that is designed to evaluate the Mississippi Healthy Students Act of 2007. This research is sponsored by the Center for Mississippi Health Policy and funded by the Robert Wood Johnson Foundation.

As a part of this research, we would like to interview \_\_\_\_\_, regarding his/her opinions about childhood obesity legislation.

Any information we gather would only be released as group information and would not be attributed to any individual person. Is there a time when I may speak with \_\_\_\_\_ for about 15 minutes in the next two (2) weeks?

Objectives (if asked to describe the study/project in more detail):

1. To learn District Health Officers' perspectives on the passage and implementation of the Mississippi Healthy Students Act of 2007.
2. To understand District Health Officers and others' knowledge, attitudes and support for ways to prevent obesity in Mississippi's children.

### **Interview Script/Guide:**

Name: \_\_\_\_\_

Dr. \_\_\_\_\_, thank you for agreeing to participate in this interview. We are interested in learning your opinions on the childhood obesity legislation in the Mississippi Healthy Students' Act of 2007. As you know, this legislation affected physical education, nutrition and health education in the schools. We are also interested in your perspectives on additional policies to assist in the prevention of obesity among Mississippi's children. We believe that results of our research will be helpful to improve programs throughout the state of Mississippi.

We would like to have your permission to tape this interview. Any information we gather from this research will be kept confidential and will not be attributed to any individual person. The tape will be used only to help with the transcriptions of the interviews, and no identifying information will be on these tapes. Your name will not be used. Your participation in this interview is completely voluntary, and you do not have to answer any questions that you choose not to.

Do I have your permission to record this interview?

Note to interviewer

If yes, proceed.

If no....use longer form with spaces (for notes)

May I begin?

1. How did you become aware of/interested in the topic of childhood obesity?
2. On a scale of 1 to 5, with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is for Mississippi?

1      2      3      4      5

3. As you may recall, there are three (3) major components of the legislation,
  - Improving physical education
  - Improving school nutrition and
  - Increasing health education

What are your thoughts on each of these areas?

4. Again on a scale of 1 to 5, with 5 being very EFFECTIVE and 1 being very INEFFECTIVE, how would you rank Mississippi's current policies on childhood obesity?

1      2      3      4      5

5. Among individuals and health department districts with whom you interact, what has been your impression of their reaction to the MS Healthy Students Act of 2007

(Probe/follow-up, if needed: For example, have you heard anything from the district administrators? County nurses? Physicians, school nurses, parents?)

6. Have you personally been involved with a local school health council in your community? If yes, in what role?
7. Do you see a role for District and County Health Offices in obesity prevention?

- Yes
- No

If yes, go to question #8. If no, go to question #9.

8. Please rank the following target areas that can be addressed by public health, by level of importance, with 5 being the most important and 1 being the least important.

Increasing physical activity	1	2	3	4	5
Increasing consumption of fruits and vegetables	1	2	3	4	5
Decreasing consumption of high-calorie, dense foods	1	2	3	4	5
Decreasing children's screen time (TV viewing, computer time)	1	2	3	4	5
Encouraging breastfeeding	1	2	3	4	5
Decreasing consumption of sugary beverages	1	2	3	4	5

9. Do you see a role for the district or county health offices to promote the MS Healthy Students Act of 2007?

How involved is the staff in your district in assisting the schools in implementing coordinated school health programs? Please list any initiatives that you are aware of.

10. Do you think Mississippi has done enough to strengthen school policies in the following areas?  
Nutrition?  
Health education?  
Physical education?
11. If no to any of these on Q#10, then what other policies need to be enacted?

12. Do you think that students are receiving enough education in each of the following areas?

Nutrition?

Health?

Physical education?

13. Many things can have an impact on the prevention of childhood obesity. Please rank the following things that exist outside of the school setting, with a ranking of 5 meaning that it has a very large impact and a ranking of 1 meaning that it has no impact.

Child care centers

1      2      3      4      5

Nutrition labeling

1      2      3      4      5

Media policy (restrictions on advertising, promoting positive messages)

1      2      3      4      5

Farmers' markets

1      2      3      4      5

Body Mass Index (measuring children's height and weight) reporting

1      2      3      4      5

Built environment (sidewalks, parks, green space, bike lanes)

1      2      3      4      5

Local Food Policy Council

1      2      3      4      5

Fat and trans fat restrictions

1      2      3      4      5

Location of Supermarkets (proximity to where residents live)

1      2      3      4      5

14. Do you think local government funds should be spent to build and maintain places in your community where people can exercise?
- Yes
  - No

15. Who do you rely on to get information on childhood obesity in Mississippi?

16. Does anyone in your close family work in the school setting?
- Yes
  - No

If YES, have you heard any discussion/comments about changes in their school regarding the areas of physical education, school nutrition, health education?

17. Do you have children living at home?
- Yes
  - No

If YES, what are their ages?

Have you heard any discussion/comments about changes in their school regarding the areas of physical education, school nutrition, health education?

18. Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation? (Probe/follow up if needed: How is this a public health concern?)

Thank you so much for your time. We know how busy you are, but are pleased that you made time to speak with me and share important information.

Would you like to receive findings from this study? (If so, obtain email or mailing address.)

Thanks again!

