

Comparison of the Local Wellness Policy Implementation between 2006 and 2008

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Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

ABSTRACT

Purpose/Objective

The Child Nutrition and WIC Reauthorization Act of 2004 required all schools receiving funding for school meals to implement a Local Wellness Policy. However, there is little to no accountability related to the implementation of the policy. Therefore, the purpose of this study was to evaluate the degree of implementation of nutrition components of the Local School Wellness policies in Mississippi in 2008.

Methods

Data were collected through the 2008 Local School Wellness Policy Principal Survey which was sent to principals of all public schools in Mississippi. The survey was sent out through email; the survey content was based on the Local School Wellness Policy: Guide for Development and the Mississippi Healthy Students Act. Responses to each survey item related to implementation of the policy were tabulated and percentages were calculated. For items asked in both the 2006 and 2008 surveys, statistical significance of difference was determined through the calculation and comparison of confidence intervals (CIs).

Results

Significant improvements have been made in the implementation of Local School Wellness Policies from 2006 to 2008. In 2008, 96.0% of the respondents reported that the Local School Wellness Policy was being partially or fully implemented in their school (significantly higher than 78.2% in 2006). The majority of schools (96.7%) reported implementing the minimum nutrition components of local wellness policy requirements. In 2008, 72.3% of the principals reported that 75-100% of the students were receiving nutrition education as compared to 35.2% in 2006.

Applications to Child Nutrition Professionals

It is encouraging to see that schools are actively moving to stronger implementation of the local wellness policy, with significant improvements in nutrition-related activities. Child nutrition professionals are key in the development, implementation, and evaluation of the wellness policy.

INTRODUCTION

Childhood obesity has been nationally recognized as a major health concern due to its ability to lead to the development of chronic diseases, decreased life expectancy, and increased healthcare costs, as well as, its association with academic achievement (Pyle et al., 2006; Rampersaud, Pereira, Girard, Adams, & Metz, 2005; Taras, 2005). With the increasing prevalence of childhood obesity, there has been recognition of the importance of proper nutrition and physical activity in reducing obesity by way of legislative mandates, specifically the Child Nutrition and WIC Reauthorization Act

of 2004. This particular legislative mandate places much emphasis on the responsibility of the school environment to encourage healthy lifestyles in school-aged children; however, the familial role should also be addressed due to the influence parents have on child eating patterns and diet quality (Epstein et al., 2001; Golan, Kaufman, & Shahar, 2006; Hesketh, Waters, Green, Salmon, & Williams, 2005; Patrick & Nicklas, 2005).

The national increase in childhood obesity, as indicated by the National Health and Nutrition Examination Survey (NHANES) data, encouraged Mississippi to conduct state- and local-level research to determine the prevalence of childhood obesity within the state. NHANES data collected from 2003 through 2006, indicated that 17.0% of children, ages six through eleven, and 17.6% of adolescents, ages 12 through 19, were obese (U.S. Department of Health and Human Services, 2008). In Mississippi, weighted, representative data on students in grades K – 12 were collected through the Child and Youth Prevalence of Overweight Survey (CAYPOS). The 2007 CAYPOS results indicated that 23.5% of students in grades K-12 were obese and 18.4% of students were overweight (Kolbo et al., 2008). The 2009 CAYPOS results indicated that 23.9% of students in grades K-12 were obese and 18.5% were overweight (Molaison et al., 2010). The 2009 Mississippi Youth Risk Behavior Surveillance (YRBS) results indicate that 16.5% of public high school students were overweight and 18.3% were obese (Centers for Disease Control and Prevention, 2010). With the high rates of childhood obesity, the Institute of Medicine concluded that the school setting is an optimal environment for implementing changes to decrease childhood obesity because children spend the majority of their time in school, and it's where they consume 35% of their food intake and expend 50% of their energy (Institute of Medicine, 2007; Koplan, Liverman, & Kraak, 2005). Patrick and Nicklas (2005), from a review of literature, concluded that parents also play an important role in child eating patterns and diet quality. Qualitative research has shown that parents felt responsible for not only providing a healthy environment but also modeling healthy eating behaviors. Parents felt that their role should be complimentary to that of schools—working together to encourage healthy behaviors in children that will last through adulthood (Hesketh et al., 2005).

