



**PA Action for Healthy Kids Parent Outreach:**  
*Change in Nutrition and Physical Activity Outcomes*

**FINAL REPORT**

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## **PA Action for Healthy Kids Parent Outreach:** *Change in Nutrition and Physical Activity Outcomes*

In fall 2004 and winter 2005, 15 schools/school districts in Pennsylvania participated in the *Action for Healthy Kids* Parent Outreach initiative. Ten of the schools were part of the American Cancer Society's School Health Leadership Institute (SHLI) and the remaining five were schools whose Family, Career, and Community Leaders of America (FCCLA) chapters implemented the initiative. The schools were asked to use the kit, *Preventing Childhood Overweight and Obesity: Parents Can Make a Difference*, produced by Project PA. Project PA is a collaboration between the Department of Education and Penn State University. The kit contains tools designed to teach parents of elementary, middle school and high school students about nutrition and childhood obesity, as well as promote parents' involvement in school activities related to these topics, such as school health councils. As a supplement to the kit, Pennsylvania Action for Healthy Kids provided information about physical activity and physical education. Each school received a mini-grant to implement their strategies. The outreach performed by the ten SHLI teams was staff driven, whereas the outreach performed by the FCCLA groups was student driven.

In order to assess the effectiveness of this initiative in Pennsylvania, participating schools were asked to distribute a survey to participating parents at the beginning of their program. The survey was designed to collect baseline information about parents' knowledge and behaviors related to the program. At the conclusion of the program, parents were asked to answer a post-survey. The surveys measured parents' knowledge about nutrition and other factors influencing childhood obesity, and parents' interest in participating in school programs that focus on healthy eating, physical activity or physical education. The survey also measured parents' knowledge about the rules and regulations that schools have to follow on the different kinds of foods offered to students at school, and in their physical education classes.

In total, 453 parents from 16 schools completed a baseline survey and 294 parents from 15 schools returned the post-survey. It was possible to match the baseline and post-surveys for 165 parents from 12 schools.<sup>1</sup> Most of the parents (105 – 64%) are associated with SHLI schools; another 48 (29%) are from FCCLA schools, and 12 parents (7%) are from schools in which it was not possible to determine whether they were SHLI or FCCLA schools.

This report summarizes results from the baseline/post-survey comparison. Paired t-tests were used to determine if post-survey scores differed from baseline scores. In addition, analysis of covariance models were conducted to see if differences existed between the SHLI and FCCLA schools.

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<sup>1</sup> Not all parents answered the baseline survey, and similarly, not all answered the post-survey.

## Results

### *Overall Findings*

At the time of the baseline survey, about one-third of the parents responding to both the baseline and post-surveys indicated that their child's school has a formal group or organization that deals with school health issues, such as a health or wellness council. Over one-half of the respondents were unsure of whether their child's school had such an entity. Results are shown in Table 1. Among the 55 parents who indicated that their school has an entity that deals with school health issues, over one-fifth (22%) responded that they had been involved with this group or organization. The majority (74%) indicated that they had not been involved; see Table 1.

**Table 1**  
**Presence and Involvement in Formal Group or Organization that Deals with School Health Issues: Baseline Survey**

	<b>Number</b>	<b>Percent</b>
School has group or organization dealing with school health issues		
Not sure	88	54%
No	20	12%
Yes	55	34%
Total	163	100%
<i>If Yes: Parent has been involved with this group or organization</i>		
Not sure	2	4%
No	41	74%
Yes	12	22%
Total	55	100%

