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The Physical Educator's Perception of the Adequate Implementation and Overall Impact of the Healthy Students Act of Mississippi

Carol Johnson Barnes
University of Southern Mississippi

The University of Southern Mississippi

THE PHYSICAL EDUCATOR'S PERCEPTION OF THE ADEQUATE IMPLEMENTATION AND OVERALL IMPACT OF THE HEALTHY STUDENTS ACT OF MISSISSIPPI

by

Carol Johnson Barnes

Abstract of a Dissertation
Submitted to the Graduate Studies Office
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ABSTRACT

THE PHYSICAL EDUCATOR'S PERCEPTION OF THE ADEQUATE IMPLEMENTATION AND OVERALL IMPACT OF THE HEALTHY STUDENTS ACT OF MISSISSIPPI

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Obesity is an epidemic among Americans that is threatening the health status of citizens and having a major impact on overall physical and psychological well being. Physical education can play a vital role in containing obesity by contributing to the development of physical fitness and assisting students in planning a healthy lifestyle. The "Healthy Students Act of Mississippi" was passed in 2007 and implemented in the public schools in the fall of 2008. This new legislation requires participation of physical activity-based instruction in the public schools.

The subjects for this study consisted of 111 individuals charged with the responsibility of teaching physical education in the public schools of Mississippi. A survey was disseminated by mail in the fall of 2008. The survey consisted of 39 questions related to demographic data and perceptions of the adequate implementation and overall impact of the "Healthy Students Act" of Mississippi.

The specific purposes of this study are to determine the perceived impact of the "Healthy Students Act of Mississippi" on the prevention of obesity, academic performance, and to determine the perceptions of the physical educators on the adequate implementation of the "Healthy Student Act of Mississippi.

Descriptive statistics were used to analyze each of the 39 questions. An independent-samples t-test was calculated to compare the perceptions of the elementary and middle school teachers to the high school teachers on the positive impact on prevention of obesity among Mississippi students, t (98) = .305, p= .761, and revealed no significant difference. A t-test was performed to determine the difference in the perceived impact on academic performance between elementary and middle, and high school teachers. There was no significant difference between the two groups (t (98) = 1.46, p = .147). A one-way ANOVA was used to analyze the perceptions of elementary and middle school physical educators in comparison to high school physical on adequate implementation F(2,108) = .764, p = .468 and overall impact (F(2,107) = .628, p= .535) of the "Healthy Students Act". No statistically significant differences were found among each group, therefore we failed to reject the null hypothesis. A one-way ANOVA was use to analyze the perception among physical educators, when controlling for class size and amount of time spent in physical education class, and no statistically significant difference was found. This research also investigated the perceptions of the physical educators on the factors that must be in place in order to provide a quality physical education program. The results showed that *certified PE teachers* was the most important factor, (M = 2.93) followed by *adequate facilities, (*M = 3.27*),* and *support of the administration,* (M= 3.81*)*. The overall impression of the potential impact of the "Healthy Students Act of Mississippi" was somewhat positive, although several methods of implementation of the mandates of the "The Healthy Students Act" must be addressed

in order to see dramatic improvements in the overall health status of the students in the schools of Mississippi.

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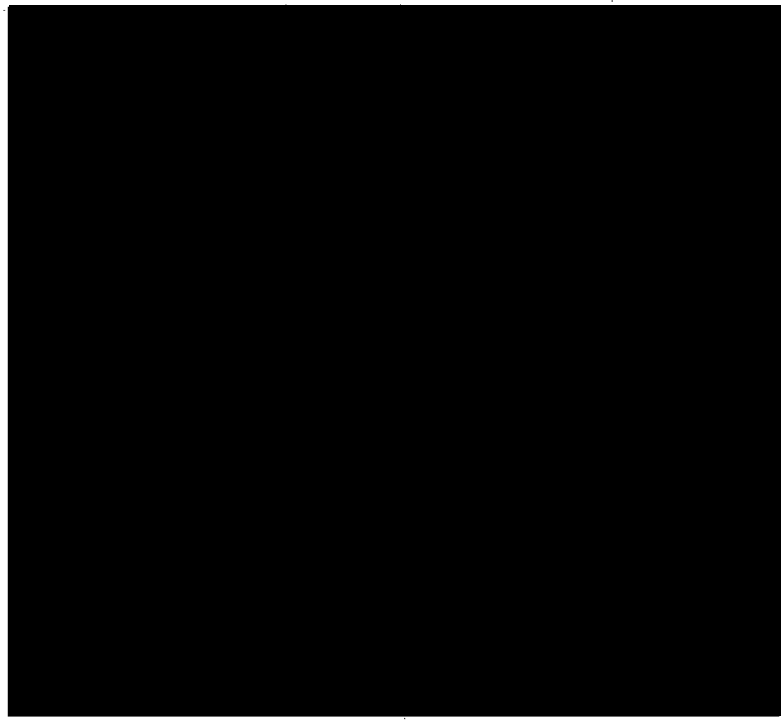

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CHAPTER I

INTRODUCTION

Prevalence of Obesity

Over the past thirty years, the prevalence of obesity has risen sharply and threatened the nation's health status. This epidemic has become a major concern because it is linked to an increased risk of many diseases and health conditions. What causes obesity, and how did we get to this point in America? An increase in overweight and obesity result from consuming more calories than the body expends, which is strongly linked to eating a diet high in fat and calories and leading a sedentary lifestyle (Centers for Disease Control and Prevention, 2008). However, the imbalance between calories consumed and calories burned can also be caused by a number of factors. Therefore, the answer is multifaceted, with no clear-cut answer or solution. There are a number of factors that must be considered including genetic, environmental, hormonal, behavioral, and even social and cultural factors. The fact still remains that America is suffering from an epidemic that is threatening our health (CDC, 2008).

Mississippi leads the nation in the number of citizens suffering from obesity (CDC, 2008). This epidemic is strongly linked to many other diseases and must be addressed in order to improve the overall health of our citizens. Physical activity is an essential component in planning healthy lifestyle habits. Goran et al. (1999) noted that physically active children benefit by having a more regulated body weight, improved body composition, and better psychological well-being.

State representatives in Mississippi have been working diligently to address the problem of obesity. During the regular Legislative Session of 2007, Senate Bill No. 2369, known as the "Mississippi Healthy Students Act" was signed into law (Healthy

Students Act, 2007). The law requires all public schools to develop a program and offer a specified amount of physical activity and health education instruction for elementary and middle school students. Each public school is required to offer at least 150 minutes of physical activity-based instruction and 45 minutes of health education instruction per week for students in kindergarten through 8th grade. In high school, students must complete at least one-half of a Carnegie unit (or 60 hours) of physical education or physical activity before qualifying for graduation. Exemptions from physical education class include participation in varsity sports (including cheerleading and dance), choral music, band, and ROTC.

Although the law mandates 150 minutes of physical activity based instruction per week, elementary schools may count time during recess and physical activity infused into the regular classroom toward the total minutes. An additional complication for school districts is that the law does not provide any additional funding for physical education in the public schools (Healthy Students Act, 2007).

Problem Statement

The primary focus of this study is to identify the perceptions of elementary, middle, and high school Mississippi physical educators on the impact and adequate implementation of the "Healthy Students Act" of 2007. This study will provide feedback to Mississippi State Legislators, the leaders in the State Department of Education, the director of the Office of Healthy Schools, and principals and physical educators in the public schools. This feedback will assist them in identifying the changes that must be made in order to offer quality physical education in the state of Mississippi. The aim is to detect the move in the right direction and determine the factors that must be considered to improve physical education in order to help combat the epidemic of obesity and improve

the health status of students in Mississippi public schools. A survey was disseminated by mail to each physical educator in Mississippi in the fall of 2008.

The specific purposes of this study were to determine:

1. The perceived impact of the Healthy Students Act on the health status of the students in the public schools of Mississippi.

2. The perceived impact of the Healthy Students Act on the academic performance of students in the public schools of Mississippi.

3. The perceived impact of the Healthy Students Act on prevention of obesity among students in the public schools of Mississippi.

4. The differences in the perceived impact of the "Healthy Students Act" of elementary and middle school physical educators when compared to high school physical educators.

5. The factors that should be considered in providing a quality physical education program in the public schools of Mississippi.

Research Questions

1. Did elementary and middle school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on the prevention of obesity?

2. Did high school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on the prevention of obesity?

3. Did elementary and middle school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on academic performance of the students in the public school system?

4. Did high school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on academic performance on the students in the public school system?

5. What are the major factors that must be considered in order to provide a quality physical education program?

Hypotheses

H01: There will be no significant difference in the perceptions of adequate implementation and the overall impact of the "Healthy Students Act" of Mississippi between elementary and middle school physical educators, and high school physical educators.

H02: There will be no significant difference in the perceptions of adequate implementation and the overall impact of the "Healthy Students Act" of Mississippi between class sizes of physical educators.

H03: There will be no significant difference in the perception of adequate implementation and the overall impact of the "Healthy Students Act" of Mississippi between the amount of time students spend in physical education at each school.

H04: There will be no significant difference in the ratings of factors required to provide a quality physical education program between class sizes of physical educators.

H05: There will be no significant correlation between the perceived adequate implementation and overall impact of the "Healthy Students Act" of Mississippi and the ratings of importance of factors influencing a quality PE program.

Definitions of Terms

Carnegie Unit: One Carnegie unit is equivalent to 120 hours of instruction. It is defined as the number of credits a student receives for a course taken daily, one class period for a full school year (The Carnegie Foundation, 2007).

National Association for Sport and Physical Education (NASPE): a non-profit professional membership association that sets the standard for practice in physical education and sport. The mission of NASPE is to enhance the knowledge, improve professional practice, and increase support for high quality physical education, sport, and physical activity programs through research, development of standards, and dissemination of information (NASPE, 2008).

Obesity: An adult who has a body mass index of 30 or higher is considered obese (CDC, 2008).

Overweight: An adult who has a body mass index between 25 and 29.9 is considered overweight (CDC, 2008).

Physical educator: For purposes of the study, any teacher or assistant (certified or not) hired by the public school systems to develop and instruct students taking part in the physical education classes.

Delimitations

The study will be delimited to the following:

Physical educators in the public school systems in Mississippi.

Assumptions

All physical educators completing the questionnaire will be honest in their responses.

Limitations

The study was limited to the names of the list of physical educators returned by the principals in the public schools of Mississippi.

CHAPTER II

REVIEW OF THE LITERATURE

Obesity: The Epidemic

The prevalence of obesity continues to threaten the nation with epidemic proportions. Since the mid-seventies, overweight and obesity has sharply risen in children and adults, resulting in a rise in many lifestyle diseases. According to the Centers for Disease Control and Prevention (2008) the increasing rates cause a concern because of the implications on the health status of Americans. Having a problem with overweight and obesity increases the risk of lifestyle diseases including hypertension, cerebrovascular accident, dyslipidemia, type 2 diabetes, osteoarthritis, heart disease, gallbladder disease, sleep apnea, and certain forms of cancer (CDC, 2008). Callahan and Mansfield (2000) found that there is a strong link to heart disease, certain types of cancer, type II diabetes, stroke, arthritis, breathing problems, and several psychological disorders. Even during childhood, obesity is closely related to an increased risk of cardiovascular disease and type II diabetes. Childhood obesity seems to have an epidemiological impact on overall health risks. Children of parents with coronary heart disease were more overweight during childhood (Berenson, Wattigney, Bao, Srinivasan, & Radhakrishnamurthy, 1995). Additionally, the incidence of type II diabetes has increased 10-fold in children in the past few years, and is most apparent among obese children (Bao, Srinivasan,Wattigney, & Berenson, 1994).

Increase in Obesity

In 2006, The Behavioral Risk Factor Surveillance System (BRFSS) revealed a dramatic increase in overweight and obesity, with only four states having a prevalence of obesity less than 20%, and two states (Mississippi and West Virginia) having a

prevalence of obesity equal to or greater than 30%. Mississippi leads the nation in the number of citizens who are obese, with an astounding 31.4% of the population (CDC, 2008).

According to the statistics among Americans, there has been virtually a doubling of obese persons over the past two decades (CDC, 2008). Although research has identified genetic factors that place children at an increased risk for developing obesity, adolescent obesity is growing at such a fast rate that genes alone cannot be the cause (McCance & Huether, 2002). Several studies have shown that the increasing prevalence of obesity is related to cultural changes in our society today which result in a decrease in physical activity. Goran, Reynolds and Lindquist (1999) hypothesized that obesity is the end-result of a combination of genetic physiology and an obesity-promoting environment. Children are more likely to play video games, play on the computer, or watch television instead of playing outdoors (Anavian, Brenner, Fort, & Speiser, 2001; Troiano & Flegal, 1998). It has been noted that physical activity has an inverse relationship to weight (Grilo, Brownell, & Stunkard, 1993; Kayman, Bruvold, & Stern, 1990). Kayman, Bruvold and Stern (1990) found that 90 % of women who lost weight and kept it off reported exercising on a regular basis, while only 34 % of women who regained their lost weight were exercising regularly. Additionally, physical activity occurs less often and at a lower intensity than recommended (Sallis et al.1997).