## Mississippi Key Legislators' Interview Guide

### Introduction: 1<sup>st</sup> Telephone Contact:

Hello. My name is \_\_\_\_\_. I am from Mississippi State University and am calling regarding a project to evaluate the Mississippi Healthy Students Act of 2007, the Act passed for improving nutrition and physical education in the schools. This research is sponsored by the Center for Mississippi Health Policy and funded by the Robert Wood Johnson Foundation.

As a part of this research, we would like to interview Senator/Representative \_\_\_\_\_, regarding his/her opinions regarding childhood obesity legislation.

Any information we gather would only be released as group information and would not be attributed to any individual lawmaker. Is there a time when I may speak with \_\_\_\_\_ for about 20 minutes in the next two (2) weeks?

Objectives (if asked to describe the study/project in more detail):

1. To learn Sen/Rep\_\_\_\_ perspectives on the passage and implementation of the Mississippi Healthy Students Act of 2007.

2. To understand Sen/Rep\_\_\_\_ knowledge, attitudes and support for ways to prevent obesity of Mississippi's children.

### Interview Script/Guide:

Name: \_\_\_\_\_

Senator/Representative \_\_\_\_\_, thank you for agreeing to participate in this interview. We are interested in learning your opinions on the childhood obesity legislation of the Mississippi Healthy Students' Act of 2007. As you know, this legislation improved physical education, nutrition and health education in the schools. We are also interested in your perspectives on additional policies to assist in the prevention of obesity among Mississippi's children.

We believe that results of our research will be helpful to improve programs throughout the state of Mississippi.

We would like to have your permission to tape this interview. Any information we gather from this research will be kept confidential and will not be attributed to any individual lawmaker. The tape will be used only to help with the transcriptions of the interviews and no identifying information will be on these tapes. Your name will not be used. Your participation in this interview is completely voluntary and you do not have to answer any of the questions that you choose not to. Should you have further questions or need more information, please feel free to contact Dr. Linda Southward at (662) 325-0851.

Do I have your permission to record this interview?

Note to interviewer

If yes, proceed.

If no....use longer form with spaces (for notes)

May I begin?

1. Please tell me how you became interested in the topic of childhood obesity?
2. On a scale of 1 to 5 with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is for Mississippi?
3. As you will recall, there are three (3) major components of the legislation,
  - Improving physical education
  - Improving school nutrition and
  - Increasing health education

Of these components, which do you see as most important? As next important?

- Improving physical education
  - Improving school nutrition and
  - Increasing health education
4. How would you rank where the State of Mississippi is on addressing childhood obesity policies? With 5 being Mississippi is doing all it can and 1 being Mississippi has only enacted minimal policies to address childhood obesity.

1      2      3      4      5

5. IF Representative---Ask  
What do you think is the general consensus of the House on maintaining improvements made by the Mississippi Healthy Students Act of 2007?  
OR  
IF Senator---Ask  
What do you think is the general consensus of the Senate on maintaining improvements made by the Mississippi Healthy Students Act of 2007?
6. Among individuals and school districts whom you represent, what has been your impression of their reaction to the MS Healthy Students Act of 2007?  
(Probe/follow-up, if needed)  
For example, have you heard anything from the school personnel? physicians, school nurses, parents?
7. How do you think we should measure success of this legislation?  
(Probe/follow-up, if needed)



For example, fitness testing, decrease in % of children who are obese  
more 'fit' workforce(economic dev) issue

8. Do you think it is important for schools to promote healthy lifestyles  
for students?  
for staff?
9. What do you think is the role of the Mississippi legislature in promoting  
healthy lifestyles through state policy?
10. What is the role of other groups in promoting healthy lifestyles for children?  
(Probe/follow-up, if needed) For example, health care providers, public health  
departments, school nurses, etal)
11. Do you think Mississippi has done enough to strengthen the school policies on  
nutrition?  
On health education?  
On physical education?  
  
If No, then ask:
12. What other policies need to be enacted?
13. What about policies outside of the school settings that can be used to  
prevent childhood obesity?  
(Probes: child care; media; after-school programs)
14. Who do you rely upon to get information on childhood obesity in Mississippi?  
  
Follow-up with
15. Who else do you hear from about these policies?  
(Probe/follow-up): Do you hear from lobbyists and interest groups?  
Who do they represent?
16. Does anyone in your close family work in the school setting?
17. Do you have children living at home? Ages?

Note to interviewer: If the respondent answer yes to either/both question  
16 & 17, then ask the follow-up question.

18. Have you heard any discussion/comments about changes within their school  
about the areas of physical education, school nutrition, health education?

