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Educational Stakeholders' Perspectives on School-Based Obesity Prevention Programs

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COLLEGE OF EDUCATION

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MA, University of Scranton, 2008

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Childhood obesity is a worldwide problem that can lead to adverse health conditions. In several rural Pennsylvania communities, over one third of elementary students are characterized as overweight, having a body mass index above the 85th percentile. The purpose of the study was to investigate educational stakeholders' perspectives about school-based obesity-prevention programs. The conceptual framework focused on cognitive theory, the theory of planned behavior, and the trans-theoretical model of health behavior change, which postulates that an individual's readiness to change is the most important factor of intervention programs. Qualitative interview data were gathered from 18 educational stakeholders. Inductive code-based analysis led to categories and themes. Key findings revealed a variety of barriers that limited and prevented effective student-wellness initiatives: students' physical activity; family dynamics, schedules, and socioeconomic factors; lack of transportation limiting children's participation in physical activities; parental engagement and input on obesity-prevention initiatives; and cafeteria environment and meal offerings. Findings informed the development of a policy recommendation for a research-based nutrition education program for schools and a strategy to communicate students' cafeteria habits to parents. Recommendations include a heightened awareness on factors contributing to obesity, as well as better educator-led planning to make improvements to school-based programs. Implications for positive social change may be the potential to increase awareness of healthy behaviors and improved student health through obesity-prevention methods, exercise patterns, and dietary habits of youth. These healthy habits may reduce adverse health effects in adulthood, which could hold the potential to improve the health of the next generation.

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Dedication

I dedicate this work to my family and the youth of our nation. Without the loving support of my wife and parents, I would not have been able to complete this process. To my mother, who supported me through every phase of my education; to my father, who instilled in me the ability to remain committed and work hard no matter what challenges I may face; and to my wife Katrina and son Devin, may the completion of this educational journey be the start of many new opportunities for our family.

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Section 1: The Problem

Introduction

The purpose of this research study was to investigate perspectives of educational stakeholders about school-based obesity-prevention initiatives. Through a series of interviews with parents, administrators, nurses, and teachers in the State of Pennsylvania, this research provided a narrative about stakeholders' perspectives regarding how effectively their schools are addressing student health and wellness initiatives aimed at helping students maintain a healthy body weight.

Because of the increasing cost of providing quality education to students, complicated by the State of Pennsylvania budget, education was reduced by more than $750 million between the 2010-2011 and 2011-2012 school years. Districts across the state share the burden of analyzing their expenditures to determine how to survive without large portions of state funds previously available. This reduction in state assistance to public education forced school districts to determine the cost effectiveness of their current programs and resulted in the elimination of programs that were no longer feasible to fund (Ginn, 2013). By conducting interviews with stakeholders from three neighboring school districts, I attempted to gain insight from stakeholders about student wellness initiatives in their respective school districts. During this time of budget cuts, it is necessary to investigate how stakeholders perceive obesity-prevention programs in order to make necessary improvements based on their feedback, in an attempt to spare obesity-prevention programs from elimination because of budgetary restraints.

Definition of the Problem

According to the U.S. Department of Health and Human Services (2010, p. 2), obesity negatively impacts quality of life and increases individuals' risks for adverse health conditions; children who are obese or overweight are extremely likely to become overweight and obese adults who suffer from various forms of chronic illnesses. The World Health Organization (2013) defined overweight and obesity as "excessive fat accumulation," which may result in adverse health conditions; "obesity has doubled in the world since 1980" (p. 1). The U.S. Centers for Disease Control and Prevention (CDC; 2013, p. 1) using body mass index (BMI) as a reference, stated that an overweight adult will have a BMI greater than or equal to 25, and an obese individual will have a BMI equal to or greater than 30. Defining what is considered overweight or obese for children differs slightly from the adult BMI scale. For individuals ages 2 through 19, the CDC uses a percentile method to determine BMI for males and females by plotting height and weight on the growth percentile chart for each sex.

According to the CDC, for individuals 2 through 19, a BMI percentile between the 5th percentile and the 85th percentile is considered a healthy body weight; a BMI percentile between the 85th and 95th percentiles is considered overweight; and a BMI percentile above the 95th percentile is considered obese. The most recent Obesity Trends Report published by the Pennsylvania Department of Health (2011, p. 1) identified 32.6% of children in Grades K-6 and 34.1% of children in Grades 7-12 as overweight or obese. Obesity is a problem that has the capacity to affect the health of 1 in 3 students in the State of Pennsylvania.