Decrease in Physical Activity

The increased prevalence of overweight is paralleled by an increase in inactivity. Overweight people are even more likely to report being inactive (CDC, 2007). Automobiles, public transportation and other labor-saving devices also contribute to inactive lifestyles (Blair & McCloy, 1993). Despite the health risks associated with

obesity, few Americans are practicing a healthy lifestyle. Recent statistics show that more than half of all Americans are not regularly active, and about 25 % are not active at all. About half of American adolescents, aged 12 to 21 are not vigorously active on a regular basis. Another 14 % of young people report no recent physical activity (CDC, 2007).

Citizens in Mississippi fall below the national average in physical activity participation, with 60% reporting that they did not have at least 30 minutes of moderate physical activity five or more days per week, and more than 80% stating that they had not participated in vigorous activity for 20 minutes for three or more days per week (CDC, 2008). The national average for no participation in moderate physical activity at least 30 minutes or more for five or more days per week was just over 50%, and 72% reported no participation in 20 minutes or more vigorous physical activity three or more days per week (CDC, 2007; Grunbaum et al.2004). Participation in physical activity begins to decline dramatically as children grow older. Saris, Elvers, Van't Hof, & Binkorst (1986) found that there is a tendency for a reduction in physical fitness by the age of 12 years. In addition, prior to puberty, there is a 50 % reduction in physical activity. As Americans grow older they report less physical activity. The relationship between the amount of physical activity and age seems to be even more prevalent among females (CDC, 2008). The latest statistics show that 14 % of white females and 21 % of black females report no recent physical activity, while only 7 percent of males report no recent physical activity (CDC, 2008).

The Economic Cost of Obesity

Escalating medical costs in America has necessitated cause for determining the attributable factors. The cost associated with inactivity and obesity results in

approximately 9.4 cents on every dollar spent in health care (WHO & CDC, 2000). By the year 2002, Medicare and Medicaid spent $84 billion each year on the chronic conditions associated with obesity and inactivity (Koplan, Liverman & Kraak, 2005). Pratt, et al. (2000) estimated that the direct and indirect cost of inactivity has reached $150 billion. It is estimated that if all Americans who are currently sedentary became physically active, this would result in a decrease of about $77 billion in yearly medical cost (Pratt, Macera, & Wang, 2000). Spending $1 in physical activity results in $3.20 savings in medical cost. Le Masurier and Corbin (2006) stated that "in attempting to 'leave no child behind' in selected academic areas, we leave many children and future adults behind by failing to educate them about healthy lifestyles including physical activity." The youth of the future will suffer by cutting physical education if nothing is done to help the youth understand the importance of physical activity and healthy lifestyles in the future. Physical education can be one important piece of the puzzle in disease prevention.

The Benefits of Physical Activity

Physical activity in childhood serves as a strong foundation for developing a lifetime of physical fitness. Looking at a child's physical activity pattern may reveal the type of lifestyle habits found in the individual. Children who are physically active may benefit by having a more regulated ideal body weight, improved body composition, and healthier psychological well-being. Physical activity can stimulate cognitive development and enhance the development of a positive self-concept. Students who have a positive self-concept are well equipped to pursue intellectual, social and emotional challenges.

The physical benefits of physical activity include a stronger immune system, increased oxygen flowing in your brain and body, improved body composition and ease of weight control. Additional benefits are increased bone strength and elasticity of the muscles, tendons and ligaments. Individuals who participate in physical activity on a regular basis benefit by lowering the risk of development of coronary heart disease, stroke, non-insulin dependent diabetes mellitus, hypertension, and colon cancer (Callahan & Mansfield, 2000).

Physical activity can improve mental health by reducing the risk of depression, decreasing levels of stress, and increasing mental alertness (CDC, 2008). The anti-depressant effect of physical activity has been seen as early as the first post exercise session (Craft, 1997). No matter the age or gender, or type of depression, physical activity has shown dramatic benefits. Anxiety disorders have also been treated by the incorporation of physical activity and the research indicates that physical activity was strongly related to a decrease in anxiety (Petruzzello et al.1991). Self-esteem is very important in improving an individual's feelings of self-worth, and participation in physical activity is shown to improve self-esteem (Calfas & Taylor 1994; Spence et al. 1997). Sleep disturbances have become common in our society and research on the impact of exercise has shown an improvement in REM or deep sleep time. Exercisers have a more restful sleep (Kubitz et al. 1996; O'Connor & Youngstedt, 1995).

Early Influence of Physical Activity

Physical activity levels are also linked to other health behaviors, such as smoking, diet, drug-use and sexual activity, as well as academic performance (Goran, Reynolds, & Lindquist, 1999). Several studies have shown that risk behaviors present in youth will carry over into adolescence and early adulthood (Bao, Srinivasan, Wattigney, &

Berenson, 1994; Berenson, Wattigney, Bao, Srinivasan, & Radhakrishnamurthy,1995; Goran, Reynolds, & Lindquist, 1999). Additionally, research indicates that early fitness knowledge influences behaviors in physical activity of children and adolescents (Adams, Graves & Adams, 2006; Cason & Logan, 2006). With this likelihood, it is vital that the proper habits are taught early in life. Formulating healthy habits early on will have a long-lasting impact throughout adulthood. Physical activity participation in childhood can influence participation as an adult, and, therefore, may contribute to a decreased risk for development of chronic disease. Regular participation in physical activity as a child, improves bone and muscle development, reduces feelings of depression and anxiety, and promotes a positive psychological well-being (Lee, Burgeson, Fulton, & Spain, 2007).

Physical Activity and Academic Achievement

It has been noted that overweight in school children negatively influences the child's readiness to learn and overall achievement. Improper diet and lack of physical activity are not only the stimuli of overweight and obesity, but they are also factors associated with lower academic achievement. Studies have shown that when children's basic nutritional and fitness needs are met, they attain higher achievement levels. A recent study conducted by Shepard (1997) showed a correlation between the SAT-9 test results and the Fitnessgram scores, which indicates that the physical well-being of students has a direct impact on their ability to perform well academically. The California Department of Education (2002) found a significant relationship between math and reading scores on the SAT, Ninth Edition with physical fitness scores on the Fitnessgram. It was noted that higher SAT scores were associated with higher fitness levels (CDE, 2002). Intense physical activity has also shown to have a positive impact by increasing concentration and reducing disruptive behaviors. Sallis et al. (1999) reported that more

time spent in physical education enhances academic performance. Gabbard and Barton (1979) found that 50 minutes of physical activity during the school day resulted in significant improvements in math performance of the students. The research points to a consistent positive relationship between the student's overall fitness level and academic performance (Grissom, 2005; Symons, Cinelli, James, & Groff, 1997).

History of Physical Education

Physical education in America began to form in the 1820's. Early physical education was based on European Gymnastics. In the later part of the 1800's and beginning of the 1900's physical education took a different approach, and placed a greater emphasis on sports, games, and recreational activities. The primary focus became development of the body, although social and emotional values were a part of the physical education curriculum (Steinhart, 1992). In the 1950's, several studies were released, comparing the fitness levels of children in Europe and the United States. The studies revealed that children in America had lower fitness levels than their European counterparts (Pangrazi, 1995). The documented findings resulted in a greater awareness by the United States government, and more emphasis was placed on the achievement of physical fitness in the public school curriculum. The United States government responded by establishing the President's Council on Physical Fitness and Sports, an organization responsible for promoting physical fitness of school age children (Pangrazi, 1995). During the 1970's through the early 1990's the focus of attention in the educational system moved to academic achievement after the release of the publication of A Nation at Risk: the American Education System (Gardner, 1983). In 1994, the implementation of Goals 2000: Educate America Act, the public school systems began to establish strict national education goals in order to improve the educational system. In

2002, the passage of the federal law, "No Child Left Behind" Act placed an even greater emphasis on the core subjects, creating a narrow curriculum and placing a small emphasis on physical education. In 2004, with the passage of the law, Child Nutrition and WIC Reauthorization Act attention was directed to the need for a quality health and physical education program in order to address the health concerns of the children of America (Child Nutrition and WIC Reauthorization Act of 2004).

Physical Education: An Essential Component

The majority of school-age children attend school regularly with school accounting for a major part of the child's day. Over 95 percent of children aged 5 to 17 are enrolled in school, making this an ideal location for promoting healthy habits and preventing development of diseases (Kann, Collins, Collins-Pateman, Leavy-Small, Ross, & Kolbel, 1995). In the 2001-2002 school year, 48 million students attended kindergarten through grade 12 in the public schools (United States Department of Education, 2003). Regular attendance in school provides researchers with a captive audience with repeated access to the adolescents. This provides an opportunity for children to participate in a variety of physical activities.

The justification for physical education in the school setting is that it contributes to children's health and fitness. Physical education can play a vital role in promoting health-enhancing physical activity. Biddle et al.(1998) found that engagement in at least 18 minutes or more of moderate-to-vigorous physical activity during PE lessons results in about one-third of the recommended daily amount of physical activity. A quality physical education program not only contributes to the opportunity to increase activity, but provides children with the chance to learn through meaningful and appropriate instruction (Le Masurier & Corbin, 2006). Combined with other forms of physical activity support,

this can directly benefit young people's health status. Physical activity has been greatly reduced in the aspect of the person's daily life, therefore physical education becomes more important as it contributes to a child's daily physical activity level (Le Masurier & Corbin, 2006). According to Burgeson (2004), schools are responsible for developing the whole child which includes exposure to the skills and knowledge necessary to adopt and maintain a healthy lifestyle.

A study conducted by National Association for Sport and Physical Education (NASPE) found that students, teachers and parents believe that physical education should be a critical component of the overall curriculum. In 2004, The Robert Wood Johnson Foundation, (RWJF) in coordination with NASPE, conducted a poll and found that 85 percent of parents and 81 percent of teachers feel that physical education should be required at every grade level (Burgeson, 2004). A recent study from Harvard Health Forum revealed that 91 percent of parents believe that there should be more physical education in schools (La Masurier & Corbin, 2006).

Burgeson (2004) believes that physical activity programs of high quality should include physical education, health education, recess for elementary school students, and interscholastic sports for high school students. It has been well-documented that physical activity has shown numerous benefits to a person's health, and physical education can provide the knowledge, skills, and desire for lifetime participation in physical activity (Story, 1999). Educating the whole child includes a high quality physical education program, where children are exposed to the goals of physical education and taught about the benefits of remaining physically active for a lifetime. President John F. Kennedy also believed in the importance of developing the "whole child". Following is a statement taken from a quotation of President John F. Kennedy (1960):

> The relationship between the soundness of the body and the activity of the mind is subtle and complex. Much is not yet understood, but we know what the Greeks knew: that intelligence and skill can only function at the peak of their capacity when the body is healthy and strong, and that hardy spirits and tough minds usually inhabit sound bodies. Physical fitness is the basis of all activities in our society; if our bodies grow soft and inactive, if we fail to encourage physical development and prowess, we will undermine our capacity for thought, for work, and for the uses of those skills vital to an expanding complex America (Kennedy, 1960).

Students who are exposed to a quality physical education program should learn a wide variety of activities such as in-line skating, tennis, golf, rock climbing, yoga, canoeing, step and slide aerobics, weight training, biking, martial arts, basketball, soccer, volleyball, gymnastics and track. The focus of the quality program is on providing the children with personal challenges that will produce a high level of fitness and support proper health. Quality physical education programs provide a firm foundation for healthy, active lifestyles and help to ensure success in future pursuits. According to Burgeson (2004) "A strong mind needs a strong and healthy body in which to reside."

The Impact of Physical Education on Obesity and Overall Health

Story (1999) conducted a review of the literature on school based programs in treatment of obesity and found 12 controlled experimental research studies that were conducted between 1966 and 1996. The results of the school-based interventions were positive. The studies revealed that 11 out of the 12 had a significantly reduced percentage of overweight in comparison to the control groups. The interventions which

included working with young children was more successful, which indicates that prevention at an early age will help children form healthy lifestyle habits.

Physical educators are key individuals who can help young people to achieve physical fitness goals. They can not only provide the knowledge and skills necessary to plan a safe and effective exercise program, and the opportunity to participate in physical activity in the classroom, but they may encourage students to continue to participate in physical activity outside the school setting (McKenzie et al. 2000). Several school-based interventions with a number of strategies and goals have been implemented. One example of this is a program called 'Go for Health', which included a physical activity component. The results of this program revealed that there was a significant increase in time spent in moderate-to-vigorous physical activity during the physical education program when compared to control schools (Parcel, Simons-Morton, O'Hara, Baranowski, & Wilson, 1989). Project SPARK (Sports, Play, and Active Recreation for Kids) is a guided program using seven elementary schools that received physical education either through the usual mechanisms, trained teachers, or specialized physical education instructors. The results showed that the students who received physical education training from the physical education specialists demonstrated a greater endurance time for a one-mile run and performed a greater number of sit-ups in one minute than individuals in the control group (Sallis, McKenzie, Alcaraz, Kolody, Faucette, & Hovell, 1997). One of the most extensive school implemented programs designed to reduce the development of cardiovascular disease risk factors was entitled 'Child and Adolescent Trial for Cardiovascular Health'(CATCH) (Luepker et al.1996). This multi-site school based intervention revealed that children in treatment schools had greater levels of moderate-to-vigorous physical activity during physical education classes

which resulted in a significant increase in overall time spent in physical activity, amounting to almost 1.5 hours per week.