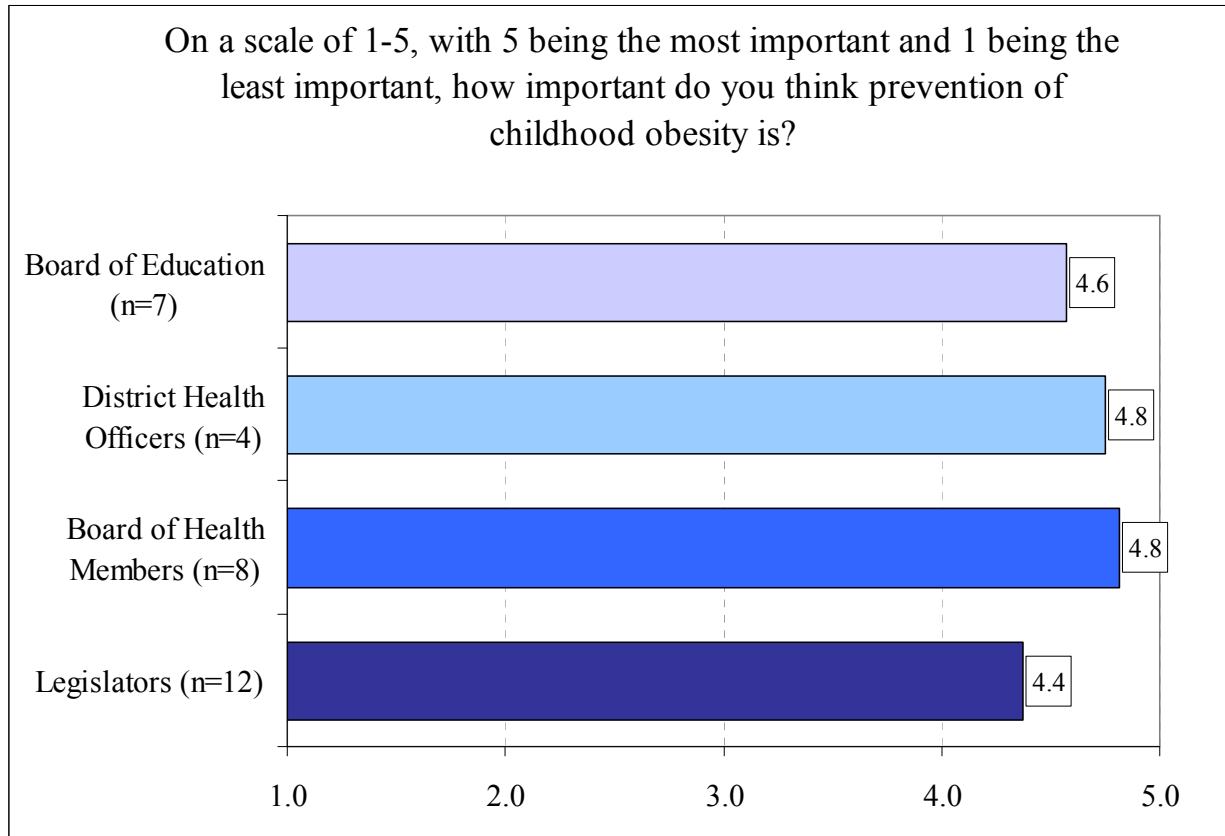
19. Is there anything else you would like to share about your experience and knowledge regarding childhood obesity legislation?

Thank you so much for your time. We know how busy you are, but are pleased that you made time to speak with me and share important information.

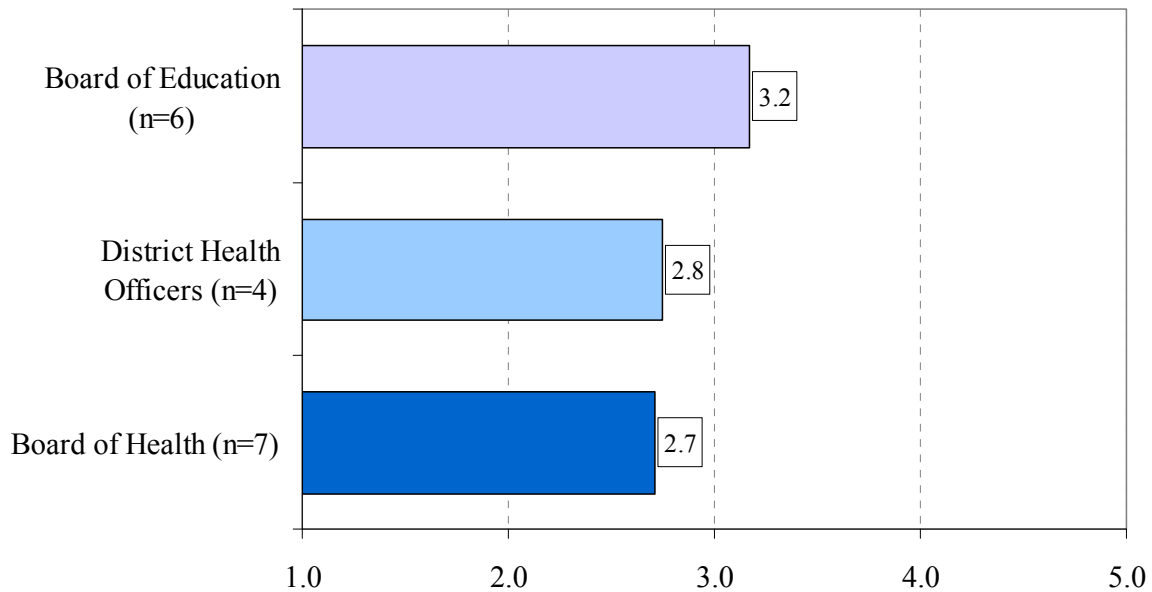
Would you like a copy of the report or be put on a mailing list for the report?