Despite the existence of comprehensive obesity-prevention programs, more than one third of the elementary school students attending the schools that were the focus of this study—referred to as NORTH, EAST, and WEST—are characterized as overweight or obese by having a BMI above the 85th percentile. The 2010-2011 Growth Screening Report released by the Pennsylvania Department of Health (2011, p. 1) identified 37.74% of elementary school students living in the county containing all three districts as overweight or obese.

NORTH is a rural K-3 elementary school with an enrollment of slightly more than 500 students. Over the past 7 years, NORTH has made changes to the school environment and collaborated with university dietetic, nutrition, and physical education professionals in an effort to reduce the number of overweight students (see Appendix B), but there is still a high prevalence of overweight and obese students in the elementary school population. EAST is a rural K-4 elementary school with an enrollment of around 400 students. EAST elementary school has made environmental changes to improve the health of the students, including changes in cafeteria offerings and increases in physical activity for students. Since the adoption of the EAST school district wellness policy in 2005, the school has limited the amount of outside snacks for holiday celebrations and has restricted certain food from fundraising sales and cafeteria snack options. The most significant measures taken by EAST elementary are the student birthday celebration policies for classrooms and birthday celebration baskets made available for purchase by the school district food service for classroom birthday celebrations. Similarly, WEST elementary school, which serves a student body of approximately 360 students in Grades K-3, has eliminated all outside snacks, requiring all food for classroom celebrations to be

purchased through the district food service. WEST elementary school offers limited afterschool child care programs.

Much research exists about which behaviors or environmental factors contribute to students becoming overweight or obese, in addition to a plethora of research describing approaches used to prevent and reduce the number of overweight children in a certain population. However, there is less research about how educational stakeholders in and around the NORTH, EAST, and WEST school districts feel about their respective obesity-prevention efforts. Even with the implementation of new policies and initiatives, as indicated by 2012 school district BMI reports, large portions of student bodies remain overweight and at risk for severe medical conditions that may begin in childhood and continue to plague these students through adulthood. As an institution that has direct access to students and can facilitate strategies to foster healthy behavior change, the school must reach out to the educational stakeholders in the surrounding area to identify existing barriers and challenges that are preventing students from making healthy behavior changes.

The Robert Wood Johnson Foundation (2012, pp. 3-5) described several possible causes of the problem, including poor eating habits, high caloric intake, high intake of foods great in sugars, and high intake of both soluble and insoluble fats. Additional causes of increased obesity rates among the elementary school population may also include poor exercise habits or lack of time engaged in fitness activities, malnutrition caused by low family income, excessive hours engaged in screen-related activities (e.g., television, video games, and computer activities), sparse attendance at fitness activities provided by the school, poor attitude toward physical activity and proper nutrition, lack

of knowledge of healthy behaviors, and the ineffectiveness of obesity-prevention programs in schools. Bucher Della Torre, Akré, and Suris (2010, p. 233) presented research that suggested that case studies investigating educational stakeholders' perspectives, through a series of interviews of administrators, school nurses, faculty members, and parents from three separate school districts, might identify specific reasons that elementary school students remain at risk of becoming obese, as well as effective strategies for preventing students from becoming overweight or obese. Data provided through analysis of interview transcripts may offer solutions to improve obesity-prevention initiatives that will assist the school districts in decreasing the percentage of children who are affected by obesity. The research question that guided this research was as follows: What are the education stakeholders' perceptions of the obesity-prevention initiatives used in their respective school districts? In the next section, the rationale is provided for conducting research on educational stakeholders' perspectives on obesity prevention in educational settings.

Rationale

Childhood obesity is increasingly becoming an issue in the international medical community. According to *Healthy People 2010* from the U.S. Department of Health and Human Services (2010), obesity in individuals under the age of 18 increased by 63.6% from 1998-2008. The conditions of overweight and obesity are becoming a more significant global health concern; and the adverse health conditions associated with living overweight are prevalent throughout the world.

International Evidence of the Problem

According to the World Health Organization (2013), the number of obese people in the world has doubled since the 1980s; a report published in 2011 identified that more than 35% of people worldwide were overweight and more than 40 million children under the age of 5 were overweight. The World Health Organization also reported that 65% of the world's population lives in countries where health conditions resulting from or relating to being overweight kill more people than starvation and malnutrition.