The Benefits of Physical Education

It is the position of NASPE that physical education is vital and an integral part of educating the whole child. Research reveals that there is a great need to educate both mind and body (NASPE, 2001). Physical education contributes to the development of physical fitness and assists students in making intelligent choices in order to lead a physically active life. Physical education benefits students both academically and physically. Students who are fit are more likely to be academically motivated, alert, and ready to succeed. Quality physical education programs can promote social development and teach cooperative and problem solving skills. The best programs assist students in developing motor skills and physical conditioning in order to promote healthy lifestyle habits.

A primary goal of physical education should be to motivate students to desire to continue physical activity throughout a lifetime. Children who have a positive experience in physical education classes are more likely to be active as adults (Sporting Goods Manufacturing Association, 2000; Telama, Yang, Laakso, & Viikari, 1997). Students who take part in quality physical education programs learn about disease prevention, safety issues, injury avoidance, and healthy habits that decrease morbidity, and promote productive, high quality lifestyles. Students must feel that they have succeeded and really enjoy physical education if they continue to be involved for a lifetime (Pangrazi & Darst, 2006). Physical activity contributes to quality of life by improving physical, psychological, and mental health. Evidence shows that the level of participation, the degree of skill, and the amount of activities that students are involved in

as a child will directly influence the extent to which they will continue to take part in physical activity throughout a lifetime (NASPE, 2001). Morgan et al. (2007) found that just 30 minutes of physical education contributes immediately to children's daily physical activity level. Moreover, the study revealed that children accumulated significantly more physical activity outside of class on school days that contained physical education than on days containing no physical education class. Morgan et al. (2007) found that one additional hour of physical education in elementary children attending first grade resulted in a reduced BMI in overweight boys and girls who were at risk of being overweight. During the elementary years, students need to be offered different types of activities in order to help them find success at one time or another. Teaching activities that will expose students to types of exercises that can be used throughout a lifetime is essential. Physical education must offer activities that will help students develop cardiorespiratory fitness in order to provide the greatest overall benefits. Baquet et al. (2002) found that well-planned physical education lessons that require a high percentage of maximal heart rate in adolescents can be used to improve aerobic fitness. Datar and Sturm (2004) found that "physical education can play a substantial role in containing obesity among overweight or at-risk-of-overweight girls." (p.1504) They estimate that providing at least 5 hours of physical education instruction per week could decrease the prevalence of overweight among girls as much as 4.2 percent.

What Constitutes a Quality Physical Education Program?

The National Association for Sport and Physical Education (NASPE, 2003) believes that every student in the nation at every grade level should have the opportunity to participate in physical education. Physical education plays a vital role in developing the health-related fitness, physical competence and cognitive recognition about the

importance of physical activity in providing and maintaining the highest level of health and well-being for a lifetime. Physical education programs of today should focus on providing learning experiences at the appropriate developmental level for each child. A quality program will provide activities that will improve mental alertness, enhance academic performance, create a readiness to learn, and spark enthusiasm for learning.

According to NASPE guidelines (2003), the highest quality physical education program will include several essential components. NASPE believes that each child participating in physical education should have at least 150 minutes per week of instruction at the elementary level and 225 minutes of instruction for middle and high school. The lessons should be developmentally appropriate for each grade level, and there should be revisions in each lesson to include opportunities for every child to participate, regardless of the physical, mental, emotional or cognitive limitations. Instruction in physical education should offer variety in motor skills and fitness development and enhance the physical, mental, as well as social and emotional well-being of each child. Each student should develop an understanding and appreciation for the importance of physical activity now and throughout life. A quality program will expose students to emerging social and cooperative skills and assist students in gaining a multi-cultural perspective. The programs should provide ample time to practice the class activities and keep the students active for the majority of the class time. Each school needs adequate equipment and facilities to implement the lessons to facilitate student learning. The students should be encouraged to continue physical activities outside of school that supports and maintains health and well-being. Regular assessment is necessary to monitor and reinforce student learning. NASPE believes that physical activity should never be used to punish a child for mis-behavior, but should be offered in

a way to help each student enjoy and appreciate the benefits of physical activity (NASPE, 2004).

NASPE Standards for Physical Education

NASPE has developed six national standards for development of a quality physical education program. The national standards developed by NASPE offer a template in developing specific learning objectives. The standards include:

Standard 1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

Standard 2: Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

Standard 3: Participates regularly in physical activity.

Standard 4: Achieves and maintains a health-enhancing level of physical fitness.

Standard 5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

Standard 6: Values physical activity for health, enjoyment, challenge, self-expression, and or social interaction. (NASPE, 2004)

Developmentally Appropriate Physical Education Programs

Using the standards, the physical educator can develop and implement appropriate instructional procedures and forms of assessment in order to determine success (NASPE, 2001). Quality instruction and variety of activities is essential in providing a physical education program that will have a positive impact on the health of students. Active involvement throughout the class period and participating in fitness and sport skill

activities will expose the students to a high quality program and assist the students in maintaining physical activity for a lifetime.

Physical education at the elementary school level focuses on the development of locomotor, non-locomotor and manipulative skills (NASPE, 2001). The movement framework focuses on body, space, effort, and relationships to help students develop, expand and refine motor skills. Quality instruction is critical in helping students develop motor patterns in order to learn how to jump, throw, skip, hop, catch, and kick. Proper motor skill development can enhance social, cognitive, and physical development and increase the likelihood of lifetime involvement in physical activity. By middle school, students should be able to apply fundamental movement concepts to sports as well as lifetime and leisure activities. Students should have an opportunity to refine motor skills and apply the skills to a variety of sport-related and lifetime activities. At the high school level, a quality physical education program will provide an understanding of the importance of health-related physical fitness and its relation to maintaining overall health and a quality life. Students need to be exposed to learning opportunities that help them understand the mechanical, physiological and social-psychological aspects of physical activity (NASPE, 2001).

Lack of Physical Education

Despite the fact that physical education can have a positive impact on the prevention of obesity, and improve academic performance, the amount and quality of physical education is still lacking. The School Health Policies and Program Study is a national survey conducted every few years to assess school health policies and programs at the state, district, school, and classroom levels (Lee, Burgeson, Fulton, & Spain, 2007).

The most recent assessment was conducted in 2006, and the survey was developed to answer the following questions:

- What are the characteristics of each school health program component at the state, district, school, and classroom (where applicable) levels and across elementary, middle, and high schools?
- Are there persons responsible for coordinating and delivering each school health program component and what are their qualifications and educational backgrounds?
- What collaboration occurs among staff from each school health program component and with staff from outside agencies and organizations?
- How have key policies and practices changed over time?(SHPPS, 2006)

In 2006, the survey revealed that adequate amounts of physical education is lacking in most schools throughout the nation. The SHPPS (2006) revealed the following statistics related to physical education and physical activity:

- 3.8% of elementary schools, 7.9% of middle schools, and 2.1% of high schools provided daily physical education or its equivalent (150 minutes per week in elementary schools; 225 minutes per week in middle schools and high schools) for the entire school year (36 weeks) for students in all grades in the school.
- 67.8% of elementary schools provided daily recess for students in all grades in the school.
- 48.4% of schools offered intramural activities or physical activity clubs to students, and 77.0% of middle schools and 91.3% of high schools offered students opportunities to participate in at least one interscholastic sport. (SHPPS, 2006)

According to NASPE (2008) improvements have been made in the past few years, but much improvement is still needed. NASPE recently revealed that 28.4 percent of students reported taking part in physical education classes daily and 55.7 percent of students reported participating in physical education at least one or more days per week. In addition only 23.4 percent of students in the Mississippi public school system reported participating in daily physical education class and 31 percent of students reported participating in physical education class at least one or more days per week (CDC, 2007).

Shape of the Nation Report

In 2006, NASPE disseminated a survey to the physical education coordinators of all 50 state agencies and the District of Columbia. The survey contained questions related to the mandates and practices related to physical education in each state. After following up with e-mail messages and phone calls, NASPE was successful in receiving completed surveys from all 51 entities. The data was analyzed and compiled into individual state profiles. The profile for each state was returned to the state physical education coordinator for confirmation of the content. After receiving confirmation, the report was published in the Shape of the Nation Report.

The report found that most states mandate physical education; over seventy percent of states (36) require physical education at the elementary level, while 65 percent of states (33) mandate physical education for middle and junior high level students, and 83 percent of states (43) require physical education at the high school level. The report revealed that sixty-nine percent (35) of all states mandate the number of high school credits in physical education for a student to graduate (NASPE, 2006). Of the 35 states, 14 require one credit in physical education, while eight states require one-half credit in order to graduate. Although the numbers look great, one problem is that over one-third

of states (18) grant exemptions for physical education, and over half of the states permit school districts to allow substitutions for physical education. The most common substitutions include ROTC, interscholastic sports, and marching band (NASPE, 2006).

It is the position of the NASPE that all kindergarten though grade 12 students should take all required physical education courses and that no substitutions, waivers, or exemptions should be permitted (NASPE, 2006). Physical education is an essential component in educating the whole child and the goals established by NASPE allow the student to develop a cognitive understanding of the importance of fitness and other essential health-related concepts.

According to NASPE:

> Classes and activities that provide physical activity (e.g., marching band, ROTC, cheerleading, school and community sports) have important but distinctly different goals than physical education. Any opportunity for students to participate in sustained periods of meaningful physical activity can be valuable for their health and fitness, but these activities do not provide the content of a comprehensive, standards-based physical education program and thus should not be allowed to fulfill a physical education requirement. Students need to be taught appropriate motor skill development, knowledge of exercise concepts and benefits, components of a well-rounded exercise program if they are going to optimize their physical activity. (NASPE, 2006)

The Shape of the Nation Report (2006) revealed that most states do not require a specific amount of instructional time at the elementary, middle or high school level. Only 22 percent of the states (11) mandate a specific number of minutes per week for elementary schools, 14 percent (7) for middle schools, and 20 percent of the states (10)

for high schools. At the time that this report was published, it was also discovered that only two states (Louisiana and New Jersey) met the national recommendation of 150 minutes or more minutes per week. An additional problem is that some states produce very broad standards and these standards are not in line with the national standards established by NASPE. Forty-seven states and the District of Columbia produce their own state standards for physical education, although the states address the six national standards for physical education (NASPE, 2006).

The latest edition of the Shape of the Nation Report showed that only 57 percent (28) of states require that all who teach physical education at the elementary level are certified/licensed by the state. It was revealed that 84 percent (43) of states require certification/license at the middle/junior high level, and 90 percent (46) of states mandate certification/license at the high school level (NASPE, 2006).

Another concern is that grades for physical education are not included in the student's GPA (NASPE, 2006). In the 2006 edition of Shape of the Nation Report, forty-three percent of states (22) require inclusion of grades to be calculated in the student's grade point average. Unfortunately, the student's achievement and performance is not assessed in physical education by most states. The grade assigned is based primarily on participation.

Obstacles in Providing a Quality Physical Education Program

Providing a quality physical education program is not devoid of potential obstacles. NASPE identified several issues that might prevent effective instruction including:

- Decreased instructional time because of management issues
- Insufficient amounts of equipment and activity space

- Decreased practice opportunities resulting in a slower rate of learning
- Decreased student time spent in activity during class
- Decreased ability of teacher to provide individualized instruction
- Increased risk of injury
- Increased opportunity for "off task" behaviors of students. (NASPE, 2003)

Legislation Addressing Obesity

The federal government has become increasingly concerned about the epidemic of obesity because of the significant health, social, and fiscal implications. The federal government spends about $117 billion per year on obesity related disorders. In order to address this issue, President Bush signed into law the Child Nutrition and WIC Reauthorization Act of 2004. Section 204 of the law states:

> Not later than the beginning of the 2006-2007 school year, this section requires local educational agencies participating in school meal programs to establish a local school wellness policy that, at a minimum: includes goals for nutrition education, physical activity, and other school-based activities designed to promote student wellness in a manner that the local educational agency determines appropriate; includes nutrition guidelines for all foods available on the school campus during the school day; provides an assurance that guidelines for school meals are not less restrictive than those set by the Secretary; establishes a plan for measuring implementation of the local wellness policy; and involves parents, students, and representatives of the school food authority, the school board, school administrators, and the public in development of the local wellness policy. (Child Nutrition and WIC Reauthorization Act of 2004)

The public schools of Mississippi must abide by the Child Nutrition and WIC Reauthorization Act by the establishment of a wellness policy for each school. During the regular Legislative Session of 2007, the Senate Bill 2369, known as the "Mississippi Healthy Students Act" was signed into law. This legislation requires every public school to develop a program and offer a specified amount of physical activity and health education instruction for elementary and middle school students (Healthy Students Act, 2007). Schools are required to provide at least 150 minutes of physical activity-based instruction as well as 45 minutes of health education instruction per week for students in kindergarten through 8th grade. In addition, the legislation requires students in grades 9 through 12 to complete a ½ Carnegie unit of physical education or physical activity before qualifying for graduation. Exemptions from physical education class include participation in varsity sports (including cheerleading and dance), choral music, band, and ROTC. In order to meet the 150 minutes requirements, elementary schools may count time during recess, and physical activity-based instruction infused into the regular classroom. The "Healthy Students Act" is a step in the right direction, but much more is needed in order to decrease the epidemic of obesity. The law did not provide funding for physical education in the public schools.