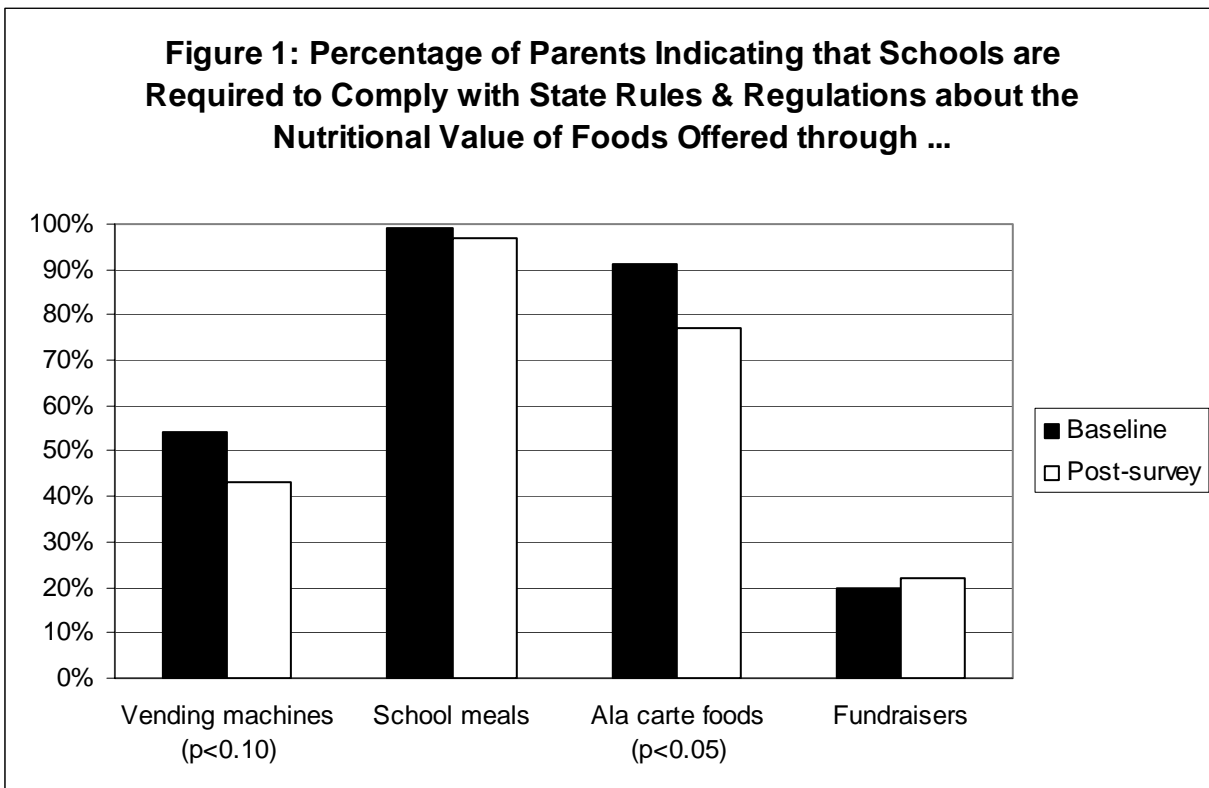
Table 2, which is presented at the end of this report, shows results from analyses measuring the extent of change in parents' knowledge about nutrition and other factors influencing childhood obesity, the rules and regulations that schools have to follow on the different kinds of foods offered to students at school, and in their physical education classes, and parents' interest in participating in school programs that focus on healthy eating, physical activity or physical education.

Parents demonstrated significantly greater knowledge about nutrition, physical activity, and other factors related to childhood obesity at the conclusion of the outreach program than at the beginning of the program ( $p < 0.05$ ). Specifically, parents showed significantly greater agreement with statements indicating that the foods a child eats and the amount of physical activity a child gets affects how well the child learns. In addition, parents showed greater agreement with statements indicating that children who see their parents eat fruits and vegetables daily are more likely to do the same. Similarly, parents were more likely to indicate that children who see their parents exercise regularly are more likely to be physically active.

Parents were asked to assess how much they knew about the rules and regulations that schools follow about the different kinds of foods offered to students and about how physical