The establishment of wellness policies has been required since the beginning of the 2006-2007 academic school year. Yet, there is little research available on the degree of implementation of school wellness policies. Studies have been conducted in Virginia, Utah, and Pennsylvania, concerning the development and execution of local school wellness policies. Study results indicated that although most schools have developed a local school wellness policy, in accordance with the 2004 Reauthorization Act, a gap exists between the development and implementation of the wellness policies. In addition, language of the policies indicates ambiguity, and the person(s) responsible for implementation was not always clearly defined (Metos & Nanney, 2007; Probart, McDonnell, Weirich, Schilling, & Fekete, 2008; Serrano et al., 2007). Rather than focusing on the implementation of the local school wellness policies, the above studies were more focused on the development and type/strength of language used in the policies.

In 2006 and 2008, researchers at the University of Southern Mississippi conducted a survey among all public school principals in Mississippi to assess the degree of implementation of school wellness policies and Mississippi-specific healthy school legislation. The findings from the 2006 survey indicated that less than half of the respondents reported implementation of a school wellness policy. Among the respondents that reported a relatively high degree of implementation, there were poor outcomes concerning the implementation of the nutrition components of the policies (Kolbo, Molaison, Rushing, Zhang, & Green, 2009). Since nutrition is not only important to combat childhood obesity but also enhances academic achievement, the purpose of this research was to evaluate the implementation of the nutrition education components of the Local Wellness Policy and the Mississippi Healthy Students Act. In addition, the researchers compared findings from 2006 and 2008 principal surveys concerning commitment to nutrition and implementation of the wellness policy. Furthermore, the researchers assessed limitations of fully implementing nutrition components of the policies.

METHODOLOGY

As with the 2006 Survey, the 2008 Local School Wellness Policy Principal Survey was intended to be completed by principals of all public schools in Mississippi. A list of e-mail contact information was obtained from the Mississippi Department of Education for the purposes of distributing the survey.

Survey Development

The items on the 2008 Survey were developed through input from several representatives of the Mississippi Department of Education's Office of Healthy Schools; a review of recent state and federal legislation and scientific literature; and, where appropriate, directly from the 2006 Survey. The 2008 Survey was set up to closely follow the wording and format of the revised Local School Wellness Policy: Guide for Development (Mississippi Department of Education, 2005). This guide included information from the Local School Wellness Policy, in addition to the Mississippi Healthy Students Act (Child Nutrition & WIC Reauthorization Act, 2004; Mississippi Health Students Act, 2007). The 11 components that were assessed included the school's commitment to implementing the Local School Wellness Policy; Nutrition; Food Safe Schools; Physical Activity/Physical Education; Comprehensive Health Education; Healthy School Environment; Quality Health Services; Providing Counseling, Psychological, and Social Services; Family and Community Involvement; A Quality Staff Wellness Program; and Marketing a Healthy School Environment. In addition, the 2008 Survey addressed general school and student demographics; knowledge, overall implementation, and quality of the Policy; health status measures of students; participation in Office of Healthy Schools' programs; performance classification of the school; and evidence related to the effectiveness of the School's Health Council. However, the results presented here focus on overall issues related to implementation of the nutrition components of the Local Wellness Policy and the Mississippi Health Students Act.

Data Collection and Analysis

The survey was administered in October and November 2008. During the first week of October, all public school principals and superintendents received a letter explaining the study and that access to the survey would be available through a future email. In the second week of October, all public school principals and superintendents received the email containing the link to the online survey. Qualtrics, Inc. was the company used to set up the online survey. Over the next three weeks, principals and superintendents were sent reminder emails to complete the survey. While individual responses to survey questions could not be traced, the software provided by Qualtrics, Inc. indicated which schools had not completed a survey. In those cases, superintendents and principals were contacted by phone to determine whether assistance would be needed in order to complete the survey.