Legislation Related to School Wellness and Physical Education

After the Child Nutrition and WIC Reauthorization Act of 2004 was signed into law, several states throughout the nation passed new legislation in order to provide stricter standards related to nutrition, health, and physical education for public schools. In the year 2007, New Mexico passed a law that included a budget of $8 million and the Public Education Department funded 110 elementary schools throughout New Mexico. They have projected a plan to provide funds to have a licensed physical educator in all

elementary schools within four years (Irion Derek, personal communication, 2008). The most significant legislation regarding physical education in Louisiana was ACT 734, which was passed in 2004 and requires 30 minutes per day of moderate-to-vigorous physical activity for students in kindergarten through 6th grade. Schools in Louisiana can receive rewards for having a model program that includes using the Fitnessgram to measure levels of progress, and designating juices, milk, and lower fat and calorie foods for lunches and in vending machines (Physical Education Act of 2004). In 2007, Louisiana passed Senate Bill 311 which provided funding for a physical education coordinator at the Department of Education (Ann Wilson, personal communication, 2008). Minnesota is closer than ever to passing stronger physical education standards and graduation requirements (Mary Thissen-Milder, personal communication, 2008). Delaware is on the move and physical education is a main focus in fighting to trim the obesity trend (Ray John, personal communication, 2008). A quality physical education program has been identified as the most important weapon in fighting obesity. The state legislature recently passed a bill requiring the creation of a statewide health advisory council to provide advice and guidance to the Department of Education on physical education (Delaware Senate Bill No. 289, 2006). School districts are required to provide instructional programs in physical education for students in grades kindergarten through 12th, and all students in grades nine through 12 must complete a credit in physical education toward graduation. As a result of House Bill 372 (2006) the Delaware Department of Education is charged with the responsibility of requiring each school district to assess the physical fitness of each student. In the school year 2006 to 2007, a pilot program was established in six of Delaware's public elementary, middle or high schools. Each program provided at least 150 minutes per week of a combination of

physical education and physical activity for each student (Delaware House Bill 471, 2006).

In the 2007 regular session of the Oregon Legislative Assembly, House Bill 3141 appropriated funds to award grants for the purpose of meeting physical education requirements. The bill also mandated that the Department of Education shall collect data from each school district on the physical capacity of public schools to provide students in kindergarten through grade five with at least 150 minutes of physical education during each school week and to provide students in grades six through eighth with at least 225 minutes of physical education during each school week. The bill goes on to specify that at least 50 percent of physical education class time shall be devoted to actual physical activity in each school week. The Oregon Department of Education is responsible for awarding grants to the school districts for the purpose of meeting the physical education requirements and the grants can be used for hiring teachers who specialize in physical education and providing in-service training to teachers on the physical education content standards (Oregon House Bill 3141, 2007).

According to Burgeson (2004), the latest legislation should address the need to hire certified physical education teachers, classify physical education as a required course of study, and enforce schools to offer physical education for an adequate amount of time each week. Policymakers have finally begun to recognize the importance of physical education in development of the whole child and prevention of obesity.

Impact of Legislation

With the mandates of the new legislations that have been passed to improve the health, nutrition and physical education in the public schools across the nation, it is necessary to determine the overall impact on the health status of the citizens of America.

In Pennsylvania, a demonstration project has been developed by the Pennsylvania Department of Education in collaboration with Penn State University to evaluate the impact of the wellness policy in the state. The efforts termed *Project PA* is being used to train school officials in successfully implementing appropriate menu planning, providing nutrition education, promoting healthy eating behaviors, and providing a healthy environment (Pennsylvania Department of Education, 2006).

In an effort to address the problem with overweight and obesity in school age children of Mississippi, the Department of Education, with the help of The Bower Foundation, created the Office of Healthy Schools. The Office of Healthy Schools provides coordinated health services to the public school districts to assist them in making the connection between proper health and academic achievement. Research indicates that students who participate in a quality physical education program are less disruptive and more likely to attend school regularly. According to the Office of Healthy Schools, "A healthy student is a productive student, ready to take on whatever challenges the classroom offers" (2007). Improving the health of students in Mississippi is a major investment in the future of the state. Several schools have taken a proactive lead in improving the health of school age children by improving the physical education programs and increasing the amount of physical activity in the students during the school day. In Charleston High School, teachers built a Frisbee golf field to provide a fun and unique way for children to increase their physical activity. At Kirkpatrick Elementary, children participated in the "Walk Around the World" competition during recess and free time. Teachers found that this exercise improved the focus of students in the classroom and helped decrease discipline problems as well. The staff and faculty of Grenada Upper Elementary lost a cumulative total weight of 916.5 pounds since last year. Every day in

Mississippi, school health programs can reach some 494,038 public school students and over 68,745 adult teachers and school staff members. If each school commits to the call to action, this can result in a positive impact on the health of school children throughout Mississippi, and benefits can be seen for years to come. Many schools are taking advantage of the numerous grant opportunities offered through the Office of Healthy Schools. If the schools take advantage of these programs, funding may be provided to ensure that students are fit, healthy, and ready to succeed (Office of Healthy Schools, 2007).

Summary

The "Healthy Students Act" of Mississippi provides an essential blue-print for public schools to follow in order to provide the adequate amount of physical activity for all students. This law went into effect in the 2008-2009 school year and public schools are charged with the responsibility to see that it is carried out. Since no additional funding is tied to the bill to hire certified physical educators and provide the materials, equipment, and facilities necessary to offer a quality program, administrators will be challenged to be creative in seeing that this law is sufficiently followed. In order to address the complex issue of obesity, a long term investment must be made, but certain facts are clear. Physical inactivity is a large part of the problem and increasing physical education is a large part of the solution. The youth of Mississippi must be exposed to the factors contributing to a healthy lifestyle in order to develop into happy, successful, and productive adults who have a great quality of life.

CHAPTER III

METHODOLOGY

This was a descriptive, comparative study revealing the perceptions of Mississippi physical educators on the adequate implementation and overall impact of the "Healthy Students Act" of Mississippi. This chapter describes the participants, treatment protocol, data collection, instrumentation, and analysis of the data.

Participants

Subjects selected for the study included individuals charged with the responsibility of teaching physical education in elementary, middle, and high school throughout the state of Mississippi. The surveys were mailed to each subject in the fall of 2008 upon receiving approval from the University of Southern Mississippi Institutional Review Board (Appendix A). A cover letter was attached to explain the nature of the study (Appendix B). The survey took approximately 10 to 15 minutes to complete.

Treatment Protocol

The data collected was analyzed to determine the perceived adequate implementation and overall impact of the Healthy Students Act of Mississippi. The survey included general information, such as gender, areas of certification, and years of service as a teacher, and a section to be answered by all physical educators. The final sections in the survey were addressed by either elementary and middle school physical educators, or high school physical educators.

Data Collection

Current physical educators in the state of Mississippi were determined by using the online data base through the State Department of Education. The names and e-mail addresses of every principal in each public school of Mississippi were obtained from this

online data base and used to send out and e-mail request for the names and addresses of individuals charged with the responsibility of teaching physical education in every public school in the state of Mississippi. The survey was distributed in the fall of 2008 by mail to each physical educator after receiving the list of names and addresses from the principals. A cover letter was attached to each survey to explain the purpose of the survey.

Instrumentation

The initial idea for the survey was created by reviewing the questionnaire used in the research for the Shape of the Nation Report, which is disseminated to the Director of Physical Education in each State Department of Education throughout the nation. The survey was developed by a panel of experts from the National Association for Sport and Physical Education (NASPE) a division of the American Alliance of Health, Physical Education, Recreation and Dance. The most recent survey was published in 2006. This report also revealed several factors that affect a quality physical education program to include mandates in each state for minutes of physical education weekly, whether the state requires physical education at the elementary and middle school level, and whether the states mandate credits in physical education toward graduation at the high school level. Additionally, several states grant exemptions or substitutions for physical education. Therefore many students may never be exposed to a physical education class. Other problems include an inappropriate student-teacher ratio, no grade assignment in physical education, and no requirements for certifications or licensure for those who teach physical education (NASPE, 2006).

The final survey was developed by using the legal mandates of the "Healthy Students Act", which went into effect in the school year beginning in August of 2008.

The "Healthy Students Act" of Mississippi, Senate Bill 2369 requires public schools in Mississippi to provide increased amounts of physical activity and health education instruction for elementary and middle school/junior high students.

The bill requires:

- At least 150 minutes of physical activity-based instruction, for K-8 students;
- Forty-five minutes of health education instruction per week, for students in K-8;
- Completion of a one-half unit of physical education or physical activity for high school students (Healthy Students Act of Mississippi, 2007).

The 39-item survey was composed of 13 questions which addressed general information such as gender, certifications, school location, and school policies, and 16 questions based on a 5-point Likert scale from "Strongly Disagree" to "Strongly Agree," for all respondents to answer questions related to the changes in their school as a result of the "Healthy Students Act" of Mississippi. The remainder of the survey was divided into two sections; one for only elementary and middle school participants, and the other for only high school participants (Appendix C).

Procedures

An expert panel was formed and given a questionnaire to determine content and face validity of the survey. The panel consisted of one college professor in the field of kinesiology and physical education who has a PhD in Exercise Physiology, a Department Chair and professor of Kinesiology who has a PhD in Exercise Physiology, a teacher who obtained a PhD in Teaching and Administration of Human Performance, a retired principal and current college professor who has a master's degree in Physical Education, and a Department Chair of Teacher Education and professor of research and statistics for an "Educational Leadership" doctoral program. Each panel member completed a validity

questionnaire (Appendix D) and made recommendations to improve the survey. Upon receiving the recommendations of the expert panel, several questions were re-worded in order to make it very clear to the participants.

Reliability was determined by completing a pilot study. In July of 2008 while attending the annual conference of the Mississippi Association of Coaches, a survey was disseminated to participants who reported currently teaching physical education in the state of Mississippi. Surveys were also given to at least three physical educators who currently serve as cooperating teachers for the Physical Education Student Teaching Program at Mississippi College. There were 20 surveys completed and returned. The results were analyzed by dividing the questionnaire into two sections. The first section analyzed the overall impact and adequate implementation of the Healthy Students Act, which consists of questions 18, 19, 21, 22, 23, 24, 25, 26 and 30-33. The results revealed a Cronbach's alpha level of .810. The second section analyzed the factors that affect the ability to deliver a quality physical education program, and consists of questions 14,15,16,19,20,26,27 and 28, and resulted in a Cronbach's alpha of .701.

Data Analysis

A one-way ANOVA with Tukey's LSD Post Hoc procedure was used to analyze the results of HO1, HO2, and HO3. A MANOVA with Tukey's LSD Post Hoc procedure was used to analyze the results of HO4. A Spearman Correlation with an alpha level of .05 significance was used to analyze the results on HO5.

CHAPTER IV

RESULTS

Demographic Information

The survey was distributed to physical educators in the public elementary, middle, and high schools throughout Mississippi. Upon receiving names and addresses of the physical educators from the principals of the school systems, there were 318 surveys mailed to the respective schools. One hundred and eleven surveys were returned, which represents a return rate of 34.9 % overall. Of the respondents, 48.6% were male (n=54), and 49.5% were female (n=55). Two respondents did not list gender.

Refer to Table I for an illustration of frequencies for gender, approximate years as a teacher, and location or region of the school. The greatest percentage of respondents had over 19 years of teaching experience at 27.9% (n=31), and the smallest percentage were those with 16 to 19 years of teaching experience, with only 6.3% (n=7). The highest percentage of respondents were from central Mississippi at 27% (n=30), while the second highest number were from northeast Mississippi at 22.5% (n=22), with the lowest percentage of respondents from the delta (n=8) with this area of respondents representing only 7.2%.

