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## EXECUTIVE SUMMARY

**Purpose:** Overweight children carry a greater risk of becoming obese adults and developing adverse health effects, such as heart disease and diabetes. The purpose of this initiative is to combat childhood obesity **by creating conditions that promote healthy nutrition and physical activity as a lifelong commitment particularly for faculty, students and families through integrated activities in schools and communities.** In 2005, the *Wellness Initiative for the School Environment: Smart Nutrition and Activity Collaborative (WISE SNAC)* was initiated with public elementary schools in the Wissahickon and Souderton Area School Districts by conducting a needs assessment to identify readiness, needs, and opportunities present in each school district. During the past year, a similar needs assessment has been conducted in North Penn School District (NPSD) to determine the most effective path to bringing NPSD into the WISE SNAC collaborative and achieve the long-term goals of the initiative.

**Methodology:** Surveys, focus groups and key-informant interviews were conducted with students, parents/guardians, faculty/staff and school administrators in NPSD. This report is based upon an intensive examination of results from 1,196 surveys (430 student surveys, 649 parent/guardian surveys, 109 faculty/staff surveys, 8 administrator surveys), 7 focus groups (2 student focus groups, 2 parent/guardian groups, 2 faculty/staff groups, one principals focus group), and 17 key informant interviews. Data was gathered between September 2006 and June 2007. The Centers for Disease Control's evidence-based Coordinated School Health Program Model provided the framework for the needs assessment.

**Key Findings:** Our findings address two key questions 1) What are the attitudes and behaviors of students parents/guardians, faculty/staff and administrators around nutrition and physical activity, particularly in the school environment and 2) How can messages about healthy eating and physical activity be successfully integrated into the school environment?

Findings indicate that students, parents/guardians, and school personnel all have an accurate understanding of what constitutes good nutrition and physical activity. However, students can improve upon current eating behaviors, such as eating breakfast everyday and reducing consumption of unhealthy snacks between meals. In addition, as NPSD students get older they are less likely to acknowledge the importance of eating fruits and vegetables and engaging in physical activities, more likely to report drinking soda and eating sweets, and reported consuming dairy products less frequently. Particular attention should be paid to reaching these children with educational messages tailored to their developmental age, and to presenting them with opportunities to remain active as they pursue new interests outside home and school. A majority of students view parents/guardians and faculty/staff as their role models for healthy lifestyles, presenting a clear opportunity for positive role modeling at home and school.

Parents/guardians in NPSD are aware of guidelines for healthy eating and their shopping behaviors appear to reflect this knowledge. Nearly all parents/guardians report buying dairy, grains, fruits and vegetables, and meat regularly, while less than half reported buying chips or sweets on a regular basis when they shop and only one-quarter reported buying soda regularly. One-third of parents/guardians said time constraints make it difficult to prepare healthy meals for their family. Less than one-fifth of parents/guardians reported there were few safe places for their children to play in their neighborhood, suggesting that access to outdoor physical activity is not as great a problem as it is in some communities.



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The capacity and interest of faculty/staff to integrate nutrition and physical activity into the school day was defined by the needs assessment. Overall, faculty/staff agree that integrating nutrition and physical activity messages into the current curricula is possible. About half of faculty/staff indicated that they currently have access to curricula on nutrition and physical activity, while about half said they had already made changes to their classroom teaching plan to focus on healthy eating habits, exercise and fitness. About three-quarters of faculty/staff are willing to participate in training to learn more about teaching nutrition and physical activity in the classroom, with a preference for school-based in-service training. There was less interest in off-site seminars and on-line self-study. Most faculty/staff said they would need materials/supplies and additional time to effectively teach nutrition and physical activity in the schools. A smaller number, although still more than half, said they would need more training, while less than one-third were interested in having teaching assistants.

School administration was generally supportive of incorporating and enhancing nutrition and physical activity messages in the schools. In order to assist faculty/staff efforts to integrate nutrition and physical activity in the classroom, all of the administrators surveyed were willing to support on- and off-site seminars and ACT 48 continuing education credits. This support also extends to purchasing resources and materials for curricula integration. Administrators believed parents/guardians could play a role by participating in volunteer groups, collaborating with teachers and other parents, and leading student health groups. Although principals who participated in the focus groups were very knowledgeable about what constitutes healthy eating and exercise, responses to administrator surveys indicate that administrators may benefit from educational materials that spell out specific guidelines around nutrition.

All three focus groups suggested a need for continuing to build upon the positive changes in cafeteria offerings by school food services. Parents/guardian, faculty/staff, and principals stressed that making improvements in school food service provisions is one of the most important areas for schools to foster healthy eating among students. All focus group participants strongly recommended increasing the availability of healthy, attractively presented foods, especially raw fruits and vegetables.

**Conclusions:** The needs assessment in the North Penn School District revealed opportunities for promoting good nutrition and physical activity in both the home and school environments. When it comes to specific pathways to promoting healthy eating and exercise habits among students, there were several areas of agreement for parents/guardians and faculty/staff: 1) students need more opportunities to be physically active throughout the school day; 2) improvements to the school cafeteria menu are still needed; and 3) readily available resources and tools, such as the WISE SNAC Monthly Messages, are needed to assist parents/guardians and faculty/staff in helping children.

The Coordinated School Health Program model encourages community involvement. This aspect was confirmed by focus groups with parents/guardians, faculty/staff, and administrators in NPSD, all of which mentioned the importance of involving community partners, such as the Boys and Girls Clubs, Scouts and YMCA. Overall, participants in the NPSD WISE SNAC Needs Assessment appear ready to involve community organizations as part of the collaboration between families and schools to promote healthy behaviors among students both at home and at school, as long as these efforts are supported and coordinated on a district-wide level.



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## INTRODUCTION

As childhood obesity rates in the United States reach an unprecedented high, the Surgeon General has declared that our country may be raising the first generation of children who will not live as long as their parents. Overweight children carry a greater risk of becoming obese adults and developing adverse health effects, such as heart disease and diabetes. A long-term strategic goal of the Health Promotion Council of Southeastern Pennsylvania (HPC) is to prevent and reduce the negative impact of childhood obesity through community-based programs. Also committed to combating childhood obesity on a local level, the North Penn Community Health Foundation has been providing funding to HPC for the *Wellness Initiative for the School Environment: Smart Nutrition and Activity Collaborative (WISE SNAC)*, since 2005. The long-term goal of WISE SNAC is to create conditions that promote healthy nutrition and physical activity as a lifelong commitment for students, families, and faculty through integrated activities in schools and communities.

Bringing the WISE SNAC model to a school (or school district) involves four systematic phases. Phase 1 is a needs assessment to determine the particular needs and resources of each school, and to engage administration, staff, parents/guardians and students in the WISE SNAC planning. Phase 2 involves development and implementation of a tailored approach based on findings from the needs assessment. Phase 3 provides an evidence-based evaluation of the program. Phase 4 addresses issues of sustainability and integration of WISE SNAC messages and activities throughout the involved school(s) and surrounding communities. Through this careful and strategic approach, WISE SNAC is able to meet the needs of each school involved in the Collaborative while building upon successes achieved in the earliest stages of the project.

A needs assessment was conducted throughout the thirteen elementary schools of the North Penn School District. The aims of the needs assessment were to:

- 1) Identify general knowledge, behaviors and attitudes of students and parents/guardians as they relate to good nutrition and physical activity.
- 2) Examine attitudes and behaviors of faculty/staff and school administrators toward integration of wellness messages focused on nutrition and physical activity into the school curriculum.
- 3) Discover barriers and facilitators to implementing the Local Wellness Policy and nutrition/physical activity programs in the school environment as identified by students, parents/guardians, faculty/staff and school administrators.

Answering these questions is an essential first step to designing and implementing successful programs that will aid school districts in creating healthier schools and communities. This document is organized to reflect the WISE SNAC needs assessment process and to report the findings in the order in which they were collected.



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## METHODS

### Sample

The needs assessment includes a representative sample of students grades 3-6, parents/guardians of students enrolled in grades K-6<sup>th</sup>, K-6<sup>th</sup> grade faculty/staff and administrators from all thirteen elementary schools in the North Penn School District (NPSD). Based on lessons learned through the Wissahickon and Souderton Area School Districts Needs Assessment phase and through input from key administrative staff at NPSD, K-2<sup>nd</sup> grade students in the NPSD were not included due to limitations in the use of the information obtained and the challenges in collecting data from these students. Additionally, target numbers of students, parents/guardians, faculty/staff, and administrators were established to represent the elementary schools in NPSD.

### Data Collection

Qualitative and quantitative methods were used to gather baseline data between September 2006 and June 2007. HPC staff obtained all data within school district policies and protocols. This report is based upon an intensive examination of results from 17 key informant interviews, 1,196 surveys (430 student surveys, 649 parent/guardian surveys, 109 faculty/staff surveys, 8 administration surveys), and 7 focus groups (two student focus groups, two parent/guardian groups, two faculty/staff focus groups, one principal focus group).

Another measure included in this report is the Body Mass Index (BMI) of students K-6<sup>th</sup> grade, which was collected and reported by school district nursing staff, as mandated by the Pennsylvania Department of Health, starting with K-4<sup>th</sup> grades in the 2005-06 school year and expanding up to 8<sup>th</sup> grade in 2006-2007. BMI provides a reasonable index of adiposity that is based on a calculation of the ratio of weight to height that is reliable, non-intrusive and has been validated against measures of body density<sup>1</sup>. In children, the BMI is plotted on the Centers for Disease Control and Prevention Growth Charts to obtain a percentile ranking that is specific to age and gender<sup>2</sup>. BMI provides a consistent screening and tracking tool used to determine whether a child is within a normal growth pattern, underweight, at risk for overweight or overweight.