Africa

It is agreed upon by researchers around the world that the condition of obesity is preventable with a healthy diet and regular exercise (Robert Wood Johnson Foundation, 2012, pp. 3-5). Obesity is also not a problem isolated to North America. According to Reddy et al. (2012), even countries not typically associated with the characteristics of sedentary lifestyles or overweight populations such as South Africa are experiencing exponential growth in the overweight and obese populations. This is because of a trend titled *risk transition*, an increase in risk behaviors strongly associated with urbanization and improving economic conditions that has resulted in adverse health conditions and higher prevalence of overweight and obese individuals (Reddy et al., 2012). Reddy et al. reported that the male overweight population in South Africa has increased by over 23% and the male and female obesity rate has doubled in the last decade.

In a literature review published by Lokuruka (2013), a new term, *globesity*, is used to describe how changing living conditions on the continent of Africa have contributed to an increase of overweight and obese individuals. Lokuruka investigated results of height and weight screenings of African people across the continent, including

the Luo, Maasai, Kamba, and Kenyan populations in both urban and rural areas, to find that conditions of overweight and obesity were not isolated to one region, demographic, age category, or socioeconomic group; all populations demonstrated vast increases in obesity.

Although increases in obesity are observable in all African populations, Rossouw, Grant, and Viljoen (2012) reported that obesity is most prevalent among female adolescents living in lower socioeconomic status communities; the authors suggested that malnutrition greatly contributes to poor eating habits and increased obesity among this specific population. While the entire continent is affected by obesity, it appears the highest rates of obesity are associated with adolescents living in lower socioeconomic status communities in both rural and urban settings (Reddy et al., 2012; Rossouw et al., 2012).

Asia

Research conducted by Mori, Armada, and Willcox (2012, p. 2069) demonstrated that even areas of the world not commonly associated with obesity, such as Japan, have shown a tremendous increase in the childhood overweight and obese population since 1977. Globesity, or the trend of increasing obesity across the globe, is also prevalent in Asian cultures. Boffetta et al. (2011) conducted a cross-sectional analysis of 900,000 individuals living in Bangladesh, China, India, Japan, Korea, Singapore, and Taiwan that demonstrated not only increasing BMI levels of individuals living in these Asian nations, but also a distinct relationship between those individuals with higher BMIs and the prevalence of diabetes.

Ramachandran and Snehalatha (2010, p. 2) described how Asian populations are quickly catching up to the United States in terms of the percentages of individuals who are overweight and obese; nations such as China, Korea, and Thailand are experiencing the highest increase, with more than 25% of their populations classified as overweight. Ramachandran and Snehalatha (p. 2) described characteristics that are contributing to the increase in the percentage of overweight and obese individuals as more calorie-dense foods, increases in processed sweetened foods, and increases in saturated fat consumption, all coupled with a decrease in physical labor and an increase in non-physically active pastimes including screen-related entertainment.

Middle East

Mirhosseini et al. (2011) presented findings that obesity rates were increasing among adolescent females in Iran because of low levels of participation in physical activity. Musaiger et al. (2012, p. 4) conducted a cross-sectional study of adolescents in Algeria, Jordan, Kuwait, Libya, Palestine, Syria, and United Arab Emirates. Each nation demonstrated an increase in its overweight and obese populations. Musaiger et al. (p. 5) reported that of the Middle Eastern Nations included in the study, Kuwait, a more developed nation, had the highest rates of obesity, 34.8% for males and 24.8% for females. The drastic increases in obesity in Kuwait can be attributed to the transitional economic climate also described by Reddy et al. (2012), which has introduced more competitive consumer foods to the market that are high in saturated fats, sugars, and calories, a trend also present in Pacific Asian nations described by Ramachandran and Snehalatha.

Europe

European nations are not as influenced by the effects of transitioning economies that are evident in Asian, Middle Eastern, and African nations. There are fewer lifestyle changes occurring in these nations because of the introduction of new dietary and sedentary behaviors; however, the prevalence of overweight and obesity is still on the rise. Brug et al. (2012, p. 4) conducted an investigation of the energy balance and dietary habits of youth in seven European countries and discovered that in the seven nations included in the study—Greece, Hungary, Slovenia, Spain, Belgium, The Netherlands, and Norway—more than 25% of the male population and at least 20% of the female population were overweight; in addition, 5.4% of boys were obese and 4.1% of girls were obese. Brug et al. indicated that nations with less overweight school-aged students, such as Norway and the Netherlands, reported higher percentages of students participating in sports and taking part in active transport to school such as cycling or walking, while countries with larger overweight and obese populations such as Greece, Hungary, and Slovenia reported lower levels of participation in sports and active transport and reported higher levels of soft drink consumption.