Table 1

Demographic Data

Variable	Frequency	Percent
Gender		
Male	54	48.6
Female	55	49.5
Total	109	98.2
No Response	2	1.8
Years of Experience	**Frequency**	**Percent**
0 to 3 years	27	24.3
4 to 7 years	18	16.2
8 to 11 years	18	16.2
12 to 15 years	10	9.0
16 to 19 years	7	6.3
Over 19 years	31	27.9
Region of Mississippi	**Frequency**	**Percent**
Northeast	25	22.5
Delta	8	7.2
Southeast	13	11.7
Northwest	9	8.1
Central	30	27.0
Southwest	9	8.1
Coast	16	14.4
Total	110	99.1
No Response	1	.9

Table 2 illustrates the teaching grade level distribution of the respondents, the approximate size of the physical education classes of each respondent, and the average number of minutes spent in physical education per week. Of the respondents, 43.2% teach at the elementary level (n=48), 33% teach at the middle school level (n=33), and 11.7% teach at the high school level (n=13). There were 7.2% (n=8), who teach at elementary and middle school, 6.3% (n=7) who teach middle and high school, while 1.8% (n=2) teach at all levels. Two respondents did not list teaching level. For statistical purposes, the respondents were grouped into two categories, elementary and middle school, and high school, because the Healthy Students Act requires 150 minutes of physical activity per week at the elementary and middle school level, and 225 minutes per week at the high school level. Of the respondents, 57.7% (n=64) have only 15 to 30 students in each class, followed by 21.6% (n=24) having 30 to 45 students in each class. The lowest percentage of respondents at 9% (n=1), reported having 75 to 90 students in each class.

When asked about the amount of time students spend in Physical Education weekly, 33.3% (n=37) said they spend approximately 30 to 60 minutes in PE per week, which falls short of the recommended 150 minutes of PE per week at the elementary and middle school and 225 minutes at the high school level. Only 16.2% (n=18) responded spending 150 to 200 minutes in PE per week, and 18% (n=20), reported spending at least 225 minutes in PE per week.

Table 2

Frequencies and Percentages of Demographic Variables

Grade Level Taught by Respondent	Frequency	Percent
Elementary	48	43.2
Middle School	33	29.7
High School	13	11.7
Elementary and Middle School	8	7.2
Middle and High School	7	6.3
All of the Above	2	1.8
Total	111	100.0
Size of PE Classes	**Frequency**	**Percent**
15 to 30 students	64	57.7
30 to 45 students	24	21.6
45 to 60 students	18	16.2
60 to 75 students	4	3.6
75 to 90 students	1	.9
Total	111	100.0
Time Spent in PE Weekly	**Frequency**	**Percent**
Less than 30 minutes	4	3.6
30 to 60 minutes	37	33.3
60 to 80 minutes	9	8.1
80 to 100 minutes	10	9.0

Table 2 (continued)

100 to 150 minutes	13	11.7
150 to 200 minutes	18	16.2
At least 225 minutes	20	18.0
Total	111	100.0

Obstacles for Quality Physical Education

As noted in the literature summary, there are obstacles that physical educators may face in providing a quality PE program. At the high school level, exemptions are allowed for physical education in the public schools of Mississippi. The exemptions include any sanctioned activity by the Mississippi High School Activities Association which are interscholastic sports, cheerleading, drill team, dance team, choral music, band, and ROTC. This will exempt many students from being required to take even one semester of physical education throughout high school. In the survey disseminated to the physical educators of Mississippi, question numbers 37 and 39 specifically addressed this issue. Question number 37 stated " My school allows exemptions for physical education (ex- band, ROTC, cheerleading, football)." Question number 39 stated "What percentage of students in your school do you estimate will qualify for one of the above exemptions?" Of the participants who responded to this question, an overwhelming 73.1% stated that their school does allow exemptions for physical education. In question 39, 50% of the physical educators estimated that at least 25 to 50% of students will qualify for an exemption, and another 19.2 percent estimated that at least 51 to 75% of the students will qualify for an exemption. Refer to Table 3 for the results.

Table 3

Frequency and Percentages

Exemptions for Physical Education

37. My school allows exemption for physical education (ex-band, ROTC, football, etc).	Frequency	Valid Percent
Yes	19	73.1
No	7	26.9
Total	26	23.4
39. What percentage of students in your school do you estimate will qualify for one of the above exemptions?	**Frequency**	**Valid Percent**
Less than 25%	6	23.1
25 to 50%	13	50.0
51 to 75%	5	19.2
76 to 100%	2	7.7
Total	26	100

Another obstacle facing middle and high school physical educators is that they are often required to teach physical education and coach at least one interscholastic sport. Many physical educators feel more pressure to perform well as a coach than as an effective physical educator. In question number 13 of the survey it stated, "Are you responsible for coaching at least one interscholastic athletic team at your school?" In question number 14, the participants were asked if they feel more pressure to perform well as a coach than as a physical educator. Of the participants, 57.5 % said that they are responsible for coaching as well, and an overwhelming 60.3 % of the participants stated

that they feel more pressure to perform well as a coach than as a physical educator. Refer to Table 4 for the results.

Table 4

Frequency and Percentages Coaching Responsibility

13. Are you responsible for coaching at least one interscholastic team at your school?	Frequency	Valid Percent
Yes	64	57.7
No	47	42.3
Total	111	100.0
14. If you answered "yes" to question No. 13, do you feel more pressure to perform well as a coach than as a physical educator?	**Frequency**	**Valid Percent**
Yes	38	60.3
No	25	39.7
Total	63	100.0

Research Questions

Research Questions Number 1 and 2:

1: Did elementary and middle school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on the prevention of obesity?

2: Did high school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on the prevention of obesity?

To determine the perception of physical educators on the *impact* of the current method of implementation of the Healthy Students Act in *prevention of obesity*, question number 24 of the survey was analyzed, which states "I believe the current method of implementation of the requirements of the Healthy Students Act will decrease the number of students suffering from obesity in Mississippi". Responses were indicated on a Likert-type scale with the following responses possible: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree. Research participants were grouped into two classifications; group one was elementary and middle school teachers, which addressed research question no. 1, and group two was high school teachers, which addressed research question no. 2. Of the respondents at the elementary and middle school level, 4.6% (n=4) stated that they "Strongly Agree", and 16.1% (n=14) said that they "Disagree". They highest number of respondents at 41.4% (n=36) said that they "Agree". The results indicate that most of the elementary and middle school PE teachers believe that the new act will help reduce obesity among Mississippi school students. At the high school level, 30.8% (n=4) of the respondents were "Neutral", while another 30.8% (n=4) "Agreed" that the "Healthy Students Act" will decrease obesity among Mississippi students, which indicates that a good percentage of the respondents believe that the act will have a positive impact on obesity. Refer to Table 5 for the results.

An independent-samples t-test was calculated to compare the perceptions of the elementary and middle school teachers to the high school teachers on the positive impact of obesity among Mississippi students, $t(98) = .305$, $p = .761$, and revealed no significant difference. Table 6 reveals the results of the t-test.

Table 5

Likert-Type Scale Results for Research Questions 1 and 2.

Perceptions of Positive Impact on Prevention of Obesity

Likert Scale	Grade Level-Elementary/Middle	Grade Level-High School	Total
1= Strongly Disagree	4	0	4
	4.6%	0%	100.0%
2= Disagree	14	3	17
	16.1%	23.1%	17.0%
3= Neutral	19	4	23
	21.8%	30.8%	23.0%
4= Agree	36	4	40
	41.4%	30.8%	40.0%
5= Strongly Agree	14	2	16
	16.1%	15.4%	16.0%
	87	13	100
	100.0%	100.0%	100.0%

Table 6

T-Test

Perceptions of Positive Impact on Prevention of Obesity

Grade Level	n	Mean	Std. Deviation	Std. Error Mean
Elementary & Middle	87	3.48	1.08	.116
High School	13	3.38	1.04	.289

Research Questions number 3 and 4:

3. Did elementary and middle school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on academic performance of the students in the public school system?

4. Did high school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on academic performance on the students in the public school system?

To determine the perception of physical educators on the *impact* of the current method of implementation of the Healthy Student Act on *academic performance*, question number 25 of the survey (Appendix C) was analyzed. Question number 25 stated that "I believe that the current method of implementation of the Healthy Students Act will have a positive impact on academic performance on the students of Mississippi schools". Research participants were grouped into two classifications; group one was elementary and middle school teachers, which addressed research question no. 3, and group two was high school teachers, which addressed research question no. 4. The highest percentage of elementary and middle PE teachers at 50.6% (n=44) stated that they "Agree" with the statement, and another 19.5% (n=17) "Strongly Agreed". The smallest number of respondents at 1.1% (n=1) "Strongly Disagreed". This indicates that elementary and middle school PE teachers believe that the act can have a positive impact on academic performance. At the high school level, the highest number of respondents were Neutral at 53.8% (n=7), followed by 23.1% (n=3) who said that they "Agree". There were no respondents who "Strongly Disagreed" with the statement. Refer to Table 7 for the results of the analysis to research questions number 3 and 4.

A t-test was performed to determine the difference in perceived positive impact on academic performance between elementary teachers, and middle and high school teachers. There was no significant difference between the two groups ($t(98) = 1.46$, $p = .147$). The mean ($M=3.82$) was slightly higher revealing the fact that elementary and middle school teachers believe that the Healthy Students Act will have a slightly more positive impact on academic performance than high school teachers which had a similar, but slightly lower mean, ($M= 3.46$). Table 8 reveals the result of the t-test analysis for research questions 3 and 4.

Table 7

Likert-Type Scale Results for Research Questions 3 and 4

Perceptions of Positive Impact on Academic Performance

Likert Scale	Grade Level-Elementary/Middle	Grade Level-High School	Total
1= Strongly Disagree	1 1.1.%	0 0%	1 1.0%
2= Disagree	4 4.6%	1 7.7%	5 5.0%
3= Neutral	21 24.1%	7 53.8%	28 28.0%
4= Agree	44 50.6%	3 23.1%	47 47.0%
5= Strongly Agree	17 19.5%	2 15.4%	19 19.0%
Total	87 100.0%	13 100.0%	100 100.0%

Table 8

T-Test

Perceptions of Positive Impact on Academic Performance

Grade Level	n	Mean	Std. Deviation	Std. Error Mean
Elementary & Middle	87	3.82	.838	.089
High School	13	3.46	.877	.243

Research Question 5

5. What are the factors that should be considered in providing a quality physical education program in the public schools of Mississippi?

Descriptive statistics were performed to reveal the most important factors in providing a quality PE program. The results showed that *certified PE teachers* was the most important factor, (M = 2.93) followed by *adequate facilities,* (M = 3.27), and *support of the administration,* (M= 3.81). The least important factors were *teacher/student ratio*, (M= 4.80) *assessment of students to determine progress,* (M = 6.46), *and the need for annual evaluation of PE teachers,* (M = 7.55). Refer to Table 9 for the descriptive statistics.

Table 9

Descriptive Statistics (Research Question 5)

Factors Important in Providing a Quality PE Program

Rank the Importance of the factors.	Mean	Std. Deviation
1. Certified PE teachers	2.93	2.34
2. Adequate facilities	3.27	2.02
3. Support of the administration	3.81	2.22

Table 9 (continued)

4. Adequate equipment	3.84	2.16
5. Sufficient number of PE teachers	4.68	2.50
6. Adequate time for PE	4.70	2.13
7. Teacher/student ratio	4.80	2.81
8. Assessment of students to determine progress	6.46	2.50
9. Annual evaluation of PE teacher	7.55	2.20

Testing the Hypotheses

Hypothesis 1

There will be no significant difference in the perceptions of adequate implementation and the overall impact of the Healthy Students Act of Mississippi between elementary and middle school physical educators, and high school physical educators.

Survey questions 18, 19, 22, and 23 were grouped to determine the perceived *adequate implementation*, while questions 24, 25, 26, and 30-33 assessed the perception of the *overall impact* of the Healthy Students Act. Refer to Table 10 for the frequencies and percentages of questions 18, 19, 22, and 23, which measures *adequate implementation,* and Table 11 for the frequencies and percentages for questions 24, 25, 26, and 30-33, which measures *overall impact* of the "Healthy Students Act". Table 12 reveals the means and standard deviations for the perceived *impact* and *adequate implementation* among elementary and middle school physical educators, high school physical educators, and the combined groups. When comparing the means for *overall impact* among each grade level teacher grouping, the responses were similar, with the highest mean found among the high school level teachers, and the lowest in the combined

grouping. When comparing the means for *adequate implementation* among each grade level teaching group, the responses again were similar, with the highest mean found among elementary and middle school teachers, and the lowest among high school teachers. ANOVA was analyzed to determine the perceived *overall_impact* and revealed that $F(2,107) = .628$, $p = .535$, so there was no statistically significant difference between elementary and middle school physical educators, and high school physical educators and the null was retained. Using ANOVA to assess the perceived *adequate implementation* it showed $F(2,108) = .764$, $p = .468$, which has no statistically significant difference between elementary and middle school physical educators, and high school physical educators, therefore the null was retained.