#### ▪ *Key Informant Interviews*

Key informant interviews included a purposive sampling of key decision-making administrators serving the North Penn School District before data collection began and continued throughout the needs assessment phase. Key informant interviews were conducted through well-coordinated meetings, emails and phone calls with administration and technology staff from NPSD to finalize and approve surveys, procedures and methods. These interviews were also critical in the coordination of the needs assessment and establishing effective communication systems, procedures, and logistics. Key informants revealed additional staff and teams, such as physical education/health teachers, school nurses, food service personnel, learning coordinators, technology staff, and Effective Schools Correlate Teams, to be key partners in the WISE SNAC process. NPSD's wellness committee and steering committee also contributed meaningful guidance and input into the needs assessment. Key informant interviews served to create further buy-in and gain further insight into ideas and strategies for future WISE SNAC development.

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<sup>1</sup> Pennsylvania Department of Health (2004). "Procedures for the Growth Screening Program for Pennsylvania's School-age Population." Retrieved on September 7, 2006 from: [www.dsf.health.state.pa.us/health/lib/health/schoolhealth/growthmanual061604.pdf](http://www.dsf.health.state.pa.us/health/lib/health/schoolhealth/growthmanual061604.pdf)

<sup>2</sup> Centers for Disease Control and Prevention (2006). "BMI — Body Mass Index: About BMI for Children and Teens." Retrieved on September 7, 2006 from: [http://www.cdc.gov/nccdphp/dnpa/bmi/childrens\\_BMI/about\\_childrens\\_BMI.htm](http://www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.htm)



All meetings were recorded and transcribed by HPC’s WISE SNAC staff as a part of the data collection and maintenance process. Specific details about how key informant interviews were instrumental in the need assessment process are described throughout the sections below.

- *Surveys*

Health Promotion Council (HPC) utilized the surveys developed and piloted through the 2005-2006 WISE SNAC Needs Assessment at Wissahickon (WSD) and Souderton Area (SASD) School Districts. Surveys were collected anonymously, identifying only the school and grade level for students and parents/guardians; and the school building for faculty/staff. WISE SNAC entailed a significant “needs assessment awareness campaign” period during the month of February 2007 to bring awareness to the project and to recruit survey and focus group participants within all cohorts. Survey recruitment methods are summarized in Table 1.

**Table 1: Survey Recruitment Methods**

Target Population	North Penn School District
Students (3-6)	Principals / PE-Health Faculty
Parents / Guardians	Flyers home <sup>3</sup> District’s Cable T.V. Channel District Web Site Announcement
Faculty/Staff	e-Newsletter “Inside Information” Email announcement with survey link included District Web Site Announcement Flyer
Administration	e-Newsletter “Inside Information” Email announcement with survey link included District Web Site Announcement Flyer

Key informant interviews identified the optimal mechanisms and critical personnel for recruiting participants and administering surveys to students, parents/guardians, faculty/staff, and administrators. Parents/guardians received a flyer via school packets sent home with students that directed parents to go to the district’s web site which provided a web site link for completing the survey and where to obtain more information about WISE SNAC. Surveys were distributed in either paper or online format, as summarized in Table 2.

**Table 2: Survey Distribution Methods**

Target Population	North Penn School District Distribution Methods
Students (3-6)	Paper
Parents / Guardians (K-6)	Online / Paper
Faculty / Staff (K-6)	Online
Administration	Online

<sup>3</sup> Flyers were translated into Vietnamese, Spanish, Bengali, Gujarati, and Korean. Flyers may not have been distributed to all parents of ESL students grades 3-6. One ESL faculty person indicated that they did not receive the English version in order to be able to read the translated flyer or identify the language of the flyer.



As determined by key informant interviews, a representative sample of students in grades 3-6 completed paper surveys in Physical Education class. To help ensure consistency and reliability in data collection, classroom teachers were provided with a script for facilitating surveys. English as a Secondary Language (ESL) faculty assisted ESL students in their class to complete the survey.

In recognition that not all parents/guardians have computer access or skills, the district offered both paper and online surveys. Opportunities for parents/guardians to complete paper surveys were provided through each elementary school's office. Surveys were translated into five languages, Vietnamese, Spanish, Bengali, Gujarati, and Korean, in an effort to include parents/guardians from ethnically and culturally diverse backgrounds.

Through an email invitation to all K-6<sup>th</sup> grade faculty/staff, which included a web link to the survey, a representative number of faculty members voluntarily participated in the online survey.

Similarly, key informant interviews identified which key K-6<sup>th</sup> grade administrators would receive the online survey administered through an email invitation containing the web link. Surveys are available in Appendix A.

▪ *Focus Groups*

Focus groups were held to further expand upon survey findings and to identify areas of need, effective communication methods and possible implementation strategies for nutrition and physical activity messages. Focus group guides were developed by HPC and piloted during the 2005-2006 WISE SNAC Needs Assessment in Wissahickon and Souderton Area School Districts. Focus group guides are located in Appendix B.

Table 3 summarizes focus group recruitment methodology, which was guided through verbal and online key informant communications. Through evidence revealed during the 2005-2006 WISE SNAC needs assessment and confirmed through key informant interviewing, seven (7) focus groups were held, two (2) with 3<sup>rd</sup> - 6<sup>th</sup> grade students, two (2) with parents/guardians of K-6<sup>th</sup> grade students, two (2) with K-6<sup>th</sup> grade faculty and one (1) with elementary school principals.

**Table 3: Focus Group Recruitment Methods**

Target Population	North Penn School District
Students (Grades 3-6)	-Flyers home to parents -Principals
Parents / Guardians (K-6)	-Flyers home -Cable T.V. Announcement -Elementary School Homepage
Faculty / Staff (K-6)	- At regular meeting, elementary school Principals reached consensus and identified two schools to participate. Principals recruited faculty.
Administration (K-6)	- Elementary School Principals Meeting – Agenda item

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Student focus groups targeted grades 3-6 in order to extract meaningful data from these sessions and remain consistent with the students groups surveyed. Two (2) separate focus groups were conducted with students at two (2) elementary schools in NPSD. During a regularly scheduled Principals' Meeting, principals collectively identified two (2) elementary schools in their district which would hold the student focus groups. The principals at these two (2) selected schools recruited 3<sup>rd</sup> - 6<sup>th</sup> grade classroom faculty to identify students to participate in the focus group, resulting in 10 students in one school and 12 in the other school.

Participation in two (2) parent/guardian focus groups sessions, on a first-come, first-served basis, was offered to parents/guardians at all thirteen elementary schools. Paper, online and cable television announcements invited parents/guardians to focus groups. Parent/guardians were self-selected and confirmed attendance via email or phone to HPC staff. NPSD hosted the two (2) parent/guardian focus groups during one evening at their district administration building.

At the same monthly Principals' Meeting described above, principals agreed upon two (2) elementary schools in which they would hold two (2) faculty/staff focus groups. Recruitment was initiated through email invitation and finalized by each school's principal. Each school's principal confirmed the focus group date and time via email and/or phone with HPC WISE SNAC staff.

HPC's WISE SNAC Project Director was the focus group moderator for all of the focus groups. Exclusive of the students, focus groups were audio recorded and an assistant accompanying the moderator took handwritten notes. Students were not audio recorded due to school district policies. Focus groups were transcribed by one person and verified by the focus group moderator, after which audio recordings were destroyed.

Due to school policies, incentives were provided to only parent/guardian focus group participants who received a \$20 grocery card, a WISE SNAC Thank You card, and a healthy snack served during the session. Students and faculty were provided with a fresh fruit snack. Faculty also received a WISE SNAC Thank You card for their participation.

## **Data Management**

Key informant interviews identified that NPSD employed the Zoomerang™ online survey software for their surveys. HPC worked with key technology staff to utilize the district's existing membership for uploading and administering the parent/guardian, faculty/staff and administration surveys. Responses from paper surveys were entered into Zoomerang™ by HPC staff; this included only the 3<sup>rd</sup> - 6<sup>th</sup> grade student surveys.

Data was reported in Microsoft® Excel spreadsheet format and provided to a consulting quantitative data analyst for analysis and reporting.

Focus groups and key informant interviews were transcribed into Microsoft® Word and analyzed by an experienced, consulting qualitative analyst. Key informant interviews were not audio recorded, however, transcribed notes were verified for accuracy by all those interviewed.



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## Data Analysis

### ▪ *Survey Data*

Data from parent/guardian and student surveys was received from school districts free of identifying information. An independent quantitative research consultant produced a descriptive statistics narrative report based upon the Zoomerang™ results.

### ▪ *Focus Group Data*

Analysis of the focus group data followed a series of systematic steps in order to provide a structured approach to ground the flexible, exploratory nature of qualitative research. In order to protect confidentiality of subjects, transcripts of focus groups were “cleaned” of all identifying information. The “clean” electronic copy of each transcript was converted to plain text format and entered into Atlas-ti as ‘primary documents’ in the study database (called a ‘hermeneutic unit’). Atlas-ti is a software program designed to assist in the management and analysis of qualitative data. Although the software can be used for operations such as theoretical modeling, for the purposes of this exploratory study Atlas was used primarily to store and retrieve individual responses from focus group participants and interpretive memos written by the investigators to:

- Develop codes and definitions of codes
- Compare coded material within and across focus groups
- Search for specific use of language relevant to the study aims
- Organize transcripts into “families” in order to compare the presence or absence of themes across and within focus groups.