Although the principal was ultimately responsible for submitting the completed survey, it was created so that other key personnel could complete sections of the questionnaires. The key personnel were those that participated in wellness policy development and implementation, such as foodservice directors and school nurses. The primary reason for principals not completing the survey was that the email, containing the link to the online survey, was blocked as SPAM. Additional phone and email attempts were made to identify barriers to survey completion. Surveys were accepted through the last week of November.

Responses to each survey item (question) related to implementation of the nutrition components of the wellness policy were tabulated and percentages were calculated. It should be noted that the percentages reported in the 2008 study and used for comparison with the 2006 study were valid percents, which excluded non-responses. For survey items that were asked in both 2006 and 2008, statistical significance of difference was determined through the calculation and comparison of 95% confidence intervals (CIs). The differences between the two survey years will be statistically significant if their 95% CIs did not overlap. SPSS 17.0 was used for data management and analysis.

RESULTS AND DISCUSSION

Surveys were e-mailed to 911 principals of public schools in Mississippi between October and November 2008. A total of 635 surveys were submitted and 95 were excluded due to majority of the survey not being complete and duplicated answers. There were a total of 540 (59.3%) surveys included in the final analysis. Of the 540 schools, 48.7% were elementary schools; 11.1% were

middle schools; 16.6% were high schools; and 23.5% were either K-6, K-8, or K-12 schools. Principals reported an average enrollment size of 582 students. On average, 71.8% of students qualified for free or reduced lunch. Elementary (71.8%) schools had the highest eligibility rates followed by middle (70.3%) and high schools (62.6%). Table 1 contains a comparison of sample characteristics from the 2006 and 2008 principal surveys.

Table 1. <i>Principal Survey Participant Characteristics</i>		
Characteristic	2006 (n/%)	2008 (n/%)
Surveys		
Sent	882/100.0	911/100.0
Returned	369/41.8	635/70.0
Completed	329/41.8	540/59.3
Schools		
Elementary	130/39.5	263/48.7
Middle	51/15.5	60/11.1
High	70/21.3	90/16.6
K-6, K-8, or K-12	78/23.8	127/23.5

Implementation of the Local School Wellness Policy

With regards to the implementation of Local School Wellness Policy components, 96.3% (n = 511) of the respondents reported having a local wellness policy that was fully or partially implemented. The 2008 Principal Survey required principals to evaluate the overall commitment and quality of the policy components according to the 11 components of the policy. The following percentages represent full implementation of the 11 policy components: 55.7% implementation; 81.0% nutrition; 87.2% food safe schools; 79.1% physical activity/physical education; 65.5% comprehensive health education; 76.7% healthy school environment; 71.4% quality health services; 84.0% providing counseling, psychological and social services; 51.5% family and community involvement; 42.8% quality staff wellness program; and 42.5% marketing a healthy school environment.

Significant changes from 2006 to 2008 principal surveys were identified. In 2008, 96.0% of the respondents (a statistically significant increase from 78.2% in 2006) reported that the Local School Wellness Policy was being partially or fully implemented in their school (Table 2). Knowledge of the Local School Wellness Policy was significantly higher in 2008 than in 2006. In 2008, 92.9% of principals reported a fair or great deal of knowledge as compared to 83.3% in 2006. It was also reported that faculty, students, parents, and the community had a significantly increased level of knowledge of the wellness policy in 2008.

Table 2. <i>2006-2008 Principal Survey Comparisons, Percentages, and Confidence Intervals*</i>		
	2008 (%)	2006 (%)

Implemented the Local School Wellness Policy*		
Prevalence (%)	96.0	78.2
95% CIs		
Established a School Health Council*		
Prevalence	84.2	66.5
95% CIs	(81.1-87.3)	(61.6-71.4)
Knowledge of the Wellness Policy (Self)*		
Prevalence	92.9	83.3
95% CIs	(90.6-95.2)	(79.5-87.1)
Knowledge of the Wellness Policy (Faculty)*		
Prevalence	78.2	66.3
95% CIs	(74.4-82.0)	(61.5-71.1)
Knowledge of the Wellness Policy (Students)*		
Prevalence	52.5	32.6
95% CIs	(48-57.0)	(27.8-37.4)
Knowledge of the Wellness Policy (Parents)*		
Prevalence	43.5	28.1
95% CIs	(39.0-48.0)	(23.5-32.7)
Knowledge of the Wellness Policy (Community)*		
Prevalence	31.9	22.3
95% CIs	(27.7-36.1)	(18.0-26.6)
Schools with 75-100% of students receiving nutrition education*		
Prevalence	72.3	35.2