Table 10

Frequencies and Percentages (Questions 18, 19, 22 and 23)

Measure of Adequate Implementation

18. I am aware of the requirements for physical education based on the Healthy Students Act of Mississippi.	Frequency	Percent
2= Disagree	6	5.4
3= Neutral	1	.9
4= Agree	43	38.7
5= Strongly agree	61	55.0
Total	111	100.0

24. The amount of time students spend in physical activity in my school has increased to the required amount of the Healthy Students Act.	Frequency	Percent

1= Strongly Disagree	5	4.5
2= Disagree	7	6.3
3= Neutral	11	9.9
4= Agree	35	31.5
5= Strongly Agree	53	47.7
Total	111	100.0

22.I have support of my administration to adequately implement a quality physical education program.	Frequency	Percent
1= Strongly Disagree	0	0
2= Disagree	6	5.4
3= Neutral	14	12.6
4= Agree	37	33.3
5= Strongly Agree	53	47.7
Total	110	99.1
No Response	1	.9

23. I have received adequate training on "implementing the Healthy Students Act."	Frequency	Percent

1= Strongly Disagree	4	3.6
2= Disagree	19	17.1
3= Neutral	18	16.2
4= Agree	45	40.5
5= Strongly Agree	24	21.6
Total	110	99.1
No Response	1	.9

Table 11

Frequencies and Percentages (Questions 24, 25, 26, and 30-33)

Measure of Overall Impact

24. I believe that the current method of implementation of the requirements of the Healthy Students Act will decrease the number of students suffering from obesity in Mississippi.	Frequency	Percent
1= Strongly Disagree	5	4.5
2= Disagree	20	18.0
3= Neutral	24	21.6
4= Agree	41	36.9
5= Strongly Agree	19	17.1
Total	109	98.2
No Response	2	1.8

25. I believe that the current method of implementation of the Healthy Students Act will have a positive impact on academic performance of the students in Mississippi schools.	Frequency	Percent

1= Strongly Disagree	1	.9
2= Disagree	7	6.3
3= Neutral	31	27.9
4= Agree	49	44.1
5= Strongly Agree	21	18.9
Total	109	98.2
No Response	2	1.8

26. I believe that the current method of implementation of the Healthy Students Act will have a positive impact in the overall health status of the students in Mississippi schools.	Frequency	Percent
1= Strongly Disagree	2	1.8
2= Disagree	6	5.4
3= Neutral	27	24.3
4= Agree	55	49.5
5= Strongly Agree	19	17.1
Total	109	98.2
No Response	2	1.8

30. I believe that infusion of physical activity into the regular classroom setting taught by the classroom teacher is the best way to increase the physical activity levels of the students.	Frequency	Percent
1= Strongly Disagree	23	20.7
2= Disagree	25	22.5
3= Neutral	21	18.9

4= Agree	24	21.6
5= Strongly Agree	6	5.4
Total	99	89.2
No Response	12	10.8

31. I believe that most (at least 75%) of the classroom teachers will adequately implement the correct amount of physical activity into the classroom setting.	Frequency	Percent
1= Strongly Disagree	22	19.8
2= Disagree	45	40.5
3= Neutral	17	15.3
4= Agree	13	11.7
5= Strongly Agree	2	1.8
Total	99	89.2
No Response	12	10.8

32. I believe that recess should count toward the amount of time that students are physically active.	Frequency	Percent
1= Strongly Disagree	13	11.7
2= Disagree	18	16.2
3= Neutral	12	10.8
4= Agree	38	34.2
5= Strongly Agree	18	16.2
Total	99	89.2
No Response	12	10.8

33. I would estimate that at least 50 percent of students are physically active during recess.	Frequency	Percent
1= Strongly Disagree	6	5.4
2= Disagree	11	9.9
3= Neutral	12	10.8
4= Agree	48	43.2
5= Strongly Agree	22	19.8
Total	99	89.2
No Response	12	10.8

Table 12

Descriptive Data (Hypothesis 1)

Impact	Grade levels Taught	n	Mean	Std. Deviation
	Elementary/Middle	88	3.30	.687
	High School	13	3.32	.715
	Combined	9	3.04	.457
	Total	110	3.28	.674
Implementation	Grade levels Taught			
	Elementary/Middle	89	4.21	.596
	High School	13	4.00	.871
	Combined	9	4.08	.459
	Total	111	4.17	.622

Hypothesis 2

There will be no significant difference in the perceptions of adequate implementation and the overall impact of the "Healthy Students Act" of Mississippi between class sizes of physical educators.

In Hypothesis 2, the same survey questions were grouped to determine the perceived *adequate implementation* and the perception of the *overall impact* of the "Healthy Students Act". Table 13 reveals the means and standard deviations for the perceived *impact* and *adequate implementation* among elementary and middle school physical educators, high school physical educators, and the combined groups. The means were similar when comparing the difference in class size of teachers and perceptions of *overall impact.* The highest mean (M = 3.34) was found with the teachers who have class sizes of 15 to 30 students, and the lowest mean (M = 3.18) was among the teachers who have class sizes of 30 to 45 students. When comparing the relationship of class size and *adequate implementation*, the means were similar among each *class size*, with the highest mean (M = 4.21) among teachers who have classes of 15 to 30 students, and the lowest mean (M = 4.03) among teachers with class sizes of 45 to 60 students.

A one-way ANOVA was computed to determine the perceived *impact* and revealed that $F(2,107) = .580$, $p = .561$, so there was no statistically significant difference between elementary and middle school physical educators, and high school physical educators when controlling for class size, and the null was retained. Using a one-way ANOVA to asses the perceived *adequate implementation* it showed $F(2,108) = .770$, $p = .465$, which revealed no statistically significant difference between elementary and middle school physical educators, and high school physical educators, when controlling for class size, therefore the null was retained.

Table 13

Descriptive Data (Hypothesis 2)

Impact	Class Sizes	n	Mean	Std. Deviation
	15 to 30 Students	64	3.34	.643
	30 to 45 Students	24	3.18	.847
	45 to 60 Students	22	3.24	.554
	Total	110	3.28	.674
Implementation	**Class Sizes**	**n**	**Mean**	**Std. Deviation**
	15 to 30 Students	64	4.21	.636
	30 to 45 Students	24	4.20	.564
	45 to 60 Students	23	4.03	.648
	Total	111	4.17	.622

Hypothesis 3

There will be no significant difference in the perception of adequate implementation and the overall impact of the Healthy Students Act of Mississippi between the amount of time students spend in physical education at each school.

The same questions were grouped as in hypothesis 1 and 2 to determine the *impact* and *adequate implementation.* The descriptive statistics were analyzed and revealed a similar response on *impact* among each grouping of class minutes, with the

highest mean (M= 3.82), among schools that offer at least 60 to 80 minutes per week and the lowest mean (M = 3.02) among schools that offer 150 to 200 minutes of PE per week.

When analyzing *adequate implementation* and the number of minutes of PE offered per week, the means were also similar among each group of minutes, with the highest mean (M = 4.48) in the schools who offer 60 to 80 PE minutes per week, and the lowest mean (M = 3.70) in schools that offer less than 30 minutes of PE per week.

When comparing *overall impact* and number of minutes of PE per week there was no significant difference, with F (6, 103)= 2.17, p=.052, therefore we failed to reject the null hypothesis. Looking at the results on the perceived *adequate implementation* and number of PE minutes per week, no significant difference was observed in the comparison as well, with F (6, 104) = .897, p=.50, and we failed to reject the null hypothesis. Refer to Table 14 for the descriptive statistics, in comparing the difference in the perceived *impact* of the act and the number of PE minutes offered per week, and *adequate implementation* and the number of PE minutes offered per week.

Table 14

Descriptive Data (Hypothesis 3)

	Time Spent in Physical Education	n	Mean	Std. Deviation
Impact	Less than 30 Minutes	4	3.53	.410
	30 to 60 Minutes	36	3.28	.667
	60 to 80 Minutes	9	3.82	.472
	80 to 100 Minutes	10	3.60	.430
	100 to 150 Minutes	13	3.12	.604
	150 to 200 Minutes	18	3.02	.831
	at least 225 Minutes	20	3.20	.661

Table 14 (continued)

	Total	110	3.28	.674
	Time Spent in Physical Education	n	Mean	Std. Deviation
Implementation	Less than 30 Minutes	4	3.70	1.23
	30 to 60 Minutes	37	4.21	.612
	60 to 80 Minutes	9	4.48	.641
	80 to 100 Minutes	10	4.24	.514
	100 to 150 Minutes	13	4.09	.557
	150 to 200 Minutes	18	4.08	.672
	at least 225 Minutes	20	4.18	.530
	Total	111	4.17	.622

Hypothesis 4

There will be no significant difference in the ratings of factors required to provide a quality physical education program between class sizes of physical educators.

A MANOVA was conducted to determine if there was a difference in ratings of factors among class sizes. A significant difference was found between class sizes with $F(2, 106) = 3.77$, $p = .026$, and the null hypothesis was rejected. Tukey's post hoc procedure revealed that the class size group of 30 to 45 students ranked all factors except certified PE teacher and adequate time more important than the class size of 15 to 30 students, and 45 to 90 students. There was also a significant difference across the factors with $F(8, 99) = 35.69$, $p < .001$), and the null hypothesis was rejected. Pairwise comparisons revealed the following order of rankings: certified PE teacher, adequate facilities > adequate equipment, support of administration, number of PE teachers > teacher-student ratio > adequate time > assessment, administrative evaluations. Refer to Table 15 for descriptive statistics.

Table 15

Descriptive Statistics (Hypothesis 4)

Factors Important in Providing a Quality PE Program	Class Sizes	Mean	Std. Deviation	n
29. Rank importance of adequate equipment.	15 to 30 students	3.89	2.28	64
	30 to 45 students	3.29	1.98	24
	45 to 90 students	4.33	1.93	21
	Total	3.84	2.16	109
29. Rank importance for adequate facilities.	15 to 30 students	3.53	2.21	64
	30 to 45 students	2.41	1.44	24
	45 to 90 students	3.47	1.77	21
	Total	3.27	2.02	109
29. Rank importance for certified PE teacher.	15 to 30 students	2.81	2.25	64
	30 to 45 students	3.41	2.81	24
	45 to 90 students	2.76	2.04	21
	Total	2.93	2.34	109
29. Rank importance of support of administration.	15 to 30 students	3.71	2.20	64
	30 to 45 students	3.58	2.12	24
	45 to 90 students	4.38	2.39	21
	Total	3.81	2.22	109
29. Rank importance of sufficient number of PE teachers.	15 to 30 students	4.95	2.46	64
	30 to 45 students	3.83	2.44	24
	45 to 90 students	4.85	2.61	21
	Total	4.68	2.50	109
29. Rank importance of adequate time for PE.	15 to 30 students	4.40	2.10	64
	30 to 45 students	4.79	2.43	24

	45 to 90 students	5.52	1.69	21
	Total	4.70	2.13	109
29. Rank importance of annual evaluation of PE teacher.	15 to 30 students	7.71	2.05	64
	30 to 45 students	7.16	2.71	24
	45 to 90 students	7.47	2.06	21
	Total	7.55	2.20	109
29. Rank importance assessments of students to determine progress.	15 to 30 students	6.48	2.33	64
	30 to 45 students	5.70	3.14	24
	45 to 90 students	7.28	1.95	21
	Total	6.45	2.50	109
29. Rank importance of teacher/student ratio.	15 to 30 students	5.09	2.79	64
	30 to 45 students	3.95	2.86	24
	45 to 90 students	4.90	2.75	21
	Total	4.80	2.81	109

Hypothesis 5

There will be no significant correlation between the perceived adequate implementation and overall impact of the "Healthy Students Act" of Mississippi and the factors required to provide a quality PE program.

A Spearman rho correlation coefficient was performed between the factors needed to provide a quality PE program and perception of adequate implementation and overall impact. There was a significant negative correlation with *overall impact* and the factor of *annual evaluation of PE teachers* with rho (107) = -.206. $p < .05$, and the null hypothesis was rejected. It was also discovered that there was a significant negative correlation with *adequate implementation* and the factor of *the importance of assessment of students to determine progress*, with rho (107) = -.204, $p < .05$, and the *importance of a low*

teacher/student ratio with rho (107)= -.223, $p < .05$, therefore the null hypothesis was rejected. Table 16 reveals the correlations.

Table 16

Correlations (Hypothesis 5)

Spearman's rho	Impact	Implementation
Impact	_____	.413
Implementation	.413*	_____
Adequate equipment	.118	.096
Adequate facilities	.152	.171
Certified PE teachers	-.017	-.047
Support of the administration	-.168	-.135
Sufficient number of PE teachers	-.092	-.113
Adequate time for PE	.039	.013
Annual evaluation of PE teachers	-.206*	-.048
Assessment of student progress	-.073	-.204*

*Correlation is significant at the .05 level.

CHAPTER V

SUMMARY, CONCLUSION, RECOMMENDATIONS

Introduction

Obesity has increasingly become a major dilemma in America, threatening overall health and well being, and resulting in a major financial burden for the American government (CDC, 2008). Obesity is strongly linked to an increased risk for hypertension, dyslipidemia, type II diabetes, osteoarthritis, heart disease, gallbladder disease, sleep apnea, and certain forms of cancer (Callahan & Mansfield 2000; CDC, 2008). Development of obesity during childhood seems to be strongly linked to increased risks of lifestyle diseases into adulthood (Bao, Srinivasan,Wattigney, & Berenson, 1994; Berenson, Wattigney, Bao, Srinivasan, & Radhakrishnamurthy, 1995). Development of healthy lifestyle habits in childhood is imperative in order to maintain health for a lifetime.