BenaventMoya (2010, p. 55) included a chart displaying the percentage of overweight children in each European nation; Italy, Malta, Spain, Crete, and Greece each have over 30% of children ages 7-11 categorized as overweight. BenaventMoya (p. 55) indicated that Russia, The Netherlands, Romania, and Denmark have less than 15% of their childhood populations ages 7-11 classified as overweight.

South America

South American nations' obesity and overweight statistics most closely resemble those of the United States. Aballay, Eynard, Díaz, Navarro, and Muñoz (2013) reported that the more highly developed industrial and more heavily immigrated South American nations demonstrate higher prevalence of overweight and obese populations and higher rates of cardiovascular disease, diabetes, and cancer. These nations, identified by Aballay et al. as Argentina, Brazil, Trinidad and Tobago, Uruguay, and Chile, also have less established education systems and larger lower socioeconomic status populations. Aballay et al. attributed the high level of overweight and obese persons in South America to hereditary and environmental factors including high levels of saturated fats, increased caloric intake, and limited physical activity.

In this section of this doctoral study, evidence has been provided that obesity is a global problem that is well documented in many countries and continents. The next section of the study narrows the scope of the investigation to provide evidence of childhood obesity in NORTH elementary, EAST elementary, and WEST elementary, three rural elementary schools located in NORTH County, Pennsylvania.

Local Evidence of the Problem

According to Janssen et al. (2005, pp. 125-126), in a comparison of 34 developed nations, the United States demonstrated the highest prevalence of obesity and the highest increase in overweight and obese children. Over the past decade, the NORTH elementary school addressed obesity through prevention initiatives, but with insufficient impact. The Pennsylvania Department of Health (2012) County Health Report indicated that the county that contains EAST, WEST, and NORTH elementary demonstrated a

higher percentage of overweight and obese elementary school students than the state average. The rationale behind conducting a case study focusing on the perceptions of stakeholders in three neighboring school districts in rural Pennsylvania regarding current obesity-prevention initiatives was that such a study might identify effective strategies for implementation to reduce the number of overweight and obese students.

Research conducted by Wittberg, Northrup, and Cottrell (2009) showed that providing students with additional opportunities to engage in physical activity and improved nutrition can benefit students' academic achievement in addition to improving their overall health. The need for obesity-prevention programs extends beyond students' overall health and can show gains in student achievement and reduced absences because of illnesses associated with the conditions of overweight and obesity. The need for elementary-school-based obesity prevention is supported by the research of Wofford (2008), which demonstrated that drastic increases in pediatric and preschool obesity require early prevention initiatives and programs that will help students address pre-existing overweight conditions.

According to Golley, Hendrie, Slater, and Corsini (2011), schools are in a position to provide effective obesity-prevention and intervention programs when parents are involved in setting and monitoring nutritional and activity-related goals for children; parents' largest contribution to effective programming comes through motivation and encouragement of continuing healthy behaviors in the home. The effectiveness of school-based obesity-prevention programs is dictated by available funding. With budget cuts for education at the state level, peripheral programs are falling victim to cutbacks and budget deficits. Ensuring that programs provide students with positive results is imperative to

the continuation of comprehensive obesity-prevention programming. Therefore, it is imperative that stakeholders' perspectives are investigated in an effort to identify strategies for improvement. In the next section of the study, further evidence is provided from various research studies and investigations of childhood obesity that demonstrate the importance of identifying the most effective childhood obesity prevention methods.

Review of the Literature

When the 2001 *Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity Report* (Office of the Surgeon General, 2001) was released, its message was simple. There are severe adverse health conditions associated with excess body weight, including diabetes and cardiovascular disease. Individuals who are overweight as children remain overweight into adolescence and adulthood, where the effects of chronic conditions become most life threatening.

Conceptual Framework

According to Lutes and Steinbaugh (2010, pp. 151-152), the theoretical principles for planning physical activity interventions for children cannot be based on a single theory; successful physical activity interventions are based on a combination of social cognitive theory, the theory of planned behavior, and the trans-theoretical model of health behavior change. The framework of school-based obesity-prevention and intervention techniques uses a combination of methods all based on a single premise. According to Ramos and Perkins (2006, p. 63), an individual's readiness to change is the most important factor in intervention programs.