Thanks again!

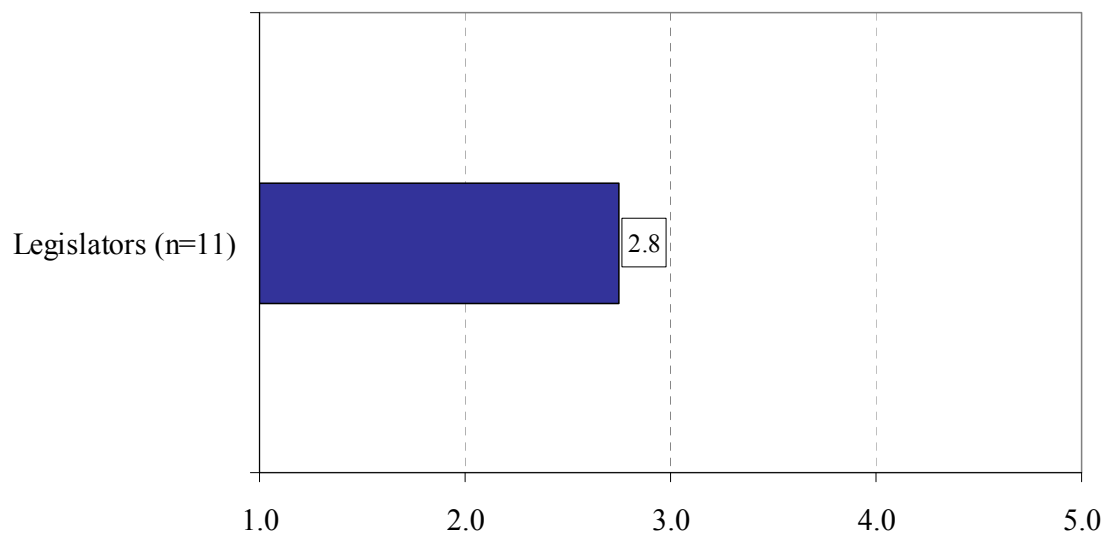
**APPENDIX B:**  
**RESULTS OF POLICYMAKER QUANTITATIVE MEASURES/RANKINGS**



On a scale of 1 - 5, with 5 being very effective and 1 being very ineffective, how would you rank Mississippi's current policies on childhood obesity?



How would you rank where the state of MS is on addressing childhood obesity policies? With 5 being Mississippi is doing all it can and 1 being Mississippi has only enacted minimal policies to address childhood obesity.



State Board of Education Members (n=7)		
Question	valid n*	Mean
On a scale of 1 - 5, with 5 being the most important and 1 being the least important, how important do you think prevention of childhood obesity is in MS?	7	4.6
Again on a scale of 1 - 5, with 5 being very effective and 1 being very ineffective, how would you rank Mississippi's current policies on childhood obesity?	6	3.2
Please rank the following target areas that can be addressed by the Department of Education, by level of importance with 5 being the most important and 1 being the least important:		
Increasing physical activity	7	4.7
Increasing consumption of fruits and vegetables	7	4.6
Decreasing consumption of high - calorie, dense foods	7	4.4
Decreasing children's screen time (TV viewing, computer screen time)	7	3.6
Decreasing consumption of sugary beverages	7	4.6
To what extent do you think schools in the state are implementing the minimum requirements of Coordinated School Health Programs? Please rank with 5 being they are doing a good job and 1 being they are not doing a very good job.	5	3.8
Many things can have an impact on the prevention of childhood obesity. Please rank the following things that exist outside of the school setting with a ranking of 5 meaning that it has a very large impact and a ranking of 1 means that it has no impact:		
Child care centers	7	3.9
Nutritional labeling	7	3.7
Media policy (restrictions on advertising, promoting positive messages)	7	3.4
Farmer's Markets	7	3.1
Body Mass Index (measuring children's height and weight) reporting	6	3.0
Built environment (sidewalks, parks, green space, bike lanes)	7	3.7
Local food policy council	6	3.2
Fat and trans fat restrictions	7	3.6
Location of supermarkets (proximity to where residents live)	7	2.6
Generally speaking, how would you rank the effectiveness of School Councils, with 5 being very effective and 1 being very ineffective?	5	3.6

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.

State Board of Education Members (n=7)			
Question	valid n*	n Yes	% Yes
Do you see a role for the State Department of Education in obesity prevention?	7	7	100.0%
Do you think Mississippi has done enough to strengthen school policies in the following areas:			
Nutrition	7	4	57.1%
Health Education	7	3	42.9%
Physical Education	7	3	42.9%
Do you think it's important for schools to promote healthy lifestyles for students?	7	7	100.0%
Do you think it's important for schools to promote healthy lifestyles for staff?	7	7	100.0%
Do you think local government funds should be spent to build and maintain places in your community where people can exercise?	7	7	100.0%
Do you think schools should make school facilities, such as gym tracks, ball fields, or playgrounds, available to the community after school hours to promote physical activity/education programs?	7	7	100.0%
Some of the school districts collect information on children's height and weight to determine children's BMI. Are you in favor of this?	6	6	100.0%
If yes, are you in favor of sending this information to children's parents?	6	6	100.0%
School districts are required to conduct fitness testing in certain grades. Are you in favor of sending the results of this testing to students' parents?	7	6	85.7%

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.