The importance of physical activity in promoting proper health and prevention of obesity has been well documented for years, and national organizations and government agencies have described the importance of physical activity for all ages (CDC, 2008; NASBE, 2007; NASPE, 2008). Physical education in the school systems can provide an opportunity for children and adolescents to obtain the knowledge and skills needed to remain active for a lifetime (McKenzie et al., 2000). Therefore physical education is an essential element in assisting Americans in developing a healthy lifestyle, decreasing chronic diseases, and improving overall quality of life (Biddle, Sallis,& Cavill, 1998; Burgeson, 2004).

The purpose of this study was to analyze the perceptions of physical educators in Mississippi on the adequate implementation and overall impact of the "Healthy Students

Act" of Mississippi. It was designed to identify the requirements of the new legislation, demonstrate the methods of implementation, compare the requirements to the national standards, identify factors that are imperative in providing a quality PE program, and determine if educators feel that the current method of implementation will have an adequate impact on the health status and academic performance of students in the schools of Mississippi.

Findings

Research Question One:

Did elementary and middle school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on the prevention of obesity?

Results showed that more of the physical educators responded that they "Agree" that the Healthy Students Act of Mississippi will have a positive impact on the prevention of obesity. The findings indicate that most physical educators agree that The Healthy Students Act will make some positive changes and ultimately impact obesity.

Research Question Two:

Did high school physical educators believe that the current method of implementation of the Healthy Students Act of Mississippi is having a positive impact on the prevention of obesity?

Although the results of high school physical educators did not differ significantly, the survey results revealed that the high school physical educators were either "Neutral" or "Agreed" with this question. It is not surprising that the high school educators were not very positive in their response to the impact on obesity, as physical educators at the high school level in Mississippi must be certified physical education teachers. The

teachers who have an educational background in physical education are much more likely to understand the importance of providing a quality physical education program. In the latest version of the Shape of the Nation Report sponsored by NASPE, only 57 percent (28) of states require that all who teach physical education at the elementary level are certified/licensed by the state (NASPE, 2006).

Research Question Three:

Did elementary and middle school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on academic performance of the students in the public school system? There seems to be a direct correlation with students who are physically fit and academic performance (CDE, 2002; Shephard, 1997). The correlation seems to be that when a student's nutrition and fitness needs are met, the student is more likely to be able to concentrate and attain higher achievement levels academically. The survey results were very positive among elementary and middle school physical educators. More than half of the participants stated that they "Agree" that the new act will have a positive impact on academic performance, with the second highest response being participants who "Strongly Agree" with this statement.

Research Question Four:

Did high school physical educators believe that the current method of implementation of the "Healthy Students Act" of Mississippi is having a positive impact on academic performance on the students in the public school system?

The high school physical educators were more neutral in their response, which indicates that they are not certain about the overall impact of the Healthy Students Act of Mississippi with the current requirements for implementation.

Research Question Five:

What are the factors that should be considered in providing a quality physical education program in the public schools of Mississippi?

The physical educators ranked the need for *certified PE teachers* as the most important factor in providing a quality PE program. This is not surprising as certified PE teachers understand how to deliver a lesson that is developmentally appropriate for each grade level. The lessons are presented in a way that allows every child to participate and the instructions provide a variety of activities that promote motor skill and fitness development, as well as enhance physical, mental, emotional and cognitive well-being. Certified teachers are well-equipped to offer a variety of experiences that apply movement concepts, refine motor skills, and apply the skills necessary to develop sport and fitness activities that can be used throughout a lifetime (NASPE, 2003). The second most important factor listed by the physical educators in providing a quality PE program was providing *adequate facilities*. In my opinion it is imperative that schools have a facility conducive to the physical education setting; a facility that is large enough for all students to remain involved throughout the lesson. The facility should be adequate for teaching physical education regardless of the environmental conditions. The third most important factor ranked by the participants was *support of the administration*. Having an administrator who understands the importance of educating the "whole child" is vital in assisting the PE teacher in providing a quality program. Although the least important factors were *assessment of students to determine progress*, and the need for *annual evaluation of PE teachers*, it is likely that there are many other issues that must be addressed before these factors can be considered. Of course PE teachers are not excited about the idea of annual evaluations, but all teachers must be evaluated for their

performance and at least partially held accountable for the progress of students in order to see any improvements in the health and well-being of the students in Mississippi schools.

Hypothesis One:

There will be no significant difference in the perceptions of adequate implementation and the overall impact of the Healthy Students Act of Mississippi between elementary and middle school physical educators, and high school physical educators.

Analysis of the responses using a one-way ANOVA found no significant differences in the perceptions of elementary and middle school physical educators when compared to high school physical educators in either *adequate implementation* or *overall impact* of the "Healthy Students Act". Responses were very similar when comparing the perceptions on *adequate implementation* among each group of participants. When looking at perceived impact of the "Healthy Students Act", again responses were similar and ANOVA revealed no significant differences between each grade level physical educator.

Hypothesis Two:

There will be no significant difference in the perceptions of adequate implementation and the overall impact of the Healthy Students Act of Mississippi between class sizes of physical educators.

Large class size can have a negative impact on the ability of the physical educator in delivering a quality program. The National Association for Sport and Physical Education (NASPE, 2006) recommends that the physical education class size be consistent with other subject areas. It may necessitate the problem of decreased

instruction time due to management issues, and result in long lines for student activities. It can also cause an increased risk for injuries and more "off task" behaviors among students. It was hypothesized that physical educators who have to deal with large class sizes might have a more negative view on the perceived impact and adequate implementation of the Health Students Act. When comparing the means of the perception of overall impact with each class size, the results were similar, with the highest mean found with teachers who have a class size of 15 to 30 students, and the lowest mean among teachers who have a class size of 30 to 45 students. When analyzing the perception of adequate implementation among each class size, again the means were similar, with the highest mean among teachers who have a class size of 15 to 30 students, and the lowest mean with teachers who have a class size of 45 to 60 students. ANOVA results revealed no statistical difference in adequate implementation and overall impact when controlling for class size.

Ideally physical educators will have a small class size which will enable the teacher to give some individual attention, allow for individual differences of each student, and provide an adequate amount of equipment and space to prevent long lines and wasted time during the lesson (NASPE, 2006). Surprisingly the survey did not reveal a large number of PE teachers who are faced with large class sizes in Mississippi schools.

Hypothesis Three:

There will be no significant difference in the perception of adequate implementation and the overall impact of the Healthy Students Act of Mississippi between the amount of time students spend in physical education at each school.

The descriptive statistics revealed a similar response on *impact* among each grouping of class minutes, with the highest mean among schools that offer at least 60 to

80 minutes per week and the lowest mean among schools that offer 150 to 200 minutes of PE per week. When analyzing *adequate implementation* and the number of minutes of PE offered per week, the means were also similar among each group of minutes, with the highest mean in the schools who offer 60 to 80 PE minutes per week, and the lowest mean in schools that offer less than 30 minutes of PE per week.

When comparing *overall impact* and number of minutes of PE per week there was no significant difference and we failed to reject the null hypothesis. When observing the comparison of *adequate implementation* and number of PE minutes per week, no significant difference was observed in this analyzation as well, therefore the null hypothesis failed to be rejected.

The National Association for Sport and Physical Education recommends a minimum of 150 minutes per week of physical education at the elementary and middle school level and a minimum of 225 minutes of PE at the high school level (NASPE, 2001). The "Healthy Students Act" states that each public school will be required to offer at least 150 minutes of physical activity-based instruction at the elementary and middle school level, and high school students must complete at least one-half of a Carnegie unit of physical education or physical activity before qualifying for graduation (Healthy Students Act, 2007). The problem is that only 50 minutes of the 150 minutes must be in physical education. Every elementary and middle school can meet the remaining requirements of 100 minutes per week by providing evidence of physical activity based instruction written into a lesson plan in the regular classroom setting and by showing evidence of providing a recess for the children. In my opinion, quality physical activity based instruction offered in the classroom is not the most ideal method of delivering PE instruction.

Another major issue is Mississippi is that there is no requirement that physical education be delivered by a certified PE teacher at the elementary level. The likelihood of PE being taught by a teacher's assistant is very high. A quality physical education program must be delivered by well-trained physical educators who understand motor skill development and developmental abilities of each student. Delivering PE during recess would be effective if every student is required to take part in physical activity.

At the high school level, exemptions become a big problem, in that any activity sanctioned by the Mississippi High School Activities Association will count for an exemption for the one-half Carnegie unit in physical education. Therefore any student who participates in interscholastic sports, cheerleading, drill team, dance team, band, ROTC, or choral music will never have to take physical education throughout high school. The survey results showed that 73.1% of the participants said that their school allows exemptions for physical education. Furthermore, 50% of the participants said that they would estimate that at least 25 to 50% of students at their school are exempt from physical education, and another 19.2% said that they would estimate that 51 to 75% of the students at their school are exempt from physical education. Many students at the high school level will never be exposed to physical education.

Additionally a problem at the high school level is that most high school physical educators must also coach at least one interscholastic sport, and these educators feel that the best way to maintain job stability is to be a good coach. They often feel much more pressure to perform better as a coach than as a PE teacher. The statistical results of the survey revealed that 57.7% of the participants stated that they are responsible for coaching an interscholastic sport team, and 60.3 % said that they feel more pressure to perform better as a coach than as a PE teacher. Although the participant's primary

responsibility is to provide a quality physical education program, they often feel that they are more likely to lose their job if they do not perform well as a coach. This may result in the teacher spending more time preparing for game events than he or she spends preparing high quality physical education lesson plans.

Hypothesis 4

There will be no significant difference in the ratings of factors required to provide a quality physical education program between class sizes of physical educators.

A significant difference was found between class sizes. Tukey's post hoc procedure revealed that the class size group of 30 to 45 students ranked all factors except for certified PE teacher and adequate time more important than the class size of 15 to 30 students, and 45 to 90 students. There was also a significant difference across the factors. Pairwise comparisons revealed the following order of rankings: Certified PE teacher, adequate facilities > adequate equipment, support of administration, number of PE teachers > teacher-student ratio > adequate time > assessment, administrative evaluations.

Hypothesis Five:

There will be no significant correlation between the perceived adequate implementation and overall impact of the "Healthy Students Act" of Mississippi and the ratings of needed to provide a quality PE program.

A Spearman rho correlation coefficient revealed a negative correlation between *overall impact* of the Healthy Students Act and the factor of *annual evaluation of PE teachers*. There was also a significant negative correlation between *adequate implementation* of the Healthy Students Act and the importance of *assessment of students*

to determine progress, and *low teacher/student ratio*, therefore the null hypothesis was retained.

Summary

The health status of the citizens of Mississippi is a major concern and must be addressed in order to decrease the epidemic of obesity and accompanying lifestyle diseases. A major factor is the amount of physical activity participation at all ages. Children who develop healthy lifestyle habits at an early age are more likely to continue the healthy practices throughout adulthood.

Evidence shows that the amount of participation in physical activity children are exposed to at a young age will directly influence the extent to which they will continue to take part in physical activity throughout a lifetime (Bao, Srinivasan, Wattigney, & Berenson, 1994; Berenson, Wattigney, Bao, Srinivasan, & Radhakrishnamurthy, 1995, Goran, Reynolds, & Lindquist, 1999). Physical Education can have a vital impact on educating children and adolescents on the importance of physical activity for a lifetime and encourage healthy practices at a young age that can carry into adulthood. The "Healthy Students Act" of Mississippi is a very positive initial movement, and with improvements and minor revisions it can have a positive impact on prevention of obesity, and help to improve the health of our citizens.

Legislation should build on this initial act by ear-marking funding that will provide certified PE teachers for every school and every grade level. Adequate facilities and equipment are imperative in providing a quality PE program and having an ample supply of equipment prevents wasted time and long lines. With the support of the administration and an understanding of the essential need to educate the 'whole child',

the students will ultimately receive the benefits. A strong mind must be supported by a strong body.

Policy makers should be encouraged to require 150 minutes of physical education per week with a certified PE teacher. Providing a time for recess is important, but allowing this to count for PE is not the most ideal method of delivering physical activity. Allowing an additional 50 minutes to take place in the classroom setting is also not ideal and it becomes very difficult to document this PE instruction simply by observing the lesson plans of the classroom teacher.

Additionally, every student at the high school level should be exposed to the recommended 225 minutes of PE per week, eliminating all exemptions for PE. Even though classes and activities that provide physical activity (e.g., marching band, ROTC, cheerleading, school sports, choral music) have important goals, the goals are very different and each student should be provided with the opportunity to participate in sustained periods of meaningful physical activity, and be exposed to the knowledge and skills necessary to create an exercise program that can be used for a lifetime (NASPE, 2006). Requiring only ½ a Carnegie unit of PE in high school will result in only 60 hours of physical education instruction one time. This can be satisfied in one semester of high school overall. Students need physical education each year throughout high school.