Transcripts were sorted into “families” according to assigned variables (i.e. students, parents, and faculty/staff). This allowed for comparisons of relationships and concepts present in each family and between families. The constant comparative method was used for data analysis, involving meticulous inspection of each line of text. Text is then tagged with appropriate codes. Codes are then grouped together into themes and then the relationships among themes are explored.

## RESULTS

### Sample

- *Survey Respondents*

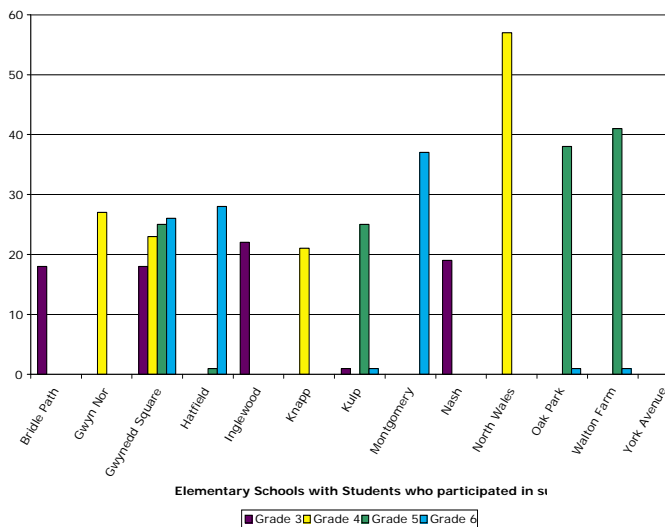
A total of 1,196 participants from the North Penn School District (NPSD) answered four different surveys about nutrition and physical activity. Table 1 lists the number of respondents by the four different groups. The parents/guardian group contained individuals who had one or more children in elementary school, representing a total of 855 children between the grades of kindergarten through sixth.

**Table 1: Number of respondents**

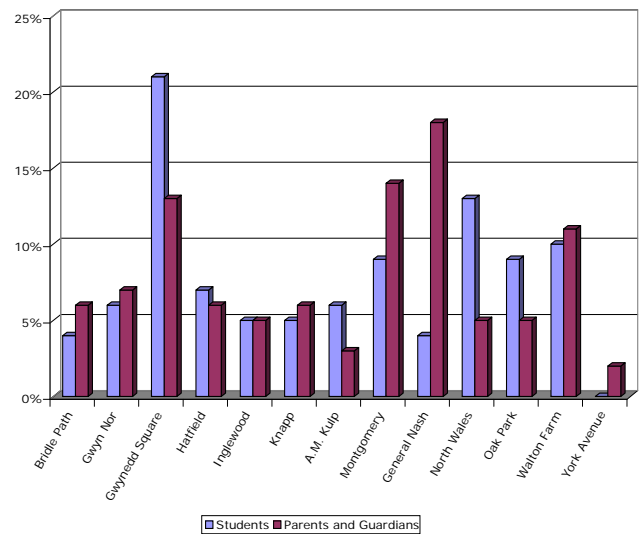
Respondent type	Number
Students (grades 3-6)	430
Parents/Guardians (grades K-6)	649
Administrators (grades K-6)	8
Faculty/Staff (grades K-6)	109

Of the thirteen elementary schools sampled for survey, only one school, Gwynedd Square, had participants from all grades 3-6. (Figure 1). North Wales Elementary School had a larger number of fourth graders participating in the survey.

**Figure 1. Student participation in the survey by elementary school and grade<sup>4</sup>**



**Figure 2. Student /parent participation in the survey by elementary school<sup>5</sup>**



<sup>4</sup> Key informant interviews determined which schools surveyed specific grades to include a representative sample of students in grades 3-6 from across the district.

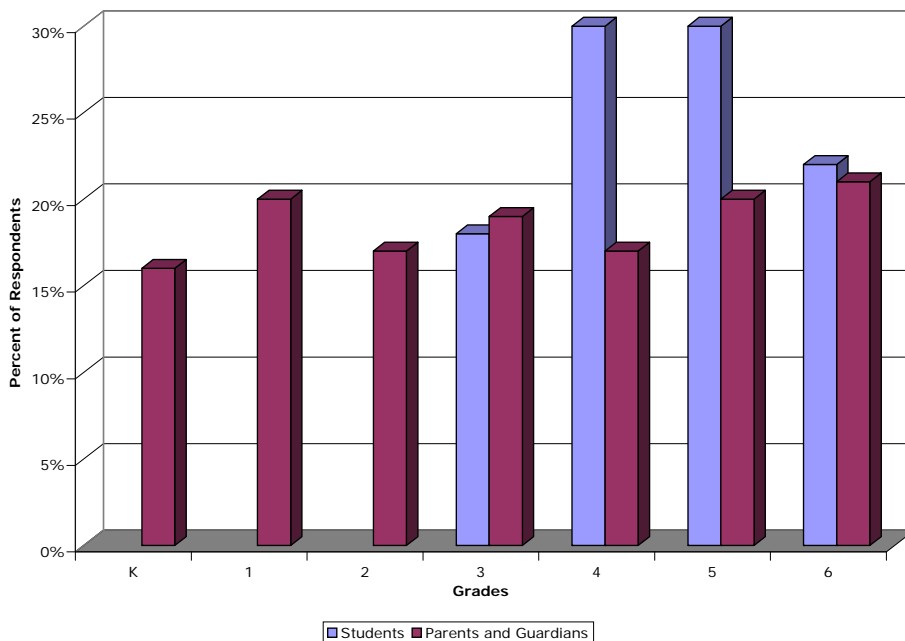
<sup>5</sup> This data is for informational purposes only. The needs assessment does not aim to have equal or comparative numbers of parents and students.



Figure 2 compares student participation in the survey with those of their parents and guardians. Gwynedd Square, North Wales, and Walton Farms had the greatest number of students participate in the survey. General Nash, Montgomery, Gwynedd Square, and Walton Farms had the greatest number of parents/guardians participate in the survey. York Avenue had no student respondents, but did have parents/guardians that participated. For anonymity, faculty/staff and administrators were not asked to provide information on their assigned elementary school.

The percentage of parents/guardians who responded by grade is compared to the number of students in Figure 3. Parents/ guardians had children in all seven grades, but more students were sampled in grades four and five and slightly more in grade six, than parents. Faculty and staff were not asked the grades with which they work or teach.

**Figure 3. Comparison of respondents by elementary school grade<sup>6</sup>**



▪ *Focus Group Respondents*

A total of 22 students participated in two (2) focus groups, while 20 parents/guardians participated in two focus groups. Two focus groups were conducted with 15 faculty/staff and all 13 elementary school principals took part in one focus group.

<sup>6</sup> K-2<sup>nd</sup> grade students were intentionally excluded from the needs assessment process. The needs assessment does not aim to have equal or comparative numbers of parents and students.

- *BMI Data*

In accordance the PA Growth Screening Program, all thirteen elementary schools reported Body Mass Index (BMI) data for a total of 6,553 students<sup>7</sup>. Table 5 shows for each elementary school the percentage of K-6<sup>th</sup> grade students that are at or above the 85<sup>th</sup> percentile, which includes both the “at risk for overweight” and “overweight” categories. Overall, an average of 29.5% of students in elementary schools across the district had a BMI at or above the 85<sup>th</sup> percentile.

**Table 5: Percent of Students Grades K-6<sup>th</sup> in “At Risk” Categories for Body Mass Index\***

<b>Elementary School</b>	<b>Total &gt;85<sup>th</sup> percentile (at risk for overweight and overweight categories)</b>
A.M. Kulp	34.3%
Bridle Path	28.0%
General Nash	33.7%
Gywn Nor	31.3%
Gywnedd Square	33.5%
Hatfield	19.7%
Inglewood	11.3%
Knapp	33.3%
Montgomery	28.0%
North Wales	30.0%
Oak Park	34.8%
Walton Farms	29.3%
York Avenue	36.0%
<b>AVERAGE:</b>	<b>29.5%</b>

\* Although K-8 BMI was measured, only K-6 is reported for consistency with the WISE SNAC needs assessment conducted at the elementary level.

## Main Findings

Guided by the Coordinated School Health Program model, the needs assessment was designed to focus on several cohorts in the school environment: students, parents/guardians, faculty/staff and administrators. Responses to surveys provided a broad overview of knowledge and attitudes about nutrition and physical activity, self-reported behaviors, and preferred methods of learning. Focus group discussions offered deeper insight into the challenges faced by principals, faculty/staff and parents/guardians in promoting healthy behaviors among students. They also revealed potential facilitators to creating change in the school environment. This section presents all of the survey findings followed by focus group results from each cohort – students, parents/guardians, faculty/staff, and administration.