State Board of Health Members (n=8)		
Question	valid n*	Mean
On a scale of 1 - 5, with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?	8	4.8
Again on a scale of 1 - 5, with 5 being very effective and 1 being very ineffective, how would you rank Mississippi's current policies on childhood obesity?	7	2.7
Please rank the following target areas that can be addressed by public health, by level of importance, with 5 being most important and 1 being least important.		
Increasing physical activity	8	4.4
Increasing the consumption of fruits and vegetables	8	4.4
Decreasing children's screen time (TV viewing, computer time)	8	3.8
Encouraging breast feeding	7	4.1
Decreasing consumption of sugary beverages	7	4.4
Many things can have a major impact on the prevention of childhood obesity. Please rank the following things that exist outside of the school setting, with a ranking of 5 meaning that it has a very large impact and a ranking of 1 meaning that it has no impact.		
Child care centers	7	3.7
Nutritional labeling	8	3.2
Media policy (restrictions on advertisement, promoting positive messages)	8	4.2
Farmer's Markets	8	3.6
Body Mass Index (measuring children's height and weight ) reporting	8	3.9
Built environment (sidewalks, parks, green space, bike lanes)	8	4.0
Local food policy council	6	3.6
Fat and trans fat restrictions	8	3.6
Location of supermarkets (proximity to where residents live)	7	3.1

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.

State Board of Health Members (n=8)			
Question	valid n*	n Yes	% Yes
Do you think local government funds should be spent to build and maintain places in your community where people can exercise?	8	7	87.5%
Do you see a role for the State Department of Health in obesity prevention?	8	8	100.0%
Do you see a role for the local and/or district Health Departments to promote the MS Healthy Student Act of 2007?	8	8	100.0%
Do you think MS has done enough to strengthen school policies in the following areas:			
Nutrition	8	1	12.5%
Health Education	8	1	12.5%
Physical education	7	0	0.0%

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.

<b>Legislators (n=12)</b>		
Question	valid n*	Mean
On a scale of 1 - 5 with 5 being most important and 1 being least important, how important do you think prevention of childhood obesity is in Mississippi?	12	4.4
How would you rank where the state of MS is on addressing childhood obesity policies? With 5 being Mississippi is doing all it can and 1 being Mississippi has only enacted minimal policies to address childhood obesity.	11	2.8

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.

<b>Legislators (n=12)</b>			
Question	valid n*	n Yes	% Yes
Do you think it is important for schools to promote healthy lifestyles for students?	10	10	100.0%
Do you think it is important for schools to promote healthy lifestyles for staff?	12	11	91.7%
Do you think Mississippi has done enough to strengthen school policies in the following areas:			
Nutrition	10	3	30.0%
Health Education	11	3	27.3%
Physical Education	11	3	27.3%

\*Some respondents gave answers that could not be scored and are not considered valid responses to the questions.



**How do you think we should measure success of this legislation?**

Categories for measure of success	Number of Legislators	n	%
Measure the change in obesity/BMI/weight over time	7	12	58.3%
Healthier children/monitor the health status of kids	2	12	16.7%
# of school districts that made a health plan and their students' change in BMI	1	12	8.3%
School policies: curriculum, approach to school lunch, nutrition, physical education	1	12	8.3%
Change in academics by improvement in grades and attitude of kids	1	12	8.3%
Measuring change will require a long term study (no unit of measure mentioned)	1	12	8.3%
Unsure-It is up to the Department of Education	1	12	8.3%

Note: Responses could have been scored as representing more than 1 reaction category (e.g. a single response from a legislator could contain statements that were scored as 'measure the change in weight' and 'change in academics by improvement of grades.' Therefore, the sum of the number of legislators does not equal 12.

**What do you think is the role of the Mississippi legislature in promoting healthy lifestyles through state policy?**

Roles	Number of Legislators	valid n	%
Legislators who gave general role response as setting policy or creating laws (e.g., provide frameworks and environment for a healthy lifestyle via policy/Set public policy/set broad general policy/create laws)	4	11	36.4%
Legislators who provided specific roles	7	11	63.6%
Provide incentives to citizens to make smarter choices	1	7	14.3%
Offer incentives to employers	1	7	14.3%
Funding programs like the Healthy Schools Act	1	7	14.3%
Improve existing tools (such as state health insurance)	1	7	14.3%
Promoting public awareness	1	7	14.3%
Promote programs (such as "Healthy Walk Mississippi")	1	7	14.3%
Curriculum recommendations	1	7	14.3%

Note: The response from one legislator was unclassifiable. Therefore the total number of responses is based on a valid n.