Physical education needs to be recognized as a "first-class" profession, as we can make a valuable contribution in improving the health of children of America. As educators, we must accept the responsibility for promoting and advocating high quality programs. Physical education can be as essential element in assisting students in developing health habits that will become a part of their lifestyle. In order to ensure high quality programs, physical educators must be willing to abide by the NASPE national

standards, incorporate high quality lesson plans, and participate in an annual evaluation of the programs. Gone are the days that physical educators can "roll out the ball" and turn the lesson over to the students. Physical educators must be committed to implementing a plan of action that will interests all students and encourage them to participate in physical activity for a lifetime.

Recommendations for Future Research

Additional research will be vital in determining the impact of the requirements of the "Healthy Students Act" of Mississippi. A thorough follow-up study using a method of testing the actual physical participation time (eg. accelerometers) of the students will determine if the students are in fact getting at least 150 to 225 minutes of physical activity per week. Further research is needed to determine if in fact a large number of high school students will never be required to participate in physical education because of allowed exemptions. A longitudinal study that assesses the body fat percentage, waist circumferences and aerobic capacity of students throughout elementary, middle, and high school and follows the students throughout the years would show if the "Healthy Student Act" is in fact having an impact on decreasing obesity and improving overall health. Additional testing to compare fitness assessment results with overall performance on standardized test results may show a direct correlation with fitness levels and overall academic performance.

In addition, research that compiles the latest forms of legislation related to physical education and overall health in every state and compares the changes in the legal requirements that directly affects the public schools would provide a view of the focus of education and determine if in fact we are educating the "whole child".

The "Healthy Students Act of Mississippi" has provided a path by which we can continue to improve the requirements that directly affect the health and well-being of the citizens of Mississippi. It is now imperative that the physical educators of Mississippi continue to be pro-active in encouraging improvements in legislation and changes in lifestyle habits that will help prevent obesity, improve academic performance, and maintain an optimal level health of our citizens.

APPENDIX A

INSTUTIONAL REVIEW BOARD

APPROVAL LETTER

HUMAN SUBJECTS REVIEW FORM **Protocol #** 28092201
UNIVERSITY OF SOUTHERN MISSISSIPPI **(office use only)**
(SUBMIT THIS FORM IN DUPLICATE)

Name Carol J. Barnes Phone 601-209-4857

E-Mail Address cbarnes@mc.edu

Mailing Address 116 Woodlands Glen Circle Brandon, MS 39047
(address to receive information regarding this application)

College/Division University of Southern Mississippi College of Health

Dept Human Performance

Department Box # 5142 Phone 601-266-5367

Proposed Project Dates: From August 29, 2008 To May 5, 2009
(specific month, day and year of the beginning and ending dates of full project, not just data collection)

Title The Physical Educator's Perception on the Adequate Implementation and Overall Impact of the Healthy Students Act of Mississippi

Funding Agencies or Research Sponsors none

Grant Number (when applicable) N/A

_____ New Project
__X__ Dissertation or Thesis
_____ Renewal or Continuation: Protocol # _____
_____ Change in Previously Approved Project: Protocol # _____

Carol J. Barnes Carol J Barnes August 28, 2008
Principal Investigator Date
Dr. Nancy Speed Nancy Speed August 28, 2008
Advisor Date
Dr. Susan Hubble-Burchell Susan Hubble-Burchell August 28, 2008
Department Chair Date

RECOMMENDATION OF HSPRC MEMBER

✓ Category I, Exempt under Subpart A, Section 46.101 (b) (2), 45CFR46.
_____ Category II, Expedited Review, Subpart A, Section 46.110 and Subparagraph ( ).
_____ Category III, Full Committee Review.

Margot Hall PhD 9/30/08
HSPRC College/Division Member DATE
Sabrina A. Norman 10-09-08
HSPRC Chair DATE

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **28092201**
PROJECT TITLE: **The Physical Educator's Perception on the Adequate Implementation and Overall Impact of the Healthy Students Act of Mississippi**
PROPOSED PROJECT DATES: **08/09/0/ to 05/05/09**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATORS: **Carol J. Barnes**
COLLEGE/DIVISION: **College of Health**
DEPARTMENT: **Human Performance & Recreation**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Exempt Approval**
PERIOD OF APPROVAL: **10/06/08 to 10/05/09**

Lawrence A. Hosman
Lawrence A. Hosman, Ph.D.
HSPRC Chair

10-09-08
Date

APPENDIX B

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

PHYSICAL EDUCATORS SURVEY

Please take a few minutes of your free time, read this informed consent, and fill out the survey attached to this page. Return the survey in the enclosed self/addressed stamped envelope.

Please complete and return by October 25, 2008

Physical Educators can help make a difference in the overall health of the students of Mississippi if we have adequate implementation of a quality physical education program; which requires a sufficient amount of time with the students, adequate materials, equipment and facilities, well-trained teachers, support of the administration, and a proper teacher/student ratio.

The Healthy Students Act is a step in the right direction, but no funding is tied to this bill, which will make it very difficult to provide a quality physical education program. It is my hope that through the results of my dissertation, state legislators will see what we must do more if we truly desire to make a difference in the health status of the children and adolescents of Mississippi.

Thank you for volunteering your time to complete this survey. Your input is very important and will assist me in providing the proof we need to demonstrate the importance in quality physical education to state representatives, administrators, and the public in general.

Informed Consent

By completing this survey, you are consenting to participate in this research project. You are not required to complete the survey, although you will have an opportunity to voice your opinion on the factors that must be considered in order to provide a quality physical education program.

There is no risk associated with completing the survey and the information will be kept confidential. The information obtained may be used for statistical analysis or scientific purposes.

By completing the survey you are acknowledging that you have read this form in its entirety and you voluntarily consent to participate in this research.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

Should you have any questions, the director of this study is listed below and you may contact her with any questions related to this research.

Contact person
Carol J. Barnes
e-mail: cbarnes@mc.edu
Phone: 601-925-3303

APPENDIX C

PHYSICAL EDUCATOR SURVEY

Please read the following questions and mark with a "check" √ honestly and to the best of your ability the correct answers.

1. What is your gender? ☐Male ☐Female
2. Approximately how many years have you been teaching physical education?

   ☐0 to 3 years ☐4 to 7 years ☐8 to 11 years

   ☐12 to 15 years ☐16 to 19years ☐Over 19 years

3. What level of accreditation does your school currently hold?

   ☐Level One ☐Level Two ☐Level Three ☐Level Four ☐Level Five

4. In what region of Mississippi is your school located?

   ☐Northeast Mississippi ☐Northwest Mississippi ☐The Coast

   ☐The Delta ☐Central Mississippi

   ☐Southeast Mississippi ☐Southwest Mississippi

5. Do you hold a valid Mississippi teaching certificate? ☐ Yes ☐ No

6. If you answered "**yes**" to question No. 5, is your certification in physical education? If **"no"**, go to question No. 8.

   ☐ Yes ☐ No

7. If you answered "**yes**" to question No. 5, how did you receive your physical education certification?

   ☐Traditional teacher education

   ☐Alternate route certification

   ☐Add-on or supplemental endorsement?

8. If you answered "**no**" to question No. 6, please list the area of certification(s).

   _____

9. What grade level do you teach?

   ☐Elementary ☐Middle School ☐High School

   ☐Elementary and Middle School ☐Middle and High School ☐All of the above

10. How much time do the students spend in physical **education** (not physical activity) in your school per week?

    ☐Less than 30 minutes ☐30 to 60 minutes ☐60 to 80 minutes ☐80 to 100 minutes

    ☐100 to 150 minutes ☐150 to 200 minutes ☐At least 225 minutes.

11. What is the approximate size of the majority of your classes?

☐15 to 30 students ☐30 to 45 students ☐45 to 60 students ☐60 to 75 students ☐75 to 90 students

☐ Other, List _____

12. Are you required to turn in physical education lesson plans to the administrator of your school?

☐ Yes ☐ No

13. Are you responsible for coaching at least one interscholastic athletic team at your school?

☐ Yes ☐ No

14. If you answered **"yes"** to question No. 13, do you feel more pressure to perform well as a coach than as a physical educator? ☐ Yes ☐ No

---

Please rank the statements about your school's physical education program on a scale of:

Strongly Disagree to Strongly Agree by marking with a check √ in the appropriate box.

15. I receive an adequate amount of funding to spend on supplies, equipment, and materials for physical education.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

16. The Mississippi Physical Education Curriculum Framework issued by the State Department of Education is implemented in my physical education classes.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

17. Physical education is required in my school.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

18. I am aware of the requirements for physical education based on the Healthy Students Act of Mississippi.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

19. The amount of time students spend in physical activity **in my school** has increased to the required amount of the Healthy Students Act (150 minutes per week for elementary and middle school students; 225 minutes for high school students).

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

20. The size of most physical education classes in my school is too large in order to provide safe, effective instruction.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

21. My school has adequate facilities to teach physical education in my school.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

22. I have support of my administration to adequately implement a quality physical education program.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

23. I have received adequate training on "Implementing the Healthy Students Act."

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

24. I believe that the **current** method of implementation of the requirements of the Healthy Students Act will decrease the number of students suffering from obesity in Mississippi.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

25. I believe that the **current** method of implementation of the Healthy Students Act will have a positive impact on academic performance of the students in Mississippi schools.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

26. I believe that the **current** method of implementation of the Healthy Students Act will have a positive impact in the overall health status of the students in Mississippi schools.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

27. I am evaluated on my personal performance as a teacher by my administration at least one time each year.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

28. I receive adequate feedback from my personal evaluation in order to improve my performance as a teacher.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

29. **Please rank the following in order of importance in providing a quality Physical Education program by placing the corresponding number in the blank.**

1= Most important 9 = Least important

_____ Adequate equipment
_____ Adequate facilities
_____ Certified PE teacher
_____ Support of Administration
_____ Sufficient number of PE teachers
_____ Adequate amount of time in PE
_____ Annual evaluation of PE teacher
_____ Implementation of Assessments to determine student progress
_____ Low student/teacher ratio (Smaller classes)

Please fill out questions 30 through 33 if you teach physical education at the Elementary or Middle School level, otherwise, skip to questions 34 through 39.

30. I believe that **infusion** of physical activity into the **regular classroom setting** taught by the classroom teacher **(not the physical education teacher)** is the best way to increase physical activity levels of the students.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

31. I believe that most (at least 75 percent) of the classroom teachers will adequately implement the correct amount of physical activity into the classroom setting.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

32. I believe that **recess** should count toward the amount of time that students are physically active.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

33. I estimate that at least 50 percent of students are physically active during recess.

☐Strongly Disagree ☐Disagree ☐Neutral ☐Agree ☐Strongly Agree

Please fill out questions 34 through 39 if you teach physical education at the High School level. Answer the following questions by marking with a check √ in the box with ☐ Yes or ☐ No

34. My school requires that each student receive ½ Carnegie unit in physical education.

☐ Yes ☐ No

35. My school assigns grades for physical education. ☐ Yes ☐ No

36. The grade the student receives is primarily based on participation. ☐ Yes ☐ No

37. My school allows exemptions for physical education (ex- band, ROTC, cheerleading, football). ☐ Yes ☐ No

38. If you answered yes to question number 37, please check the exemptions that are allowed at your school.

☐Band ☐Varsity Sports ☐Cheerleading ☐Dance Team ☐Drill Team ☐ROTC

☐Other –Specify __

39. What percentage of students in your school do you estimate will qualify for one of the above exemptions? (Refer to question No. 38).

☐Less than 25%

☐25% to 50%

☐ 51% to 75%

☐ 76% to 100%

Thank you so much for taking the time to complete this survey!

APPENDIX D

VALIDITY QUESTIONNAIRE

I believe that Physical Educators can help make a difference in the overall health of the students of Mississippi if we have adequate implementation of a quality physical education program; which requires a sufficient amount of time with the students, adequate materials, equipment and facilities, well-trained teachers, support of the administration, and a proper teacher/student ratio.

The Healthy Students Act is a step in the right direction, but no funding is tied to this bill, which will make it very difficult to provide a quality physical education program. It is my hope that through the results of my dissertation, state legislators will see that we must do more if we truly desire to make a difference in the health status of the children and adolescents of Mississippi.

Thank you for volunteering your time to assist me in the development of this survey. Your input is very important with respect to the survey itself and the development of my dissertation overall. Your willingness and consideration to participate in this study is greatly appreciated.

Please rate the included survey based on the following information.

1. Does the survey contain language that can be understood by physical education teachers? If not, please offer suggestions for changes.

_____

_____

2. Does the survey address specific issues in each statement in regards to adequate implementation and overall impact of t*he Healthy Students Act of Mississippi*?

_____

_____

3. Do you find any questions offensive or obtrusive?

_____

_____

4. Are there any questions that you would exclude from the survey?

_____

_____

5. Are there any other statements that you would include that are **not** a part of the survey?

_____

_____

6. Does the survey appear clear, readable and obvious?

_____

7. Please make any other comments or suggestions about the survey below:

_____

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