95% CIs	(68.3-76.3)	(29.7-40.7)
Serving fresh fruits daily		
Prevalence	46.1	40.0
95% CIs	(41.7-50.5)	(34.9-45.1)
Serving raw vegetables daily		
Prevalence	26.2	21.7
95% CIs	(22.3-30.1)	(17.4-26.0)
Serving whole grain foods daily*		
Prevalence	31.7	21.5
95% CIs	(27.5-35.9)	(17.1-25.9)
Serving at least 3 different fruits weekly*		
Prevalence	99.6	97.0
95% CIs	(99.0-100)	(95.2-98.8)
Serving at least 5 different vegetables weekly		
Prevalence	97.2	94.9
95% CIs	(95.7-98.7)	(92.6-97.2)
Schools with 75-100% of students receiving health education*		
Prevalence	75.9	38.4
95% CIs	(71.8-80.0)	(33.0-43.8)
Schools with 75-100% of health education were taught by certified teachers		
Prevalence	55.3	44.0

95% CIs	(50.5- 60.1)	(33.8- 54.2)
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* Non-overlap in the 95% CIs indicated a significant difference between 2006 and 2008

Implementation of Nutrition Components

The majority of schools (96.7%) reported implementing the minimum nutrition components of local wellness policy requirements, which include the establishment of guidelines in accordance with the Mississippi Snack and Beverage regulations. High schools (87.3%) had the highest rate of implementing the minimum nutrition components, followed by middle schools (82.7%) and elementary schools (79.9%). Results also indicated that 72.3% of schools were providing nutrition education to 75-100% of students. This was a significant improvement from 35.2% of schools in 2006. The percentages of schools reporting serving whole grains and three different fruits weekly also increased between 2006 and 2008.

As can be seen from the results, improvements have been made in the establishment, implementation, and perceived quality of Local School Wellness Policies from 2006 to 2008. It is important to understand why such improvements have occurred. One possible answer to this particular question is that there has been an increase in the knowledge concerning the Local School Wellness Policy among principals, students, teachers, parents, and entire communities. The increase in knowledge among all individuals mentioned perhaps indicates that a relationship exists between knowledge of the Local School Wellness Policy and full implementation. In a study that examined school wellness policy implementation, perceived barriers in implementing the Local Wellness Policy (LWP) were assessed. Respondents reported that the implementation of the LWP would need the support of school administration, support of teachers, and the support of parents/families (Molaison, Carr, & Federico, 2008). In regards to the 2008 principal survey, there was increased knowledge among school administration, teachers, and parents which perhaps led to increased support of the LWP and ultimately resulted in a higher amount of schools that fully implemented local wellness policies in Mississippi. Increased knowledge among principals, students, teachers, parents, and the community can also lead to using a team approach to implementation. When a team approach is used it can lead to program sustainability which, in the case of the LWP, can lead to a healthier school environment, healthier students, and a decrease in the prevalence of childhood obesity in Mississippi (Molaison et al., 2008).

Barriers to Implementation of Nutrition Components

The top barriers to implementing nutrition education included less time for "No Child Left Behind" program (16.7%, n = 90), insufficient funding to implement nutrition education adequately (16.3%, n = 88), and unqualified teachers to teach nutrition education (12.6%, n = 68).