**What do you think is the role of other groups in promoting healthy lifestyles for children?**

Roles	Number of Legislators	valid n	%
Other groups need to provide education to parents and children/getting parents involved	3	11	27.3%
Other groups have a role in raising awareness/educating/promoting community activities (gardens)	3	11	27.3%
Department of Health and Department of Education have a role together in increasing emphasis on preventive health care	1	11	9.1%
Churches and non-profits provide programs to our kids	1	11	9.1%
Advocacy groups have a role to make sure that kids are exposed to a healthier lifestyle	1	11	9.1%
Teachers and school staff need to set examples	1	11	9.1%
Youth peer leaders can provide positive peer pressure	1	11	9.1%
Sororities and fraternities etc need to get involved and help our children	1	11	9.1%
There is a role for all groups to get involved in teaching healthy lifestyles	1	11	9.1%

Note: The response from one legislator was unclassifiable. Therefore the total number of responses is based on a valid n. Some legislators gave examples of multiple groups and their roles and each of these are listed separately. Therefore the sum of the number of legislators does not equal the valid n.

**What about policies outside of the school settings that can be used to prevent childhood obesity?**

Response Category	Number of Legislators	Valid n	%
Overall public awareness campaign	1	9	11.10%
Require recipients of WIC/Food Stamps to take on-line class about nutrition	1	9	11.10%
Encourage parents to model healthier lifestyles at home	1	9	11.10%
Provide incentives/make health insurance available for those making healthy choices	1	9	11.10%
Encourage community groups/Foundations to address the problem	2	9	22.20%
First, deal with the poverty issue in the state	1	9	11.10%
Wait and see if what has been done is helpful	1	9	11.10%
The government shouldn't force it on anybody	1	9	11.10%

Note: Three of the legislators were not asked this question because either they responded “yes” to an earlier question that Mississippi has already done enough to strengthen school policies on nutrition, health education and physical education; gave a response that was unclassifiable and/or indicated they didn't know . Therefore the total number of responses is based on a valid n.

**Who do you rely upon to get information on childhood obesity in Mississippi?**

Response Category	Number of Legislators	n	%
Department of Health	6	12	50.00%
National meetings/Southern Legislative Conference	2	12	16.70%
Local schools/school nurses	3	12	25.00%
Internet/research web sites	2	12	16.70%
Advocacy groups/other advocates in the community/constituents	2	12	16.70%
Medical journals	1	12	8.30%
Parents	1	12	8.30%
Foundations (Bower, RWJF, Annie E. Casey, Kellogg)	1	12	8.30%
Nutrition books, brochures	1	12	8.30%
Department of Human Services	1	12	8.30%
Department of Education	1	12	8.30%
MS Library Commission	1	12	8.30%
Children's Defense Fund	1	12	8.30%
Kids Count	1	12	8.30%
Not any particular source	1	12	8.30%

Note: Some legislators gave examples of multiple sources. Therefore the sum of the number of legislators does not equal the number of policymakers interviewed.

**Who else do you hear from about these policies?**

Response Category	Number of Legislators	Valid n	%
Pediatricians/nurse practitioners/the medical group overall	2	9	22.20%
Special interest groups	2	9	22.20%
Health advocacy groups/Children's Defense Fund	1	9	11.10%
Media	1	9	11.10%
Teachers	1	9	11.10%
Soft drink manufacturers	1	9	11.10%
State agencies/legislators	1	9	11.10%
Don't know	2	9	22.20%
Know some sources, but can't recall	1	9	11.10%

Note: Three of the legislators did not have an answer for this question. Therefore the total number of responses is based on a valid n. Some legislators gave responses in more than 1 category; therefore the sum of the number of legislators does not equal the valid n.

**As you will recall, there are three major components of the legislation: improving physical education, improving school nutrition, and increasing health education. Of these components, which do you see as most important? As second most important?**

Component	Ranked 1	Ranked 2	Ranked 3	Average Rank	valid n
Health Education	4	0	3	1.9	7
Physical Education	3	3	1	1.7	7
School Nutrition	0	4	3	2.4	7

Note: Responses from 5 of the 12 legislators could not be classified into rankings. 1 legislator was not asked which component was 2nd most important, so ranks could not be calculated for the 3 components; the remaining 4 legislators gave responses that did not allow for rankings as they indicated that all components were important and they could not pick one component over the others.

## APPENDIX C:

### TABLES OF RESULTS FOR SCHOOL BOARD MEMBERS AND SUPERINTENDENTS

Please rate your school district's progress in implementing the Healthy Students Act of 2007? Would you say:				
Response	School Board Members		Superintendents	
	n	%	n	%
25% or less	5	3.3%	6	5.5%
50%	19	12.5%	33	30.0%
75%	36	23.7%	55	50.0%
100%	38	25.0%	10	9.1%
Don't know/Not sure	48	31.6%	6	5.5%
No comment	6	3.9%	0	0.0%
Total	152	100.0%	110	100.0%

What level of feedback have you had from parents on implementing the Mississippi Healthy Students Act? Would you say:				
Response	School Board Members		Superintendents	
	n	%	n	%
None	57	38.3%	18	16.4%
Minimal	39	26.2%	61	55.5%
Moderate	26	17.4%	24	21.8%
High	1	0.7%	2	1.8%
Don't know/Not sure	19	12.8%	5	4.5%
No comment	7	4.7%	0	0.0%
Total	149	100.0%	110	100.0%

Does each school in your district have a health council?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	53	35.3%	87	79.1%
No	36	24.0%	18	16.4%
Don't know/Not sure	57	38.0%	5	4.5%
No comment	4	2.7%	0	0.0%
Total	150	100.0%	110	100.0%