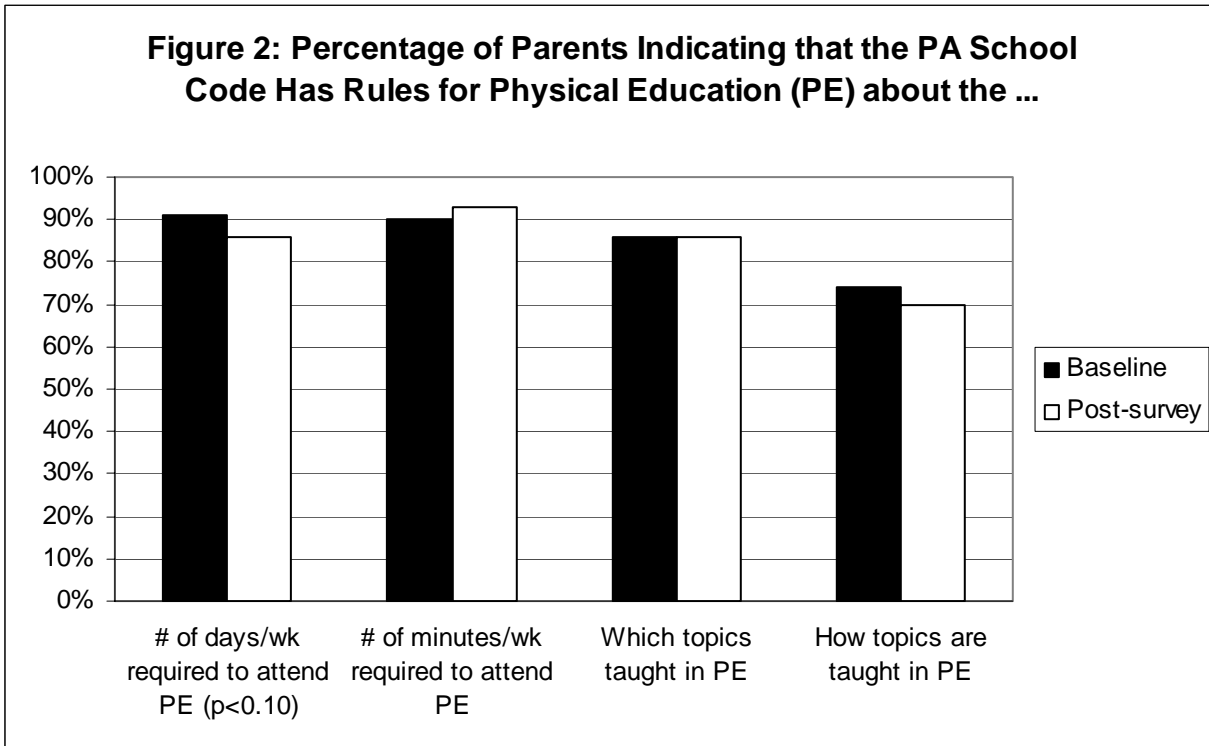
education classes are taught. Compared to scores at the start of the program, parents made statistically significant gains by the end of the program in their self-assessed knowledge in these two areas ( $p < 0.001$ ).

The percentage of parents indicating that schools are required to comply with state and federal rules regarding the nutritional value of foods offered through various venues in the school is presented in Figure 1. There are state rules and regulations about the nutritional value of foods offered through school meals, but not vending machines, ala carte foods, or fundraisers. By the end of the program, parents were expected to be more likely to agree that there are state rules and regulations about the nutritional value of foods offered through school meals and less likely to agree that there are state rules and regulations on the nutritional value of foods offered through vending machines, ala carte foods, or fundraisers. There was some change in parents' knowledge in this area between the baseline and post-surveys. As hypothesized, significantly fewer parents indicated that these rules applied to a la carte foods: the percentage indicating such decreased from 91% at the start of the program to 77% at the conclusion of the program ( $p < 0.05$ ). Also, there was a tendency for fewer parents to indicate that these rules applied to foods in vending machines ( $p < 0.10$ ).



Also, parents were asked whether the Pennsylvania School Code has rules about various aspects of physical education (PE), such as the number of days or minutes per week students are required to attend PE, and topics taught in PE classes. The Pennsylvania School Code does not have specific regulations about the number of days or minutes per week students are required to

attend PE or how topics are taught in PE classes. By the end of the program, parents were expected to be less likely to agree that there are rules on these three aspects of PE classes in Pennsylvania. The percentage of parents indicating that the state has rules about these different aspects of PE at baseline and post-survey is presented in Figure 2. At the end of the program, there was a tendency for parents to be less likely to agree that there are rules about the number of days per week students are required to attend PE ( $p < 0.10$ ). There was minimal change between the baseline and the end of the program on the remaining items related to state regulations about PE.