Both of the main health behavior change theories, the theory of planned behavior (Ajzen, 1991) and the trans-theoretical model of health behavior change (TMC;

Prochaska & Velicer, 1997), are based on the principles of social cognitive theory (Bandura 1986). The central concept of Bandura's (1986) social cognitive theory, *self-efficacy*, is described as the process of learning to change behaviors through one's expectations or goals combined with one's perceived ability to meet these goals despite the existence of challenges. According to Rosenstock, Strecher, and Becker (1988), individuals engaged in a behavior change process, such as weight loss or smoking cessation, greatly increase their chances of adhering to newly established behaviors when these individuals enhance their self-efficacy and concentrate their efforts to change behaviors that they directly have control over in their lives. In the case of children, they may not have the independence to make these decisions, which makes the involvement of parents a key to success in the obesity-prevention process.

The theory of planned behavior (Ajzen, 1991), a theory developed to use individuals' intentions and perceptions of particular behaviors in an attempt to design prediction systems related to many human behaviors, including smoking and exercise, was recently modified for use to detect eating patterns by Kahlor, Mackert, Junker, and Tyler (2011, p. 14) to predict individuals' likelihood of becoming overweight or obese. This theory can be used to assist individuals in identifying challenges that may impede the behavior change process. Without considering obstacles to the change process, one may not be able to overcome these challenges.

The stages of TMC can be used to establish solutions to reduce obesity among elementary students. The process of changing health behaviors varies for individuals, so intervention programs must support behavior change from a systematic, stage-based approach. Combining Bandura's (1986) concepts of modeling healthy behaviors,

observational learning, and self-efficacy with Prochaska and Velicer's (1997) TMC stages will ensure that a theoretical approach is used to formulate a solution to reduce the prevalence of obesity by providing assistance to students and their families through each stage of the behavior change process.

Winter (2009) suggested that schools use a five-step strategy to reduce childhood obesity, which includes staying informed of current research and trends in obesity prevention, conducting a needs analysis of the population and creating an action plan to address students' and family needs, creating a school environment that fosters pro-psychosocial behavior, providing nutrition education for students and families, and increasing opportunities for participation in enjoyable physical activity in a supportive environment.

Parental Involvement

Pyle (2006, p. 371) suggested that obesity-prevention and intervention programs are most effective when participants are currently contemplating health changes in their life; this necessitates the education of students and their families on the risks of adverse health conditions associated with obesity and is a necessary component of the health education curriculum, which must exist before interventions are developed and implemented. Prochaska and Velicer (1997, p. 39) described *behavior change* as a process that occurs through a series of steps, and a supportive environment helps to eliminate deviation from the behavior change process. Parents of overweight children can help reduce and eliminate some of the hardships encountered with the behavior change process. According to Golley et al. (2011), schools are in a position to provide effective obesity-prevention and intervention programs when parents are involved in

setting and monitoring nutritional and activity-related goals for children; parents' largest contribution to effective programming comes through motivation and encouragement of continuing healthy behaviors in the home.

Lemelin, Gallagher, and Haggerty (2012, p. 8) described the importance of collaboration with clinical nurses and physicians when planning interventions to tailor the procedures to the specific population's needs in order to better assist parents as they establish healthy behaviors for themselves and their children. According to Jouret et al. (2009), early BMI screenings and follow-up information for parents, in conjunction with early nutrition education at the kindergarten level and follow-up care and counseling from family clinicians, proved to be effective in reducing children's BMI. The early intervention approach aims to begin the prevention and behavior change process immediately upon students entering the public school process.

Pratt, Stevens, and Daniels (2008, pp. 251-252) recommended that obesity-prevention strategies include multicomponent comprehensive treatment strategies that include collaboration with medical professionals and that all results be disseminated with medical professionals for the successful distribution of vital information in the prevention of childhood obesity. According to Bruss et al. (2010, p. 10) matching intervention strategies to the population greatly increases the effectiveness of the program; in order to design effective programming, it is recommended to collaborate with an institution of higher learning. Bruss et al. (p. 10) suggested including teachers and administrators familiar with the school community to develop culturally sensitive intervention programs.

Brown, Knoche, Edwards, and Sheridan (2009, pp. 502-504) reported that early childhood educators' relationships with their students' families are vital to student

success and are imperative when establishing a path to parental involvement in the school setting; professional development is often necessary to demonstrate strategies of communicating with parents to formulate cooperative relationships. According to Berry et al. (2004, pp. 442-443), the most effective family-based childhood obesity-prevention strategies included the parents in the intervention process for behavior monitoring and goal setting, as well as in family nutrition counseling.

According to Ouimette, Feldman, and Tung (2006, pp. 108-110), if parents are provided multiple avenues of engagement into the school environment, it is more likely that parents of all demographics will become engaged in school community activities. This trend increases when schools make a commitment to providing teachers with training on how to effectively engage parents in various forms of communication and participation in children's academic lives.