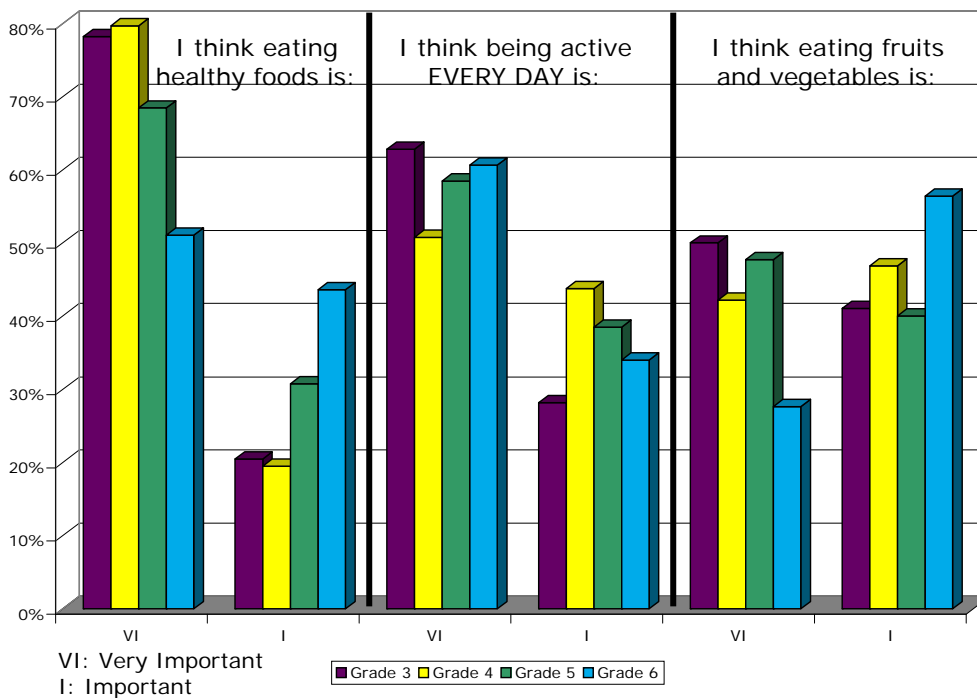
- *Survey Results: Students*

Students were asked about their attitudes toward the importance of healthy eating habits and physical activity (Figure 4).

<sup>7</sup> Enrollment data from NPSD Enrollment Summary report, April 2007



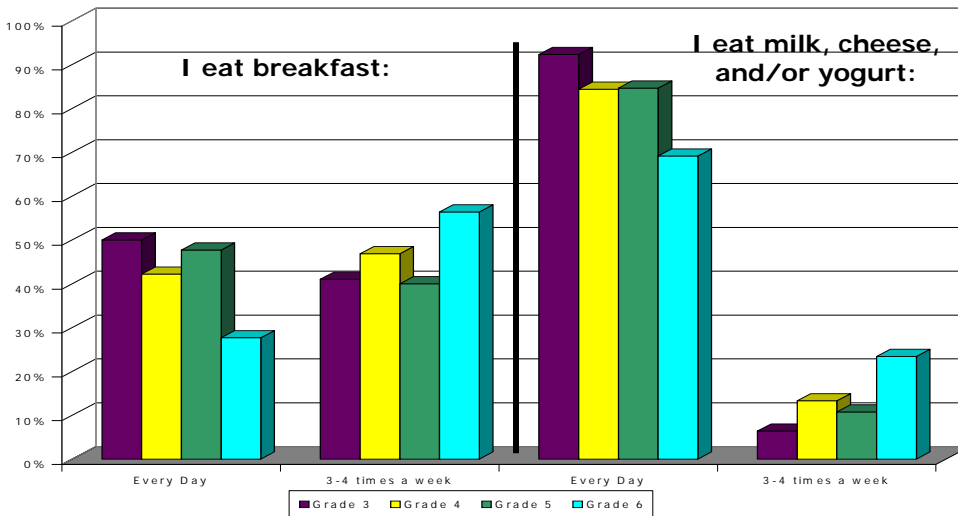
**Figure 4: Student responses by grade - Importance of eating and being active regularly**



Three questions were asked about importance of eating healthy foods, being active every day, and daily consumption of fruits and vegetables. When asked if eating healthy was important, 99% of all grades responded either very important or important. But when examined by grade, the sixth graders are almost evenly split between very important and important. Another question that was asked concerned physical activity. Students were asked how important it was to be physically active. The students responded (>90%) that it is very important or important to be active every day. The fourth graders were almost equally split on their answers, while almost two-thirds of the fifth and sixth graders said it was very important. The last question of this type was about consumption of fruits and vegetables. More variation in responses was evident in this question. Most students (>84%) answered it was very important or important to eat fruits and vegetables on a daily basis. The number of students reporting that it was very important was decreased from the previous two questions, with less than 50% of any grade reporting it was very important. These results may suggest a couple of things: 1) while students view healthy eating as important there may be a disconnect between where fruits and vegetable fit into healthy eating; 2) the importance of daily physical activity should be stressed as part of one’s daily habits, especially as students advance from grade to grade and the potential for additional interests may compete with physical activities in time.

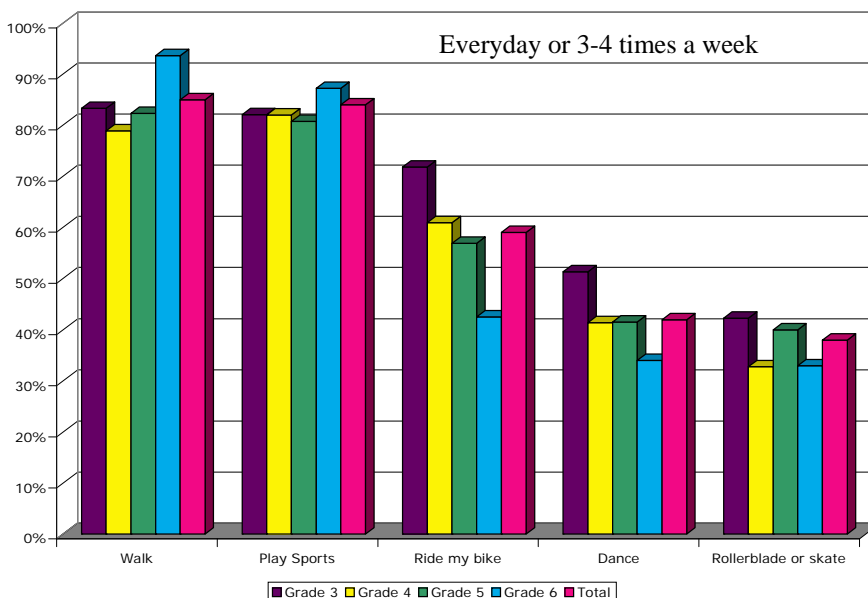
Less than half of all students responded that they eat breakfast daily (Figure 5). Most (>84%) report they eat breakfast only at least 3-4 times a week, but sixth graders were the least likely to eat breakfast regularly. Almost all the students (>93%) eat a dairy product at least 3-4 times a week, with 92% of third graders eating milk, cheese or yogurt every day, while only 69% of sixth graders report consuming this food group on a daily basis.

**Figure 5. Student responses - Frequency of eating breakfast and certain dairy products**



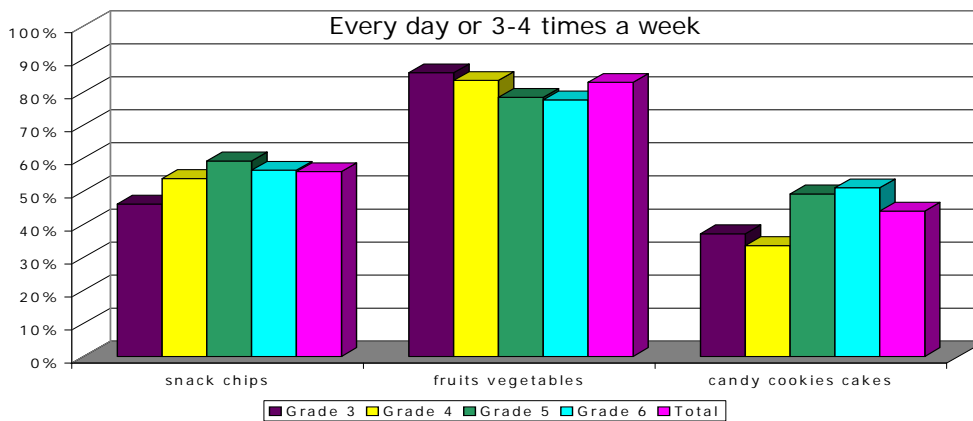
Students were asked about their participation in the following activities: walking, playing sports, riding a bicycle, dancing, or rollerblading/ skating (Figure 6). Most of the students (>83%) responded that they either walk or play sports either every day or 3-4 times per week, with sixth graders reporting walking and playing sports as the most frequent activity. Third graders are most likely to ride a bicycle (72%), with majority of fourth and fifth graders also participating in that activity. Only 43% of sixth graders report frequent cycling activities. Less than half the students dance or participate in rollerblading/skating, with sixth graders participating less than other grades. A plausible explanation of these results might be that as students develop their interest in certain types of physical activities may change. Also, the time available to students may change due to interests, family commitments or other outside activities that do not involve physical activity.