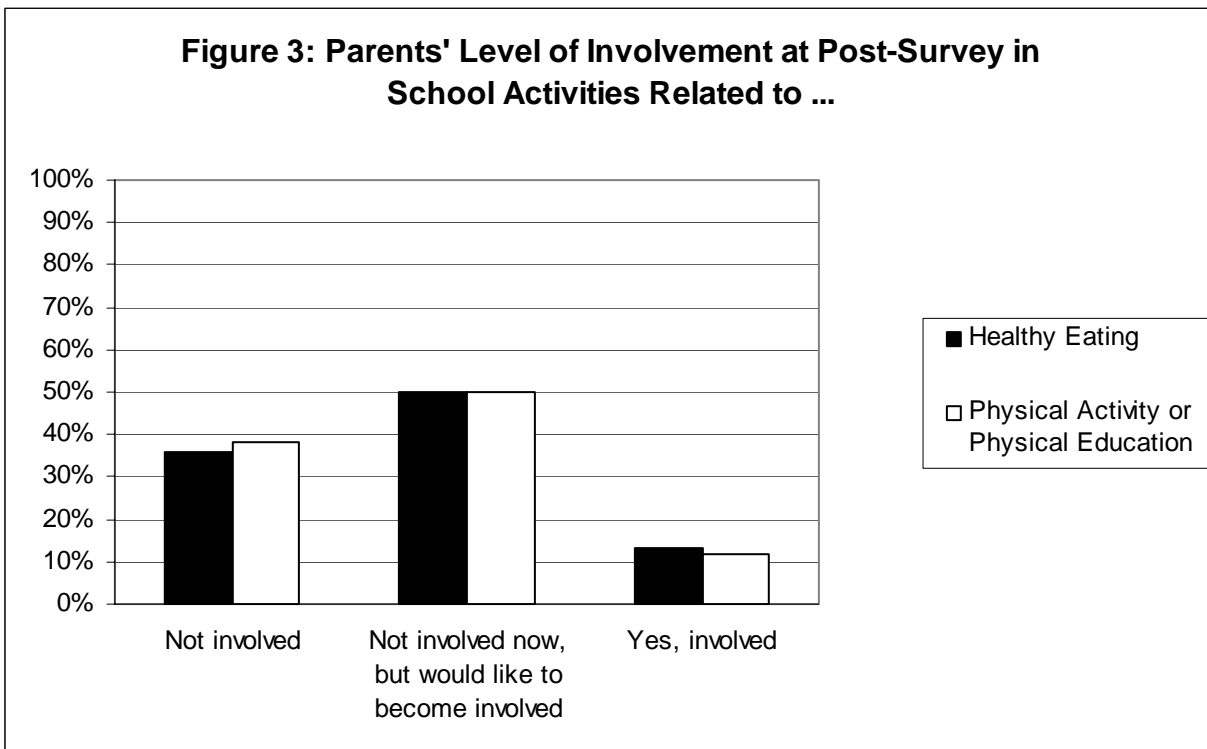


In addition, parents were significantly more likely to agree that at the end of the program children should attend a class everyday in school where they learn about the benefits of physical activity and how to be physically active for life ( $p < 0.01$ ).

Compared to scores at the start of the program, parents showed greater disagreement at the end of the program with the statement indicating that it is okay for children to buy candies, cookies, and soda at school. However, the change was not statistically significant ( $p > 0.10$ ).

Parents were no more likely to be involved or want to become involved in their child's school activities related to healthy eating, physical activity, or physical education at the end of the outreach program than at the start of the program. The percentage of parents indicating their level of involvement in these activities at the end of the program is presented in Figure 3. About one-tenth (13%) indicated that they are involved in school activities related to healthy eating. One-half (50%) of the parents indicated that they are not involved now but would like to become involved in such activities. Similarly, 12% of the parents indicated that they are involved in

school activities related to physical activity or physical education, and another 50% indicated that they are not involved now, but would like to become involved in these activities.



The same parents tended to be involved in both types of activities. The majority of the parents involved in activities related to healthy eating were also involved in activities related to physical activity or physical education.