McCoach, Reis, Black, Sullivan, and Rambo (2010, pp. 455-456) presented findings that successful schools have higher percentages of parental involvement and parental participation in school initiatives and also have stakeholder support of instructional methods and administrative support of academic programs; these factors may also directly contribute to student achievement. Active parent populations have great impacts on student learning and student wellness. Absence of parents is potentially dangerous to youth during their formative years when health-related habits are forming. Results of a study conducted by Nayga (2001) indicated that an individual's level of education reduces the individual's risk of being obese; the more education an individual has completed, the less likely it is that they are overweight or obese. The Nayga study did not directly correlate nutrition or health knowledge with reduced prevalence of obesity,

but the results suggested that a more informed public is a healthier public. Nayga explained that when parents are involved in the education process and in obesity-prevention programs, they increase the chance that their children will develop healthy behaviors and avoid risk behavior associated with obesity.

Schetzina, Dalton, Pfortmiller, Lowe, and Stern (2011) provided details describing the success of a comprehensive obesity-prevention program conducted in a rural setting that used collaborative community partnerships, provided nutrition education, increased parental involvement, and increased physical activity for a period of 4 years after the initial program implementation. Schetzina et al. indicated the systematic nature of the program assisted students in decreasing BMIs and improving health behaviors.

Teachers' Perspectives on Obesity Prevention in Schools

According to Sutherland, Gill, and Binns (2004, p. 142), teachers felt they could play an integral role in school-based obesity-prevention programs with proper administrative support and professional development. Defining the role that teachers play can be accomplished through the establishment of school health councils and professional development opportunities. While costly, this can be a successful means to implement effective nutrition education and classroom physical activity programs. Smibert, Abbott, Macdonald, Hogan, and Leong (2010, p. 162) stated that teachers who offered their perspectives on obesity prevention identified parents as the necessary motivators of health behavior change because of the limited amount of time teachers are able to devote to wellness initiatives during the academic day. Smibert et al. (p. 167) stated that the responsibility to assist children in the development of healthy behaviors is

not isolated to one set of stakeholders and requires collaboration throughout the school community.

Offering an example of a school committed to changing health-related behaviors, Donnelly et al. (2009, p. 339) reported that over a 3-year period, the Physical Activity Across the Curriculum (PAAC) program failed to lower students' BMI scores, possibly because of the low intensity of the activities or absence of a nutrition component. However, academic scores improved in the classrooms that participated in PAAC compared to control groups that did not participate in the physically active classroom lessons. While the PAAC program may not have demonstrated drastic reductions in student BMI, there were teachers who felt that the program was delivering positive benefits to the students. Donnelly et al. (p. 340) discovered that in the school year following the completion of the PAAC study, 95% of the teachers were still using the active lessons methods at least once a week, and more than half of the teachers used PAAC lesson methodology two to four times per week. Commitment to facilitating health modification programs over extended periods of time is necessary because individuals enter school-based prevention and intervention programs at various stages of the behavior change process.

A European focus group study aimed at collecting the perspectives of Swiss educational stakeholders' opinions of obesity-prevention programs found that teachers, administrators, food service staff, and parents all felt favorably toward the implementation of obesity-prevention programs (Butcher Della Torre et al., 2010, pp. 236-238). Butcher Della Torre et al. (pp. 236-238) found that stakeholders felt that there was not a cohesive collaborative approach in place and that more governmental

assistance was necessary to make the programs more impactful, while food service employees felt better marketing of healthy options could be a successful measure to improve eating habits.

School nurses also reported barriers that prevented them from being more impactful in the prevention of obesity. Steele et al. (2011, p. 136) discovered that nurses experience several barriers interfering with discussing weight-related issues with families. Lack of current information, lack of support from the school district, time constraints, and personal image problems are some of the impediments to beginning the process of communicating weight-related concerns to parents.

Parents' Perspectives on Obesity Prevention in Schools

In a survey of parents of Australian primary school children, Crawford et al. (2008, p. 153) identified limiting meals and sales of snacks as among the foremost environmental changes parents wished to see in their children's educational setting. This is a difficult battle because many food service operators make a profit on snack sales, as the cost of many meals in the school lunch program must be subsidized with government-distributed items so schools do not lose money on the sale of a basic meal. According to Crawford et al. (p. 156), parents also wished to see more opportunities for participation in physical activities after school in childcare settings and wished to reduce the number of screen-related activities in these environments. Crawford et al. (p. 156) discussed a community mobilization effort where resources are pooled in the community to provide more opportunities for youth physical activities.