**Figure 6. Students' frequency of participation in physical activities by grade**



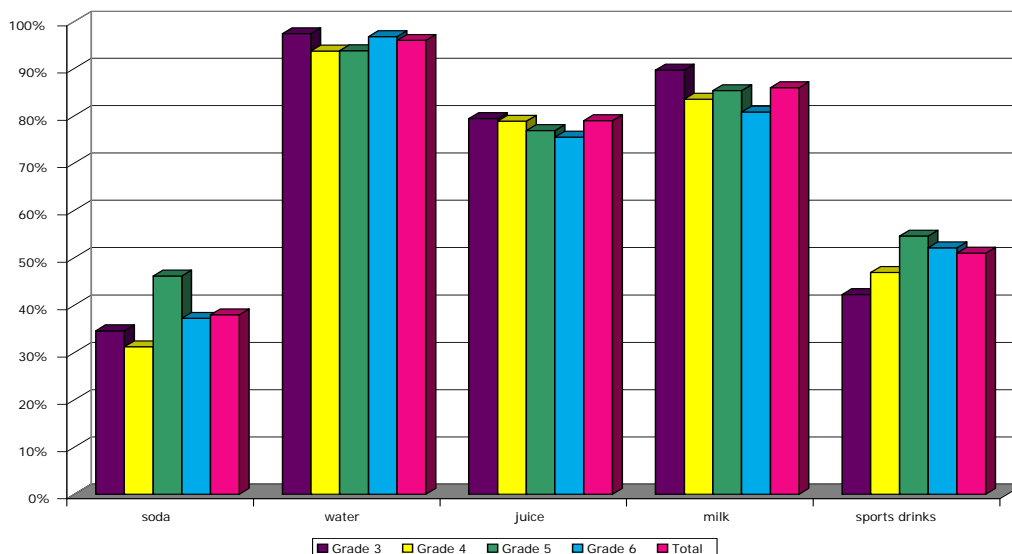
Snack preferences were sampled (Figure 7). Students were asked, “if you are hungry between meals, how often do you reach for snack chips, fruits and vegetables or candy, cookies, and cakes?” Overall, slightly more than half (56%) of the children would reach for snack chips (cheese curls, potato chips), 83% eat fruits and vegetables, and 44% eat sweets like candy, cookies or cakes on a daily basis or at least 3-4 times a week. Little difference exists between the grades in terms of snack chips or fruits and vegetables. But the younger students report less sweet eating and the older student report greater sweet eating. One potential explanation may include that parents may have a greater influence over consumption of sweets for younger students and older students are more responsible for their own choices.

**Figure 7. Frequency of snack choices by grade (3<sup>rd</sup>-6<sup>th</sup>)**



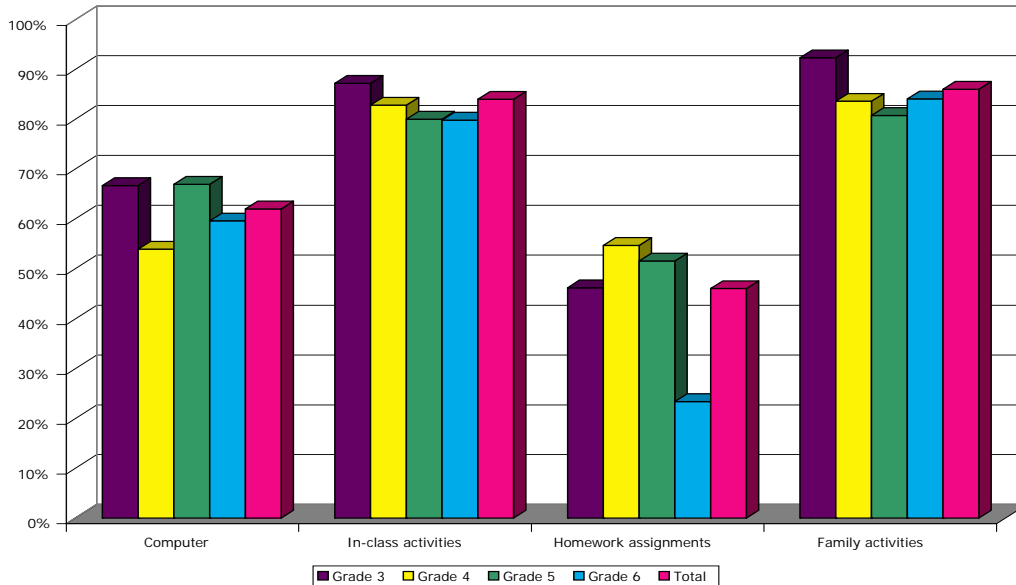
When asked what students drink, 96% of all grades reported drinking water (Figure 8) every day or at least 3-4 times a week, with 86% of students drinking milk and 70% choosing juice. Only 38% said they drank soda frequently and 51% drank sports drinks like Gatorade. Older grades reported drinking more soda and sports drinks but there was little difference reported in water and milk consumption.

**Figure 8. Frequency (daily and 3-4 times a week) of drink choices by students grade (3-6)**



Students were asked how they liked to learn (Figure 9). For all grades, family activities (86%) were cited as being the most popular, with in-class activities being a close second (84%), with 62% mentioned the use of computer games and 46% talked about homework assignments. Little difference between the grades was evidenced with one major exception, less than a quarter of the sixth graders liked to learn using homework assignments. While students in general may not like to learn via homework assignments, it is interesting to note that the activity that was mentioned by all grades where they like to learn is through is family activities.

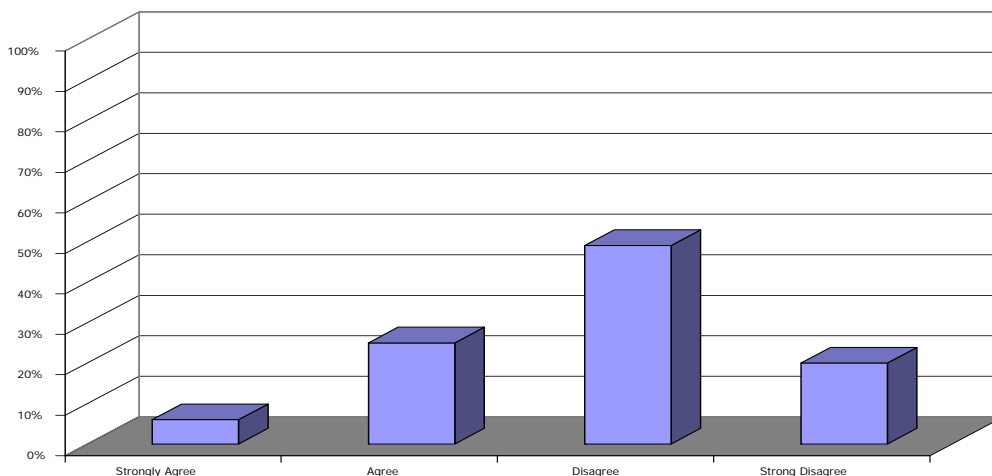
**Figure 9. Student learning preference by grade**



▪ *Survey Results: Parents/Guardians*

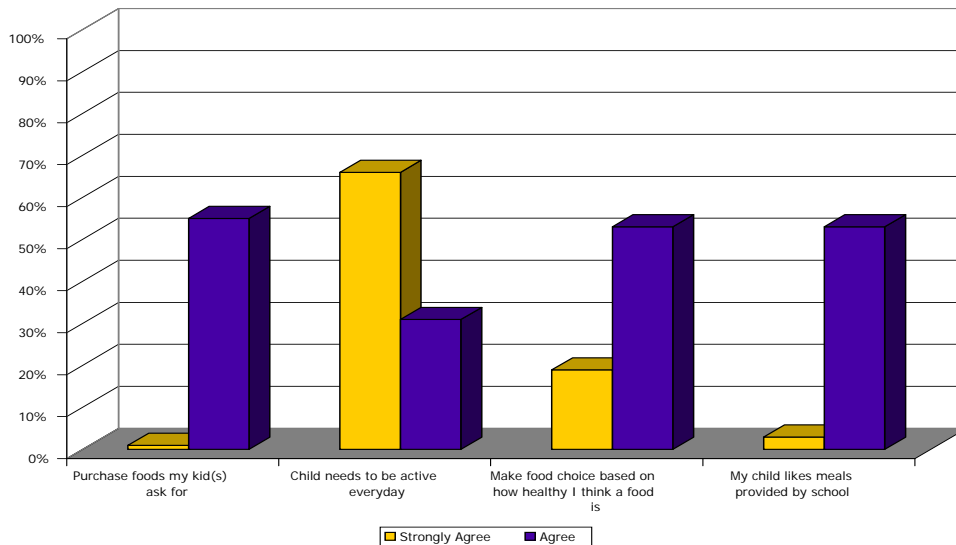
Parents and guardians were asked if they believe it is hard to cook or prepare healthy meals for the family because they are so busy (Figure 10). Almost a third of the parents/guardians agreed or strongly agreed with that statement, while slightly less than half (49%) disagreed with the statement and only a fifth strongly disagreed. This suggests that parents/guardians may be having difficulties in preparing healthy meals regularly because of time constraints.

**Figure 10. Parent/Guardian belief it is hard to prepare healthy meals due to busy lifestyle**



Almost all the parents/guardians (95%) disagreed with the statement, “I believe that French fries are just as healthy as a baked potato.” Slightly more than half the parents/guardians responded that they do buy foods in the supermarket that their kid(s) ask for and that their child likes the meals provided by the schools (Figure 11). Almost all parents/guardians (97%) strongly agree or agree that a child needs to be active daily. Almost three-fourths of the meal or food choices were based upon how healthy that choice is viewed by the parents/guardians. Slightly more than half (53%) of the parents/guardians agreed with the statement, “My child likes the meals provided by the schools,” with only 3% strongly agreeing.

**Figure 11. Parent/Guardian attitudes towards foods and physical activity**



When asked what they routinely buy, the responses are in Table 2. Almost all the respondents buy dairy, fruits, vegetables, and bread/grain products on a regular basis. Meat is purchased slightly less than these foods. Less than half of the parents/guardians buy chips or sweets, and about a quarter buy sweetened drinks. Yet 38% students report drinking soda at least 3-4 times per week, which may suggest that students are making their own choices about drinking soda or soft drinks.