Table 3 presents the percentage of parents indicating the *types* of school activities related to healthy eating they are involved in or would like to become involved in at the time of the post-survey. Only parents who indicated that they are involved in school activities related to healthy eating or would like to become involved in such activities responded to this series of questions.<sup>2</sup> Over one-half of both of these groups of parents indicated involvement or interest in promoting the idea that nutrition lessons be taught in various school curriculums (60%). About two-fifths (45%) indicated involvement or interest in promoting programs that help parents model healthy eating behaviors, or getting students involved in school meal programs (40%). About one-third of the parents indicated involvement or interest in getting parents involved in school nutrition environment support issues (36%), working with school staff and groups to discourage non-

<sup>2</sup> The differences between parents who are involved in school activities related to healthy eating and those who would like to become involved are minor and not statistically significant, as indicated by a series of contingency table analyses ( $p > 0.05$ ). This is due, in part, to the small number of parents who were involved in activities related to healthy eating at the time of the post-survey – only 9 parents indicated having actual involvement in such activities.

nutritious food fundraisers (32%), working with school staff to develop nutrition policies (32%), or promoting the school food service program (30%). Over one-half (60%) of these parents indicated involvement or interest in other activities related to healthy eating.

**Table 3**  
**Percentage of Parents Indicating Involvement or Willingness to Become Involved in School Activities Related to Healthy Eating: Only Parents Who Are Involved or Would Like to Become Involved in Activities Related to Healthy Eating at Post-Survey**

<b>Activities Related to Healthy Eating</b>	<b>Not Involved at Post-Survey, but Would Like to Be (n=44)</b> <b>Percent</b>	<b>Involved at Post-Survey<sup>a</sup> (n=9)</b> <b>Percent</b>	<b>Total at Post-Survey (n=53)</b> <b>Percent</b>
Promoting the idea that nutrition lessons be taught in various school curriculums	57%	78%	60%
Promoting programs that help parents model healthy eating behaviors	45%	44%	45%
Getting students involved in school meal programs	34%	67%	40%
Getting parents involved in school nutrition environment issues	34%	44%	36%
Working with school staff and groups to discourage non-nutritious food fundraisers	32%	33%	32%
Working with school staff to develop nutrition policies	34%	22%	32%
Promoting the school food service program	27%	44%	30%
Other activities focusing on healthy eating	61%	56%	60%

<sup>a</sup> These parents indicated being involved in school activities that focus on healthy eating. However, it is not possible to determine whether respondents in this column are involved in each of these specific activities or would like to become involved in them.

Paired t-tests were used to determine whether the percentage of parents involved in or wanting to become involved in activities related to healthy eating changed between the baseline and post-survey.<sup>3</sup> Results of these paired t-tests are presented in Table 4. During the course of the program, parents were significantly more likely to become involved in or want to become involved in school activities promoting the school food service program ( $p < 0.01$ ) and in school activities focused on getting students involved in school meal programs ( $p < 0.05$ ). There was minimal change in the rest of the activities related to healthy eating.

<sup>3</sup> In order to conduct these analyses, parents who indicated that they did not want to become involved in activities focusing on healthy eating at their child's school were included in these analyses by indicating that the parent was not involved or did not want to become involved in any of the specific activities listed in Table 4.

**Table 4**  
**Change Between Baseline and Post-Surveys in Activities Parents Are Involved in or Would Like to Become Involved: Paired t-test Results for School Activities Related to Healthy Eating**

	Baseline Mean	Post- survey Mean	Mean Difference (Post – Baseline)	t	df	p-value
Promoting the school food service program <sup>a</sup>	6.5%	20.8%	14.3	3.233	76	0.002
Promoting the idea that nutrition lessons be taught in various school curriculums <sup>a</sup>	32.5%	37.7%	5.2	1.424	76	0.159
Getting students involved in school meal programs <sup>a</sup>	13.0%	24.7%	11.7	2.587	76	0.012
Getting parents involved in school nutrition environment issues <sup>a</sup>	14.3%	20.8%	6.5	1.297	76	0.199
Promoting programs that help parents model healthy eating behaviors <sup>a</sup>	20.8%	27.3%	6.5	1.092	76	0.278
Working with school staff to develop nutrition policies <sup>a</sup>	18.2%	20.8%	2.6	0.630	76	0.531
Working with school staff and groups to discourage non-nutritious food fundraisers <sup>a</sup>	13.0%	20.8%	7.8	1.620	76	0.109
Other activities focusing on healthy eating <sup>a</sup>	40.3%	39.0%	-1.3	0.241	76	0.810

<sup>a</sup> Percent indicating ‘yes’ (i.e., 0=no; 1=yes).