In the past year, has your school district adopted any policies to specifically create a healthier environment or prevent childhood obesity?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	117	77.0%	80	72.7%
No	24	15.8%	24	21.8%
Don't know/Not sure	10	6.6%	6	5.5%
No comment	1	0.7%	0	0.0%
Total	152	100.0%	110	100.0%

Has your school board adopted any policies within the last year to improve student nutrition?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	110	72.4%	76	69.1%
No	25	16.4%	31	28.2%
Don't know/Not sure	15	9.9%	3	2.7%
No comment	2	1.3%	0	0.0%
Total	152	100.0%	110	100.0%

Has your school district adopted a policy stating that schools are prohibited from using food or food coupons as a reward for good behavior or good academic performance?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes, we prohibit	34	21.2%	26	23.6%
No, but we recommend against	27	16.9%	30	27.3%
We do not have a policy	56	35.0%	48	43.6%
Don't know/Not sure	34	21.2%	6	5.5%
No comment	6	3.8%	0	0.0%
Total	157	100.0%	110	100.0%

Does your district have a district-wide fundraising policy?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	99	64.7%	88	80.0%
No	32	20.9%	20	18.2%
Don't know/Not sure	18	11.8%	2	1.8%
No comment	4	2.6%	0	0.0%
Total	153	100.0%	110	100.0%

Does the fundraising policy include nutrition guidelines?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	33	26.8%	51	58.0%
No	52	42.3%	28	31.8%
Don't know/Not sure	34	27.6%	9	10.2%
No comment	4	3.3%	0	0.0%
Total	123	100.0%	88	100.0%

Has your school board adopted any policies within the last year to increase student physical activity?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	80	55.9%	68	61.8%
No	40	28.0%	38	34.5%
Don't know/Not sure	21	14.7%	4	3.6%
No comment	2	1.4%	0	0.0%
Total	143	100.0%	110	100.0%

Please describe the level of community support your school district receives on promoting physical education, nutrition, and health education?				
Response	School Board Members		Superintendents	
	n	%	n	%
Very supportive	44	28.4%	29	26.4%
Somewhat supportive	80	51.6%	70	63.6%
Somewhat unsupportive	5	3.2%	5	4.5%
No support	9	5.8%	5	4.5%
Don't know/Not sure	14	9.0%	1	0.9%
No comment	3	1.9%	0	0.0%
Total	155	100.0%	110	100.0%

Do schools in your district conduct fitness testing?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	55	35.0%	80	72.7%
No	32	20.4%	21	19.1%
Don't know/Not sure	68	43.3%	9	8.2%
No comment	2	1.3%	0	0.0%
Total	157	100.0%	110	100.0%



Are you in favor of sending this information to children's parents?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	92	71.3%	74	92.5%
No	6	4.7%	1	1.3%
Don't know/Not Sure	13	10.1%	5	6.3%
No comment	18	14.0%	0	0.0%
Total	129	100.0%	80	100.0%

Some school districts collect information on children's height and weight to determine children's Body Mass Index (BMI). Are you in favor of this?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	95	61.3%	84	76.4%
No	25	16.1%	23	20.9%
Don't know/Not sure	29	18.7%	3	2.7%
No comment	6	3.9%	0	0.0%
Total	155	100.0%	110	100.0%

Are you in favor of sending this information to children's parents?				
Response	School Board Members		Superintendents	
	n	%	n	%
Yes	106	73.6%	80	95.2%
No	13	9.0%	1	1.2%
Don't Know/Not Sure	14	9.7%	3	3.6%
No comment	11	7.6%		
Total	144	100.0%	84	100.0%

In your opinion, how important is it to provide staff wellness programs? Would you say:				
Response	School Board Members		Superintendents	
	n	%	n	%
Very important	88	58.7%	71	64.5%
Moderately important	46	30.7%	35	31.8%
Not important at all	2	1.3%	4	3.6%
Don't know/Not sure	8	5.3%	0	0.0%
No comment	6	4.0%	0	0.0%
Total	150	100.0%	110	100.0%

**APPENDIX D:**

**WEIGHT STATUS CATEGORIES FOR SCHOOL-AGED CHILDREN IN MISSISSIPPI**

**AND THEIR PARENTS**

**Table 1. Weight status categories for school-aged children in Mississippi and their parents (based on parent responses)**

<b>Weight Status Categories for School-aged Children in Mississippi and their Parents (Parent Responses)</b>				
<b>Weight Status Category</b>	<b>Parents</b>		<b>Children</b>	
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
Underweight	40	1.2%	195	6.7%
Normal / Healthy Weight	882	25.9%	1,633	56.0%
Overweight	1,151	33.8%	474	16.2%
Obese	1,335	39.2%	615	21.1%
Total	3,408	100.0%	2,917	100.0%

**Notes:**

For Table 1, Figure 1, and Figure 2: BMI for parents, BMI and BMI percentiles for children, and weight status categories were calculated using standard formulas and tools available on the Centers for Disease Control and Prevention's website:

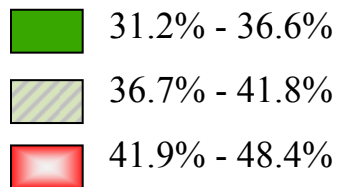
<http://www.cdc.gov/healthyweight/assessing/index.html>.