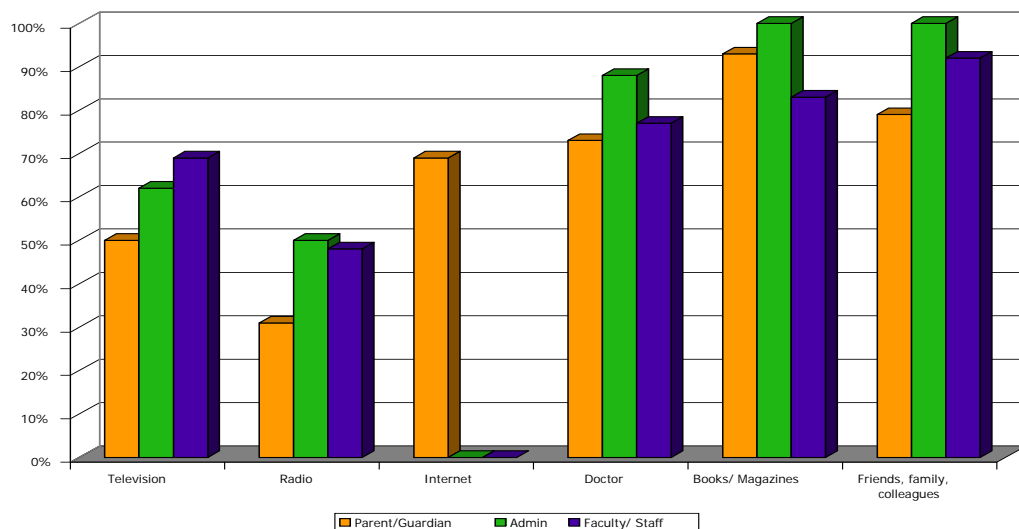
**Table 2. Parent/Guardian responses to: “When I shop at the supermarket/ grocery store, I regularly buy:”**

<i>Type of Food</i>	<i>Percent of respondents</i>
Dairy (milk, cheese, yogurt)	99%
Breads, pasta, grains, cereal, rice	99%
Fruits and vegetables	98%
Meat (beef, chicken, turkey, pork)	95%
Chips (potato chips, cheese curls)	41%
Candy, dessert or sweets	39%
Soda/soft drinks (sugar-sweetened drinks)	25%

Eighty-two percent of parents and guardians disagreed with the statement; “There are not many safe places in my neighborhood for my child to play outside.” Most (91%) of the respondents responded they understood the term BMI or Body Mass Index.

Parents/guardians, faculty/staff, and administrators were surveyed about where they learn about healthy eating and physical activity (Figure 12). Differences exist between these constituencies. Parents or guardians were most likely to get information from books or magazines (93%), followed by talking to friends, family and co-workers (79%). Faculty and staff are more likely to consult friends, family and colleagues (92%), followed by journal articles (83%). Administrators reported that they are more likely to consult friends, family and colleagues (100%) and journal articles (100%) equally. It is interesting to note, health care providers were less likely to be consulted than the social network or books and magazines. In the open-ended response section for this question (“other”), nearly 70% of parents/guardians reported using the Internet to find information.

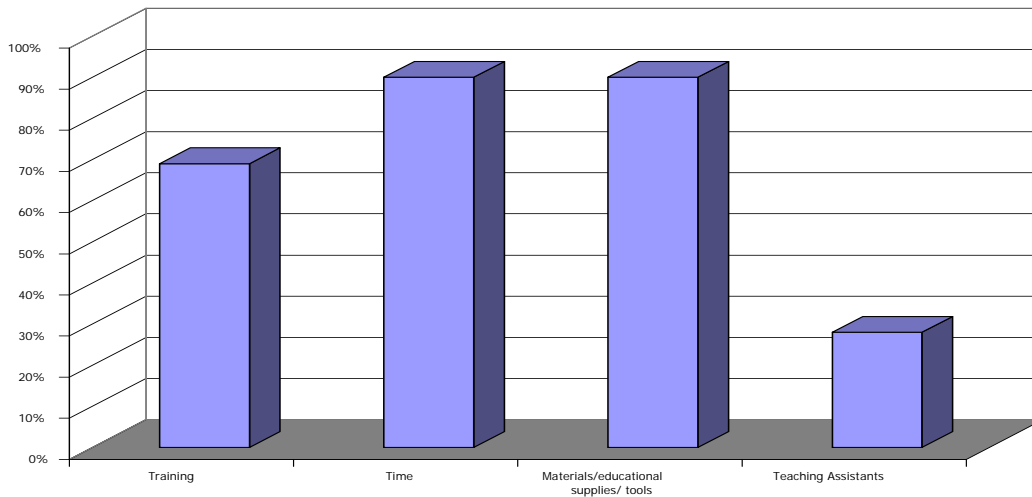
**Figure 12. Where respondents learn about healthy eating and physical activity**



▪ *Survey Results: Faculty/Staff*

A majority of the faculty and staff (56%) responded positively to the statement “there are curricula available to me on nutrition and/or physical activity.” The majority (56%) have made changes in their lesson plans and/or teaching techniques that focus on healthy eating habits while slightly less than half (48%) have incorporated information on exercise and fitness. The faculty and staff make changes to their lesson plans and/or teaching techniques when prompted by current student needs (97%), an administrator asks for changes (94%) or self-interest/motivation (92%). The majority, (72%) are willing to participate in training sessions to learn more about teaching nutrition and physical activity as they integrate the information into their curricula. Faculty and staff cited time and materials as being the key resources they need to effectively teach nutrition and physical activity in the schools (Figure 13), but not teaching assistants.

**Figure 13. Support needed to effectively teach nutrition and physical activity by faculty/staff**



Faculty and staff strongly agreed (56%) or agreed (40%) that school-based in-services would be the best way to participate in training about nutrition and physical activity. Less than half of the respondents either strongly agreed or agreed that they would participate in on-line self-study (40%) or offsite seminars (37%). Most (90%) of the faculty and staff either strongly agreed or agreed that integrating nutrition and physical activity messages is possible through the current curricula. In the comments section, a number of respondents felt that the physical education instructors should be leading in this area. Others suggested that the cafeteria choices should reflect healthy eating and that recess be expanded to encourage physical activity, thereby putting lesson plans into practice.

▪ *Survey Results: Administrators*

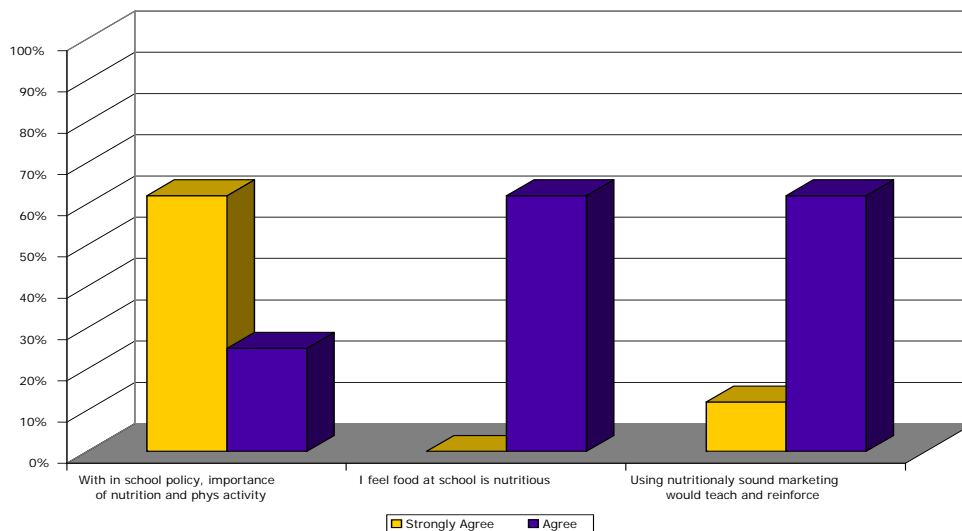
Administrators would fully support teachers’ training sessions to teach about healthy eating and physical activity through offsite seminars/ continuing education (ACT 48 credits) (100%), on-site seminars/education lessons (100%), and purchasing resources and materials that support curricula (88%). This compares with faculty and staff responses in that they would overwhelmingly prefer on-site seminars, with less than half of the respondents willing to participate in other options. When asked if parents would have an impact in promoting wellness and physical activity by certain activities, the responses are represented in Table 3.