Table 5 presents the percentage of parents indicating the *types* of school activities related to physical activity or physical education they are involved in or would like to become involved in at the time of the post-survey. Only parents who indicated that they are involved in school activities related to physical activity or physical education or would like to become involved in such activities responded to this series of questions.<sup>4</sup> Nearly two-thirds of both these groups of parents indicated involvement or interest in becoming involved in school activities that promote time for children to be physically active in school (61%). Over two-fifths of the parents indicated involvement or interest in activities that promote quality physical education programs, or programs that help parents model healthy physical activity behaviors (44%, respectively). Somewhat less than two-fifths of the parents indicated involvement or interest in activities that get parents involved in school physical activity or physical education environment issues, or working with school staff to develop policies on health, physical activity, and/or physical education (37%, respectively). The majority (70%) of these parents indicated involvement or

<sup>4</sup> The differences between parents who are involved in school activities related to physical activity or physical education and those who would like to become involved are minor and not statistically significant, as indicated by a series of contingency table analyses ( $p>0.05$ ). This is due, in part, to the small number of parents who were involved in activities related to physical activity or physical education at the time of the post-survey – only 10 parents indicated having actual involvement in such activities.

interest in becoming involved in other activities focusing on physical activity or physical education.

**Table 5**  
**Percentage of Parents Indicating Involvement or Willingness to Become Involved in School Activities Related to Physical Activity or Physical Education: Only Parents Who Are Involved or Would Like to Become Involved in Activities Related to Physical Activity or Physical Education at Post-Survey**

<b>Activities Related to Physical Activity or Physical Education</b>	<b>Not Involved at Post-Survey, but Would Like to Be (n=44) Percent</b>	<b>Involved at Post-Survey<sup>a</sup> (n=10) Percent</b>	<b>Total at Post-Survey (n=54) Percent</b>
Promoting time for children to be physically active in school	59%	70%	61%
Promoting quality physical education programs	43%	50%	44%
Promoting programs that help parents model healthy physical activity behaviors	45%	40%	44%
Getting parents involved in school physical activity or physical education environment issues	39%	30%	37%
Working with school staff to develop policies on health, physical activity, &/or physical education	36%	40%	37%
Other activities focusing on physical activity or physical education	73%	60%	70%

<sup>a</sup> These parents indicated being involved in school activities that focus on physical activity or physical education. However, it is not possible to determine whether respondents in this column are involved in each of these specific activities or would like to become involved in them.

Paired t-tests were used to determine whether the percentage of parents involved in or wanting to become involved in activities related to physical activity or physical education changed between the baseline and post-survey.<sup>5</sup> Results of these paired t-tests are presented in Table 6. There was minimal change between the baseline and post-surveys in the percentage of parents becoming involved or wanting to become involved in any of the activities presented in Table 6.

<sup>5</sup> In order to conduct these analyses, parents who indicated that they did not want to become involved in activities focusing on physical activity or physical education at their child's school were included in these analyses by indicating that the parent was not involved or did not want to become involved in any of the specific activities listed in Table 5.

**Table 6**  
**Change Between Baseline and Post-Surveys in Activities Parents Are Involved in or Would Like to Become Involved: Paired t-test Results for School Activities Related to Physical Activity or Physical Education**

	<b>Baseline Mean</b>	<b>Post-survey Mean</b>	<b>Mean Difference (Post – Baseline)</b>	<b>t</b>	<b>df</b>	<b>p-value</b>
Promoting time for children to be physically active in school <sup>a</sup>	32.4%	39.2%	6.8	1.396	73	0.167
Promoting quality physical education programs <sup>a</sup>	27.0%	31.1%	4.1	0.830	73	0.409
Getting parents involved in school physical activity or physical education environment issues <sup>a</sup>	23.0%	23.0%	0	0.000	73	1.000
Promoting programs that help parents model healthy physical activity behaviors <sup>a</sup>	23.0%	25.7%	2.7	0.532	73	0.596
Working with school staff to develop policies on health, physical activity, &/or physical education <sup>a</sup>	24.3%	23.0%	-1.3	-0.445	73	0.658
Other activities focusing on physical activity or physical education <sup>a</sup>	37.8%	44.6%	6.8	1.297	73	0.199

<sup>a</sup> Percent indicating ‘yes’ (i.e., 0=no; 1=yes).