A review of qualitative studies of parents in the United Kingdom conducted by Pocock, Trivedi, Wills, Bunn, and Magnusson (2010, p. 349) was impacted by a myriad

of individual, interpersonal, societal, environmental, and organizational factors. Pococket al. (p. 349) discussed that many parents' perceptions of preventing overweight and obesity related to barriers to living healthy caused by outside factors such as marketing, peers, role modeling, and family dynamics.

After conducting parental focus groups with the goal of gathering parental perspectives on packing school lunches, Bathgate and Begley (2011, p. 23) cited that overwhelmingly parents struggled to balance providing food their children found favorable with providing healthy options. Most parents participating in Bathgate and Begley's (p. 24) research fell into one of three categories: (a) they wanted to please their children and ensure they were not hungry, so they only packed foods the children would eat; (b) healthy options were often too pricey, so they opted for convenient lower priced options; or (c) they were unaware of strategies to balance healthy and enjoyable lunch options. Bathgate and Begley (p. 25) suggested that schools needed to make a stronger effort to offer programming to educate parents in ways to better fulfill their children's nutritional needs.

Morin and Roy (2013) conducted a study to collect the perceptions of working parents on obesity-prevention strategies; the results indicated that physical activity and nutrition programs in childcare settings were the most preferred obesity-prevention strategy among parents. Parents participating in the research of Morin and Roy (p. 119) also identified menu planning, label reading, and cooking activities as viable obesity-prevention strategies. In addition to time limitations to prepare healthy meals, both high and low income, working families identified the need for programs that provided physical activities that would provide working families with more time to prepare healthy meals

during weekdays (Morin & Roy, 2013, p. 119). Parents also made the suggestion that it is necessary for communities to establish facilities where they can engage in physical activities with their children.

While several perspectives are offered and many similar themes appear in each study, according to Davidson (2007, p. 390), there are a large number of prevention strategies for childhood obesity with varying results, but what is lacking is a set of definitive practices that make one approach more successful than the next, which perpetuates the need for more research on what makes obesity-prevention practices effective and to what standard these programs may be considered successful.

Adverse Health Conditions Related to Overweight and Obesity

Ogden, Carroll, and Flegal (2008, p. 2401) indicated that a 24% of children in the United States ages 2 to 5 are above the 85th BMI percentile, putting them at risk of becoming obese, and one of three U.S. students is overweight. Cross-sectional analysis of preschool children conducted by Cockrell Skinner, Perrin, and Steiner (2010, pp. 651-654) indicated that severely obese preschool-aged male children had much higher prevalence of breathing-related disorders such as asthma, and severely obese preschool-aged females demonstrated frequent headaches and nighttime coughing. The risk of becoming obese indicator, the 85th percentile for BMI, did not effectively correlate with higher reported incidents of adverse health conditions for 2- to 5-year-old children; however, with continued excess fat escalation, these students may reach higher percentiles, where Cockrell Skinner et al. (2010, p. 654) identified higher reported incidents of adverse health conditions associated with obesity.

The most commonly diagnosed adverse health conditions associated with overweight and obesity are cardiovascular disease and diabetes. A large cohort study conducted by Carson and Janssen (2011, pp. 8-9) revealed that children who engage in above-normal durations of television viewing and sparse participation in moderate to vigorous physical activity demonstrated conditions referred to as cardio-metabolic risk factors. Cardio-metabolic risk factors are defined by Katzmarzyk, Janssen, Ross, Church, Blair (2006) as a set of global conditions that put individuals at risk of cardiovascular disease including factors such as waist circumference, obesity, dyslipidemia, glucose intolerance, hypertension, and type II diabetes.

A study conducted in India by Phatale and Phatale (2012, p. 484) of more than 250 overweight children identified 57% of the children involved in the study demonstrated the conditions of hypertension or a condition described as prehypertension. This is a more commonly diagnosed condition in children with excess fat; 64.3% of the children in the study demonstrated signs of pre-diabetes, and 3.8% were found to have type II diabetes. In addition to cardiovascular concerns, experts have expressed concerns that obesity and overweight conditions in children can affect motor skill development, preventing these children from participating in rigorous physical activity later in life. In a study completed by Castetbon and Andreyeva (2012, p. 5) results indicated that obesity among children ages four to six had no impact on children's fine motor skills although gross motor skills are affected by excess fat content. Castetbon and Andreyeva discussed that obesity in children ages four to six impacts musculoskeletal function of gross motor functions or locomotor skills that can be described as movements requiring high energy expenditure, activities such as running, jumping, hopping.