In this survey, parents reported their own height and weight, as well as the height, weight and gender of their child. Parents were not asked the age of their child (which is a necessary component for determining weight status category), but age was inferred from the grade level provided for the child (e.g., those who were in Kindergarten were assumed to be 6 years old and 1 year was added for each grade level, up to those who were in 12th grade that were assumed to be 18 years old).

By applying a finite population correction formula, the margin of error for the total dataset ( $n \geq 3,500$ ) is no larger than  $\pm 2.5\%$  at a 99% confidence level (for binomial response options with 50/50 split). For sub-samples of approximately 400 cases, the margin of error is no larger than  $\pm 5.0\%$  at a 95% confidence level. For sub-samples of approximately 300 cases, the margin of error is no larger than  $\pm 5.0\%$  at a 90% confidence level.

**Figure 1. Percentage of parents who were obese, 2009**

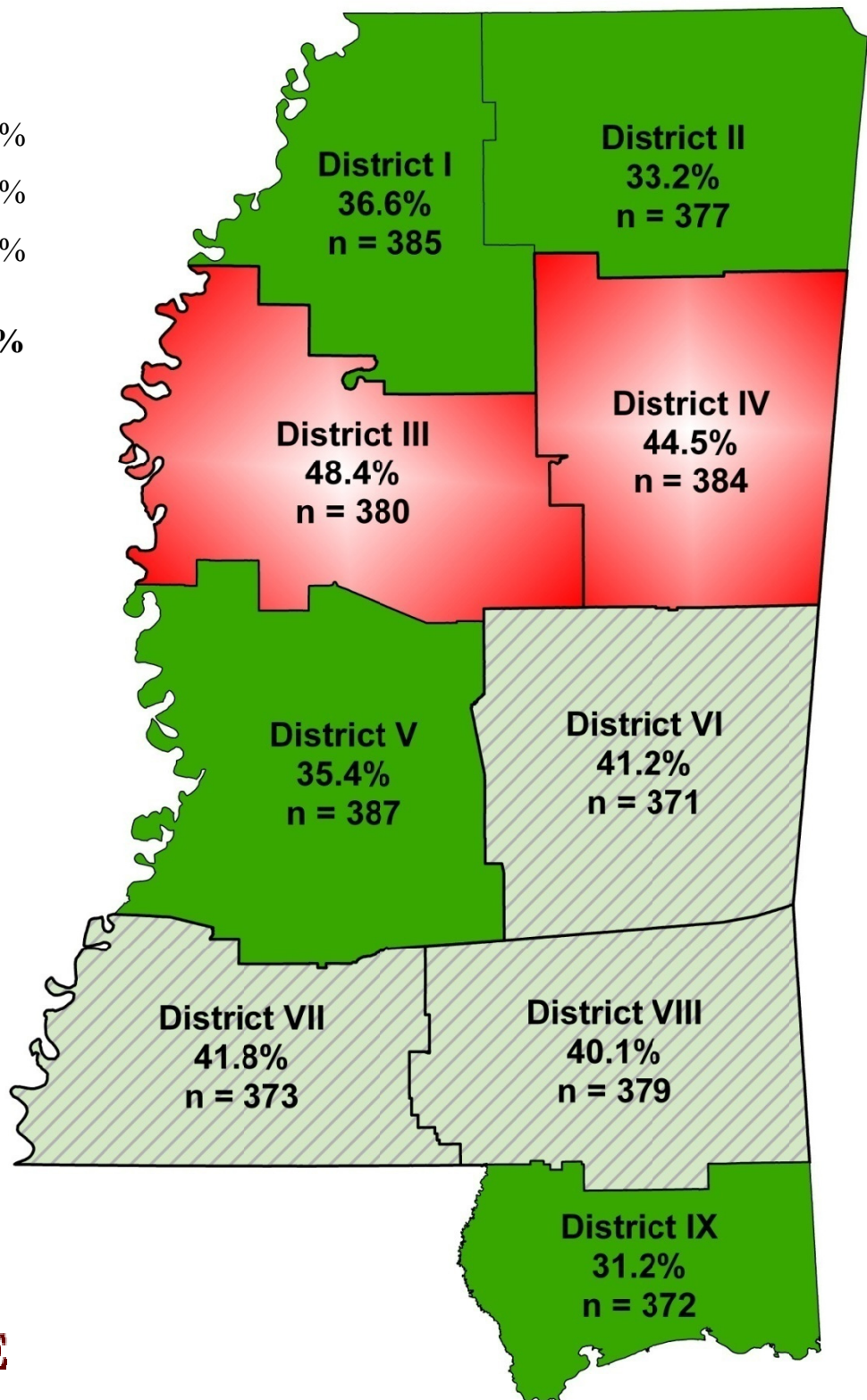
**Percentage Obese**



**Mississippi = 39.2%**



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**Figure 2. Percentage of school-aged children (Kindergarten – 12<sup>th</sup> graders) who were overweight or obese, 2009**

**Percentage Overweight or Obese**



32.4% - 34.5%



34.6% - 39.0%



39.1% - 43.2%

**Mississippi = 37.3%**



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