**Table 3. Administrators’ perceptions of parental involvement in promoting wellness and physical activity**

Type of Activity	Percent
Participating in volunteer groups	100%
Collaborating with teachers	100%
Collaborating with parents	100%
Organizing student health groups	88%
Organizing fundraisers	75%

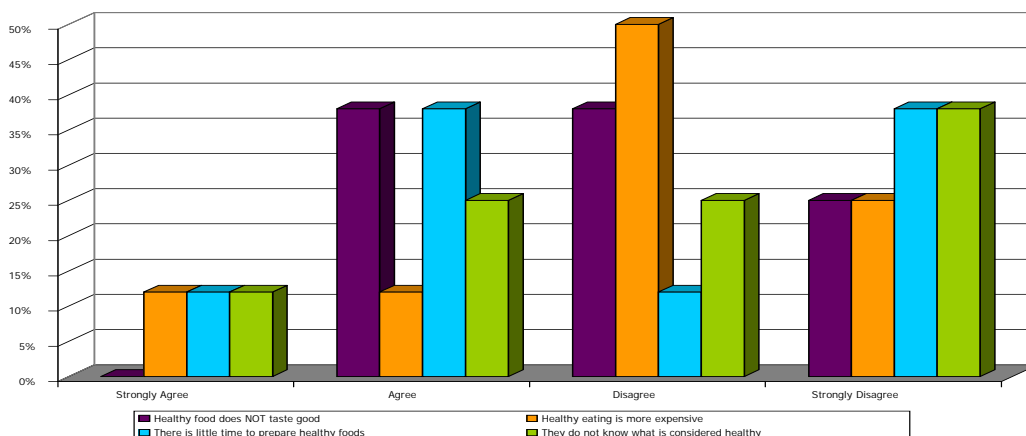
Administrators were queried about their attitudes toward nutrition and physical activity (Figure 14). The first question asked, “Within the context of school policy, exercise and physical activity are just as important as other educational initiatives such as No Child Left Behind and standardized testing,” 87% of the respondents saying they strongly agree or agree with this statement. The majority of participants agree that the food offered throughout the day at school including vending and school lunch options is nutritious, but no one strongly agreed with this statement. Lastly, most of the respondents either strongly agreed or agreed, that “using nutritionally-sound marketing pieces (i.e. point-of-sale items and posters/signs) in the cafeteria would effectively teach and reinforce healthy lifestyles.”

**Figure 14. Administrators’ attitudes towards nutrition and physical activity**



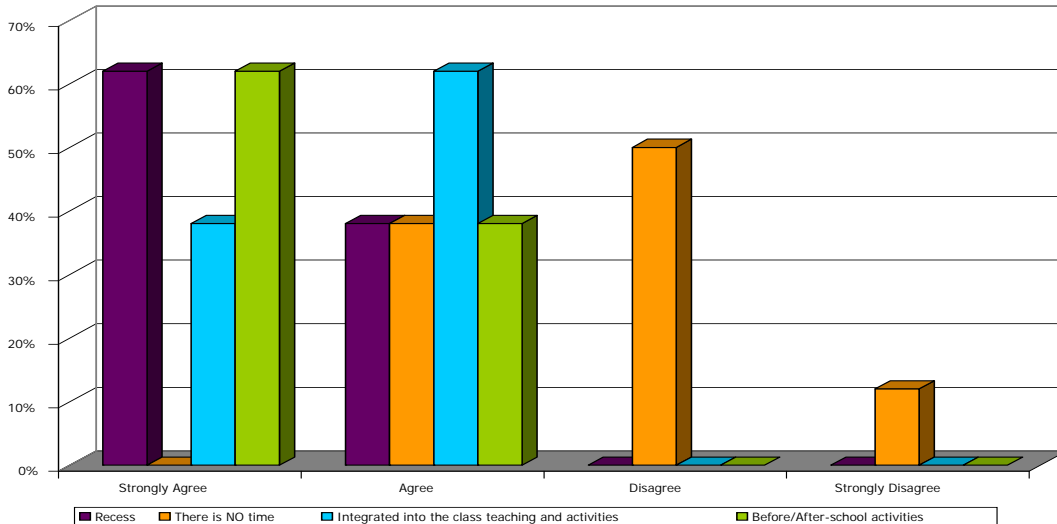
The perceptions about healthy foods are reflected in Figure 15. These perceptions are very disparate and may reflect a range of knowledge and comfort about healthy foods. But considering the small sample size for this group (n=8), it would be interesting to ask similar questions to parents/guardians and faculty/staff. Respondents were equally divided about the time to take to prepare healthy meals. But more than a third didn’t really know what is considered “healthy.” Given the responses to this series of questions, it may be helpful to have administrators participate in educational opportunities about nutrition and physical activity in order to improve knowledge and help formulate policy.

**Figure 15. Administrators’ perceptions of healthy eating**



Most respondents thought that opportunities to increase physical activity could occur during recess, integrated into class teaching and activities as well as part of before or after-school programs (Figure 16). While most participants disagreed that there is NO time for additional physical activity, more than a third did agree with the statement.

**Figure 16. Opportunities to increase physical activity during the school day**



In the comments from the administrators, some suggested involving the school nurse more in program planning and to put nutrition ideas into practices such as removing doughnuts from the menu and requiring parents to provide “healthy” treats in classes.

▪ *Focus Group Findings: Students*

In general, students who participated in the focus groups were knowledgeable about the role of nutrition and physical activity in promoting good health. Students easily named specific elements of a healthy diet—eating fruits and vegetables, avoiding junk foods, eating from each food group everyday. A few students talked about the idea of moderation—that it was okay to have sweets or fast food on occasion as long as it was balanced out by healthy eating the rest of the time. Students made connections between a healthy diet and better energy and quality of life. When asked to name their favorite foods, students in the focus groups stated a list of fruits and vegetables such as apples, clementines, and cucumbers. When asked about their views on physical activity, all of the students said they felt it was important to be physically active. They equated physical activity with watching less TV and playing outside more in organized sports and casual play (i.e. bike riding, playing with a pet).

The majority of students reported eating healthy foods at breakfast (banana and waffle, non-sugary cereals, eggs). About half of the students said that a parent helped prepare their breakfast at least some mornings. The children who reported eating breakfast in the school cafeteria appeared to eat less nutritious foods (i.e. pretzel, pizza). One group of students specifically said they would like to see a change in the school cafeteria menu at breakfast—they talked about how pizza was one of the choices and they identified that as an “unhealthy food.” These kids said they would like to see more raw fruits and vegetables in the school cafeteria.



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In one focus group, nearly all of the students reported making their own lunch, while only one ate lunch regularly in the school cafeteria. The students who pack their own lunches report eating fruits and vegetables, sandwiches, and yogurt. In the second focus group the situation was reversed—a greater number of students reported eating the school lunch most days. These students were more likely to report eating fatty foods, such as hamburger and fries, although when asked about their snacking habits these same students said they enjoyed eating raw fruits and vegetables. In this group, a number of students said they sometimes buy a piece of fruit in the school cafeteria. One student said that his mother usually packs his lunch but sometimes forgets to pack a piece of fruit; he said he would buy fruit in the cafeteria if it was available. At least one student said the fruit sometimes looked “gross.” While this comment might be dismissed as a child’s-eye view of what fruit is “supposed to look like,” it is interesting to note that the principals’ focus group suggested that the cafeteria should present fruits and vegetables in a more attractive manner to encourage kids to choose these healthy foods.

A majority of students appear to be highly influenced by their parents/guardians when it comes to what they eat. Many students talked about eating a home-cooked meal cooked by either parent, and some talked about how their parents had a plan to share cooking duties during the week. Family dinners tended to feature a variety of healthy foods (chicken, meat, pasta, vegetables). Most students said their mother did the grocery shopping, and many students accompanied their mother. When asked what they request for foods while shopping with mom, most kids reported healthy choices such as favorite fruits and vegetables. Some kids said they did not bother to request unhealthy foods because they knew their mother would say no. A few students reported that their parents would occasionally let them have “unhealthy foods”, such as candy and chips. A majority of students said that a family member (parents, siblings, grandparents) tells them what to eat and to eat healthy.

Students described their involvement in a variety of physical activities after school and on weekends, which includes organized sports and playing with friends. Students look up to parents/guardians and faculty/staff as role models; nearly all students said they would like to do more physical activities with their parents/families. Students are open to messages about good nutrition and exercise from their schools. When it comes to exercise and nutrition, the majority of students say that they listen to their teachers, particularly “health” and “gym teachers”. Some students also mentioned parents, doctor, nutritionist, siblings and other family members as other role models. With further discussion, no students mentioned celebrities or sports figures as a role model.

These students appear to be influenced a great deal by the lessons they are learning in health and gym class — students in both groups mentioned school programs that had an impact on them (keeping a fitness log, using a pedometer, free apples, jump rope assembly). Moreover, they were very interested in increasing opportunities for physical activity and healthy eating in school—specific suggestions included: more raw veggies and fresh fruit available in the school cafeteria, no junk food available on campus, more opportunities for active games at recess, and more balls and equipment with which they can play in the classroom and during recess.



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- *Focus Group Findings: Parents/Guardians*

Parents/guardians are very sophisticated in their knowledge of specific guidelines for good nutrition and physical activity. Most parents believe that children should be given very limited choices while they are young, and that it is the parent's responsibility to provide healthy food, limit use of video games and television, and provide opportunities for activity at home. They all said that time constraints and the high cost of healthy and organic foods is a limiting factor when it comes to providing nutritious food; however, these parents seem very committed to teaching and modeling healthy eating behaviors.

Parents/guardians in both focus groups were appreciative of many of the changes made by the schools, but they felt the schools could be doing more to promote healthy eating and physical activity to students. Specifically, many parents were still unhappy with the foods being offered in the school cafeteria and on the school campus. While they talked about the improvements (soda machines removed from campus, less fatty meats being served in the cafeteria), they wanted to see more being done. In both groups, parents mentioned that the featured "fruit of the month" (strawberry, banana) was never actually served during those months. Like the students, parents wanted to see less canned and cooked fruits and vegetables in the school cafeteria and more raw vegetables and fresh fruits. A number of parents said they would be willing to volunteer in the cafeteria to help make this happen. In general, parents wanted more information about what was being served in the cafeteria, including nutritional information, and they wanted to see changes to the offerings in the cafeteria.