The number of activities related to healthy eating and physical activity or physical education, respectively, that parents indicated involvement or interest in becoming involved in were added together at baseline and post-survey. As evidenced in Table 2 at the end of this report, there was a statistically significant increase between the baseline and post-survey in the number of school activities related to healthy eating that parents indicated involvement or interest in becoming involved. On average, parents indicated involvement or interest in becoming involved in 1.6 activities related to healthy eating at the start of the program, but that number grew to 2.1 activities at the end of the program ( $p < 0.01$ ). The maximum number of activities related to healthy eating that parents could choose was eight.

The increase in the number of activities related to physical activity or physical education between baseline and post-survey was small and not statistically significant ( $p > 0.10$ ). On average, parents indicated involvement or interest in becoming involved in 1.7 activities related to physical activity or physical education at baseline; the average was 1.9 at post-survey. The maximum number of activities related to physical activity or physical education that parents could choose was six.

### ***Differences Between SHLI & FCCLA Schools***

Analyses were conducted in order to see if there were differences between the SHLI (staff driven) and FCCLA (student driven) schools on the post-survey.<sup>6</sup> With only one exception, differences between these two groups were minor and not statistically significant ( $p>0.05$ ).

The one exception was that parents in SHLI schools were significantly less likely to indicate on the post-survey that schools are required to comply with state or federal rules about the nutritional value of a la carte foods ( $F=5.931$ ;  $df=1,59$ ;  $p<0.05$ ). About two-thirds (67%) of the parents in SHLI schools indicated this was the case compared to 91% of parents in FCCLA schools. There was a significant decrease in the percentage of parents in SHLI schools who indicated that schools are required to comply with state or federal rules about the nutritional value of a la carte foods – 92% of parents on the baseline and only 67% on the post-survey indicated that schools are required to comply with state or federal rules about the nutritional value of a la carte foods ( $t= -3.213$ ;  $df=38$ ;  $p=0.003$ ). In contrast, the baseline and post-survey scores of parents in FCCLA schools were similar – 87% of parents on the baseline and 91% on the post-survey indicated that this was the case ( $t=0.569$ ;  $df=22$ ;  $p=0.575$ ).

### **Summary**

Results indicate that parents who participated in the *Action for Healthy Kids* outreach program experienced statistically significant gains in knowledge related to the program. Gains in knowledge related to both healthy eating as well as physical activity and physical education are evident. Knowledge gains were most clearly evident in areas focusing on the importance of children eating nutritiously and being physically active, and of the importance of parents modeling these behaviors.

Overall, parents' involvement in school activities showed minor change between baseline and post-surveys. Parents who were not involved at baseline in school activities related to healthy eating, or physical activity and physical education were no more likely to be involved in these programs at post-survey. However, those parents who were involved or who wanted to become involved in these school activities at baseline became even more involved by the end of the outreach program in school activities focusing on healthy eating. In particular, parents who were already involved or who would like to become involved in school activities focusing on healthy eating were more likely to become involved (or wanted to become involved) in activities promoting the school food service program and getting students involved in school meal programs. Overall, the number of activities related to healthy eating that these parents were involved in or were interested in increased significantly between baseline and post-surveys. On the other hand, parents were no more likely to become involved in activities related to physical activity or physical education by the end of the program.

Overall, there were minor differences in survey responses between parents in staff driven (SHLI) and student driven (FCCLA) schools. The only difference that occurred was that parents in SHLI schools were significantly less likely to indicate on the post-survey that schools are required to comply with state or federal rules about the nutritional value of a la carte foods.

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<sup>6</sup> Baseline scores were controlled in the statistical analyses using analysis of covariance.