Competitive foods also present a challenge to compliance with implementation of the nutrition component of the LWP in the school environment. Briefel, Crepinsek, Cabili, Wilson, and Gleason (2009) reported that 45% of students in public schools consume some type of low nutrient, energy dense food item obtained from school, and schools that limited the availability of competitive foods resulted in children consuming less energy from sugar-sweetened beverages. In addition, Brown and Tammineni (2009) conducted an exploratory study, in Mississippi, to determine if beverage sales could be maintained while offering more healthy choices to students rather than sugar-sweetened beverages. Results indicated that when healthier choices were given, the children continued to purchase the beverages and there were no substantial changes in profits earned from beverage sales. If children are encouraged to make smart beverage choices at school, they may be more likely to consume less sugar-sweetened beverages all together, which is a behavior change related to a healthy lifestyle. In our study, principals reported compliance with the above nutrition component, but they also reported that schools still offered chocolate candy (4.8%, n = 30), other kinds of candy (5.6%, n = 35), cookies or crackers (10.8%, n = 68), and full calorie soft drinks, lemonade, or sweet tea (10.8%, n = 68) to students through vending machines, food bars/carts, or school stores on campus.

CONCLUSIONS AND APPLICATIONS

Little research is available on the implementation of Local Wellness Policies due to their recent development. It is also unknown how implementation of nutrition policies in Mississippi compares to the rest of the country. Two national studies have been published concerning the effect of legislation in the school environment. These two studies focused on the legislative environment of states prior to the Child Nutrition and Reauthorization Act of 2004, in which Mississippi was considered to have a strong legislative environment to develop a LWP, as well as the development process for a LWP (Longley & Sneed, 2009; Moag-Stahlberg, Howley, & Luscri, 2008). Three states, including Utah, Virginia, and Pennsylvania have conducted state-specific research which focused on policy development, strength of language used in wellness policies, and responsibility of implementation (Metos & Nanney, 2007; Probart et al., 2008; Serrano et al., 2007).

The state-specific research conducted in Mississippi, using the principal survey, is similar to the research conducted in Utah and Pennsylvania in that they both investigated the quality and implementation of wellness policies. In Utah, researchers determined the quality of policies based on the strength of language used in school wellness policies. Policies were considered strong if the words “shall”, “will”, or “must” were used, and policies were considered weak if the words “suggest” or “will attempt” were used (Metos & Nanney, 2007). In Pennsylvania, researchers assessed quality by examining goals within local wellness policies, in which ambiguity was detected through the use of words/phrases like “recommend” or “strive to comply” (Probart et al., 2008). The wording used in the current survey was meant to capture current practices related to implementation of the wellness policy, not proposed changes to practice in the schools. Therefore, the high rates of knowledge of the policy and implementation of the various components of the policy are encouraging to a state with high rates of childhood obesity.

It is important to note that the 2006 and 2008 surveys were administered slightly differently, in that the 2006 survey was completed by paper and pencil, and the 2008 survey was completed online. There is no way of knowing whether the different way the survey was administered may have affected the responses to the survey items. While the response rate was much higher in 2008 (59.3% vs. 41.8%), the findings cannot be considered necessarily representative of all schools. Due to the anonymous nature of the survey, there is no way of knowing which schools responded in either year, nor if the same schools responded each year. Another aspect of the anonymous nature of this survey is that while principals were asked to submit their data, there is no way of knowing who actually completed the survey in any of the schools since this information was not a required component of the survey. Another limitation is related to the nature of self-report. The question of accuracy arises when school administrators are being asked whether they are implementing required policies and programs. As stated previously, the surveys have been designed to be anonymous and confidential, hopefully prompting more honest and accurate responses. With data from other state-wide research on the prevalence of overweight and obesity, it might be possible to determine if implementation of the policy is related to weight-related trends in school-aged children.

Even with the limitations of the research, the results are encouraging. Child nutrition professionals can play a role in assuring that all components of the LWP are completely and adequately implemented. These individuals can work to assure that nutrition education is provided in all schools and at all grade levels. Many principals listed not having a qualified teacher for nutrition education as a major barrier to implementation of the nutrition component. This presents future job opportunities for those with nutrition and/or health backgrounds to have a potential impact on the provision of nutrition education in the school setting. Finally, those working in child nutrition can offer additional education and support to those schools that continue to offer high calorie and high fat foods and beverages by finding alternatives that are acceptable to the student population.

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