Parents/guardians in both groups felt there were not enough opportunities for physical activity during the school day. Specific suggestions for increasing activity during the day included; increasing recess time and gym time, providing opportunities for family involvement through family activity nights in the gym during the week, and offering more special programs such as the "Governor's Exercise Challenge". Parents in both focus groups also expressed disappointment that their kids could not walk or bike to and from school, either because of a lack of safe sidewalks and pathways around the school, or because of an individual school policy restricting kids from walking or riding bikes to school depending on where they live.

Parents and guardians gave mixed reviews to the practice of sending home the results of students' Body Mass Index (BMI) measurements. Although parents had a clear understanding of what BMI means, most preferred to receive information about their child's BMI from a family doctor. Many parents' felt there were problems with the child's BMI being measured and reported by the school; specifically, they were concerned that "having kids line up in the nurses office to have their BMI measured" and that the practice of sending home a "BMI letter" only to the parents of a child who had a BMI outside the norm would result in those kids being singled out for teasing by their peers. Parents also felt that the school did not provide sufficient context to interpret the results of BMI testing in a meaningful way.

Parents/guardians in both groups were enthusiastic about partnering with schools and organizations in the community to promote healthy eating behaviors and increased physical activity among kids. Parents/guardians had a number of specific suggestions, including: cooking, nutrition, and gardening classes for kids and parents, sponsored either by the schools or by local business such as grocery stores; events and information sponsored by Boy and Girl Scouts, YMCA and other community-based organizations; physical activity nights for families



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sponsored by the schools; monitoring what kids eat in the cafeteria; and involving cafeteria staff in efforts to improve kids eating habits. Parents/guardians in the two focus groups said they would volunteer their time to help these efforts.

▪ *Focus Group Findings: Faculty/Staff and Principals*

Faculty/staff who participated in the focus groups were very committed to promoting healthy eating and exercise habits among their students. Some faculty talked about efforts they already make, including introducing students to different fruits in the classroom, modeling healthy eating for their students, rewarding students with healthy snacks rather than candy, and substituting physical activity for watching movies in school on Fridays.

Faculty/staff discussed barriers to promoting healthy behavior among their students and integrating messages about nutrition and physical activity into the school environment. Many felt that parents/guardians needed to be more educated about healthy foods and encouraged to send their children to school with healthy snacks. Some faculty focus group participants felt that parents were limited by the expense of healthful foods and lack of time to prepare healthy dinners. Faculty recognized that the school cafeteria had made some efforts to offer more healthy meal choices, but they felt this was still a problem area. A major focus of the faculty focus group participants centered on lack of opportunities for physical activity during the school day. Faculty talked about lack of space for exercise and felt there was not enough time devoted to recess during the day.

Despite these barriers, faculty/staff focus group participants identified a number of important facilitators to implementing changes to promote healthy behaviors. They felt that efforts would only be successful if they were supported and coordinated on a district-wide level and all faculty/staff were included. Faculty/staff wanted to see recess happen twice a day. They also wanted to see the school cafeteria offer more raw, cut vegetables, a salad bar, and other healthful choices. Faculty/staff said it was essential to provide parents and families with information on nutrition topics (i.e. importance of a healthy breakfast, suggestions for healthy snack/lunch foods and dinners.) In particular, one faculty member reported she receives the WISE SNAC Monthly Messages from the Wissahickon School District, where her daughter attends school. This faculty member liked the Monthly Messages so much that she used the information to teach in her classroom and also made copies to share the Monthly Messages in her school at the North Penn School District. Most faculty/staff believed their students are interested in learning more about their bodies and how to eat healthfully; these faculty participants would like to see health education topics added to the school curriculum so they can integrate these messages into their teaching and reach students on a daily basis. In term of promoting physical activity, faculty/staff participants feel messages need to be framed in a positive way; to give kids fun alternative activities to do rather than just telling them to turn off the TV and video games.

Faculty/staff who participated in the focus groups were very interested in partnering with community organizations, specifically the Boys and Girls Clubs and YMCA. They said that students in their district are very involved in after-school activities at these organizations, and believed that efforts to reach kids would be more successful if these organizations became involved.

NPSD principals were very much in agreement with faculty/staff focus group participants. Like faculty/staff, the principals suggested that the school cafeterias need to serve more raw fruits and



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vegetables and present them in a more attractive manner to encourage kids to choose these healthy foods. Principals also felt it was important to continue to offer kids healthy snacks in the classroom. Principals were more aware of PANA activities than were faculty/staff focus group participants, and they felt these activities were a success and would like to see them repeated more frequently. Principals agreed with faculty/staff that there were not enough opportunities for physical activity during the school day, and also wanted to see an increase in recess time, although it's interesting to note that faculty/staff suggested having two 20-minute recesses a day, while principals suggested a more modest increase of 10 extra minutes a day, to be taken out of lunch time.

Like the faculty/staff participants, principals felt it was important to partner with local organizations such as the Boys and Girls Clubs. NPSD principals had also seen the WISE SNAC Monthly Messages and were very interested in having these distributed at their schools and linked to the school web site and sent out to parents as flyers. These principals felt there were good initiatives already being undertaken to promote healthy eating and increased physical activity among school-aged children, but they acknowledged that more could be done, especially within the school environment, and were eager to see coordinated efforts involving the schools, parents, and community organizations.

### **Key Informant Interviews**

Key informant interview data correlates with findings from surveys and focus groups and served to provide key strategies for implementation and future program development. More specifically, they determined feasible communication mechanisms for disseminating nutrition and physical activity, such as school newsletters, district web site, local cable channels and bulletin boards in various areas of the school buildings.

A key finding includes the North Penn School District's commitment to the Family Friendly Schools initiative, which began during the 2006-2007 school year. It will be critical for WISE SNAC to align with the findings and implementation of Family Friendly Schools. WISE SNAC is also viewed by NPSD as a key component to the district's wellness policy implementation planning process. Other areas for possible program development highlighted an interest in incorporating nutrition and physical activity in before and after-school settings, which include community organizations, such as YMCA and the Boys and Girls Club. Data is summarized in Appendix C, *Key Informant Interview Data*.



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## CONCLUSION

The WISE SNAC needs assessment provided an overview of knowledge, attitudes, beliefs and behaviors regarding nutrition and physical activity among NPSD students, parents/guardians, faculty/staff and administrators. The needs assessment revealed areas of greatest need as well as facilitators for implementing change. Families and school personnel are invested in the health of the students and suggested the best pathways for introducing WISE SNAC resources and programs in the North Penn School District. With 29.5% of elementary school-aged children in NPSD found to be “at risk for overweight” and “overweight” through the Body Mass Index assessments conducted during the 2006-2007 school year, future interventions are needed.

Overall, students, parents/guardians, and faculty/administrators included in this assessment did not have a lack of knowledge about what constitutes healthy eating and exercise. Findings revealed specific challenges including access to healthful foods and opportunities for physical activity during the school day and time constraints to introducing health education topics into the school curriculum. In addition, as children get older and outside influences and activities have a greater effect on their food choices and exercise, it becomes increasingly important to educate and reach them through partnerships with outside community organizations. While school personnel are eager to educate children and provide them with healthy choices within the school environment, it is also essential to build sustainable partnerships between schools, parents/guardians, and community organizations at a district-wide level.

Consistent with findings from previous needs assessments in other school districts, less than half of all students report eating breakfast everyday, with 6<sup>th</sup> graders least likely to eat breakfast every day. Although consumption of fruits and vegetables between meals was high, about half of all students also reported high weekly intake of snack chips, cookies, candy and cake, with consumption highest among older students. Students in the focus groups made positive comments about fruits and vegetables, and overall, students acknowledged the importance of eating fruits and vegetables; however, opportunities for kids to eat fruits and vegetables need to be increased in both the home and school environments. Across the board, a majority of students reported drinking water, milk and juice, although consumption of soda was greater among older students. Students exhibited positive attitudes toward the importance of being physically active every day that were consistent with their reported activity rates, although older students were less likely to view physical activity as important compared to younger students.

Students cited parents and other family members, as well as teachers and school staff, as having the greatest influence on their attitudes and behaviors around food and exercise. Students identified family activities and classroom learning as their preferred methods for learning about nutrition and physical activity. Parents/guardians and faculty/staff recognize their responsibility as role models and are interested in having access to resources and activities that can help them integrate nutrition and physical activity into the classroom and home environments through a coordinated approach.

The needs assessment revealed that faculty/staff and administrators feel any efforts must be coordinated on a district-wide level in order to be successful. Parents/guardian, faculty/staff and administrators were enthusiastic about dissemination of information via Monthly Messages sent home to parents and posted on the school web sites. The school web site, newsletters and district wellness councils were recognized as effective ways to link families to the healthy lifestyle messages that children are learning at school. Within the school environment, changes in the



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school cafeteria menu and increased recess time were highlighted as areas of greatest potential impact.

As was found in previous needs assessments, a strengthened partnership between home, school and community has the potential to impact many of the challenges faced by families and schools in the North Penn School District. A collaborative effort holds promise in assisting parents/guardians to foster healthy habits at home, including making nutritious food choices at the grocery store, streamlining healthful meal and snack preparation and participating in physical activity with their children. Faculty/staff and administrators in the NPSD were very interested in community partnerships to help promote messages about healthy eating and physical activity among students; the Boys and Girls Clubs and YMCA in particular were mentioned as potential partners. The Implementation Phase of the WISE SNAC model will take into account the importance of including these local organizations as partners in creating a culture to promote healthy eating and physical activity among students, families, and school personnel in the community.



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# APPENDICES