**Table 2**  
**Change Between Baseline and Post-Surveys: Paired t-test Results**

	<b>Baseline Mean</b>	<b>Post-survey Mean</b>	<b>Mean Difference (Post – Baseline)</b>	<b>t</b>	<b>df</b>	<b>p-value</b>
The foods a child eats affect how well that child learns. <sup>a</sup>	4.5	4.7	0.2	3.707	164	<0.001
The amount of exercise a child gets affects how well that child learns. <sup>a</sup>	4.3	4.5	0.2	4.545	164	<0.001
Children who see their parents eat fruits and vegetables everyday are more likely to eat fruits and vegetables everyday. <sup>a</sup>	4.5	4.6	0.1	2.466	164	0.015
Children who see their parents exercise regularly are more likely to be physically active. <sup>a</sup>	4.5	4.6	0.1	3.603	163	<0.001
It is okay for children to buy candies, cookies, and soda at school, such as through vending machines, school stores, fundraisers, or a la carte. <sup>a</sup>	2.2	2.1	-0.1	-1.551	162	0.123
Children should attend a class everyday in school where they learn about the benefits of exercise and how to be physically active for life. <sup>a</sup>	3.9	4.1	0.2	2.927	164	0.004
Schools are expected to follow rules about the <i>different kinds of foods they offer to students</i> . How much do you know about these rules? <sup>b</sup>	2.3	2.6	0.3	4.877	160	<0.001
Schools are expected to follow rules and regulations about how <i>physical education (PE) classes are taught</i> . How much do you know about these rules and regulations? <sup>b</sup>	2.1	2.4	0.3	4.483	159	<0.001
Schools are required to comply with state or federal rules about the nutritional value of foods offered ...						
In vending machines. <sup>c</sup>	54.1%	42.6%	-11.5	-1.843	60	0.070
Through school meals, including the National School Lunch Program and the School Breakfast Program. <sup>c</sup>	99.2%	97.0%	-2.2	-1.346	133	0.181
A la Carte foods. <sup>c</sup>	90.9%	77.3%	-13.6	-2.407	65	0.019
Through fundraisers. <sup>c</sup>	20.3%	21.9%	1.6	0.444	63	0.658

**Table 2**  
**Change Between Baseline and Post-Surveys: Paired t-test Results**

	<b>Baseline Mean</b>	<b>Post-survey Mean</b>	<b>Mean Difference (Post – Baseline)</b>	<b>t</b>	<b>df</b>	<b>p-value</b>
The Pennsylvania School Code has rules for Physical Education (PE) about the ...						
Number of days per week students are required to attend PE. <sup>c</sup>	91.4%	86.0%	-5.4	-1.917	92	0.058
Number of minutes per week students are required to attend PE. <sup>c</sup>	89.9%	92.8%	2.9	0.705	68	0.484
Which topics are taught in PE classes. <sup>c</sup>	85.5%	85.5%	0	0.000	68	1.000
How topics are taught in PE classes. <sup>c</sup>	73.6%	69.8%	-3.8	-0.814	52	0.419
Are you involved or would you like to become involved in activities at your child’s school that focus on healthy eating? <sup>d</sup>	1.8	1.8	0	0.000	90	1.000
Number of school-related activities involved in or would like to become involved in focusing on healthy eating. <sup>e</sup>	1.6	2.1	0.5	3.132	76	0.002
Are you involved or would you like to become involved in activities at your child’s school that focus on physical activity or physical education? <sup>d</sup>	1.8	1.8	0	0.726	88	0.470
Number of school-related activities involved in or would like to become involved in focusing on physical activity or physical education. <sup>f</sup>	1.7	1.9	0.2	1.170	73	0.246

<sup>a</sup> 1=strongly disagree; 2= disagree; 3=no opinion; 4=agree; 5=strongly agree

<sup>b</sup> 1=nothing; 2=a little; 3=some; 4=a lot

<sup>c</sup> Percent indicating ‘yes’ (i.e., 0=no; 1=yes).

<sup>d</sup> 1=no; 2=not involved now, but would like to become involved; 3=yes

<sup>e</sup> Only respondents who are involved or would like to become involved answered question; scores range from 1 to 8.

<sup>f</sup> Only respondents who are involved or would like to become involved answered question; scores range from 1 to 6.