Several addition physiological conditions are now being related to obesity and overweight. According to Mosli, Mosli, and Bokhari (2013, p. 96), in a urological study of men, obesity was not only closely associated with a higher prevalence of diabetes, but also frequently reported were complications with emptying the bladder and sexual physiology such as erectile dysfunction. According to Li et al. (2013, p. 5), cases of chemical exposure to bisphenol-A (BPA) are now linked to obesity, especially in females ages nine to 12, triggering hormonal changes, early puberty, and excess weight gain during pubescent years.

According Jones Nielsen et al. (2013), in the last decade there has been a severe increase in hospital admissions of British youth between the ages of 5 to 19 seeking treatment for obesity-related conditions such as sleep apnea, asthma, and complications with pregnancy; in addition to hospital visits, reports of bariatric surgery performed on youth have also increased in frequency. Adding to an increase in pediatric hospital visits for obesity-related issues, Kesztyus et al. (2013, p. 8) study of more than 1800 first and second grade students demonstrated that of the 158 obese students identified by the research, this population averaged more sick days and doctor visits per school year than students who were not obese. Kesztyüs et al. suggested these missed school days may hinder overweight and obese student academic achievement.

Another contributing factor to troubles with academics can be linked to students' self-esteem. In a review of 42 studies conducted on children's quality of life and self-esteem, Griffiths, Parsons, Hill (2010) cited that overweight and obese children are more likely to have low self-esteem or a negative self-perception, although a portion of overweight and obese youths' image problems may be a result of interactions with peers.

Janssen, Craig, Boyce, and Pickett, (2004, pp. 1191-1192) and Gray, Kahhan, and Janicke (2009, p. 725) stated that obese children between the ages of 11-16 are more likely to be victims or demonstrators of bullying-related behaviors suggesting that obesity has the potential to negatively affect children's ability to engage in appropriate social behaviors.

Children who are overweight often suffer from social isolation and bullying from classmates that result in undesirable behaviors. According to Lumeng, Gannon, Cabral, Frank, and Zuckerman (2003, p. 1144), there is a relationship between overweight children and behavioral problems; research suggests poor physical activity patterns and unhealthy dietary habits may contribute to overweight children's negative behavior patterns. As stated by Hunt (2008, pp. 1-2) because most excess weight gain is preventable it is unfortunate that many students experience self-esteem and health issues related to obesity. While researchers argue there is no direct correlation between obesity and academic performance, Hunt argued that obesity is one more obstacle that a student must cope with during an academic career which presents another potential barrier to success in the classroom.

Barriers to a Healthier Country

Tovar et al. (2012, p. 9) disclosed that children living in rural settings included in a recent research study were not participating in the recommended amount of daily physical activity, engaged in elevated amounts of screen-related activities, but had parents who stated they were aware of the dangers of childhood obesity. Environmental factors such as television viewing habits have the potential to not only affect children's activity level, but also exposes children to target marketing aimed at enticing vulnerable

children to eat products of questionable nutritional value. According to Zimmerman and Bell (2010, p. 338) specific television was not closely associated with obesity, but certain types of food marketing suggesting that children's exposure to marketing may be potentially more harmful than the sedentary behavior of simply watching television.

According to Power, Bindler, Goetz, and Daratha (2010, p. 17) the majority of adolescents participating in a recent study did not possess knowledge of healthy dietary behaviors and blamed environmental and interpersonal factors for their poor dietary habits, while teachers participating in the study blamed parents for their children's poor eating habits. To battle environmental factors contributing to increased overweight and obese children there is a need for the implementation of elementary school-based, obesity-prevention programs according to Wofford (2008, p. 18). Wofford indicated that drastic increases in pediatric and pre-school obesity require early prevention initiatives and programs that will help students address pre-existing overweight conditions upon their arrival in the K-12 school setting.

Sigmund, Ansari, and Sigmundová (2012, pp. 12-13) stated that increased physical activity in educational settings, improved physical education curriculum, and improvements that make educational buildings more compatible to physical activity assisted students in decreasing their BMI and were able to assist students by improving leisure-time activities outside of the school setting. Although making capital improvements is a costly endeavor for school districts, there are other measures available to use existing facilities for obesity-program prevention implantation. According to Gombosi, Olasin, and Bittle (2007, p. 6), a thorough review of educational goals including health and physical education curriculums is necessary to ensure effective

program delivery. A movement to include physical education as a daily educational requirement for students at all grade levels should be a priority for a country dedicated to alleviating health disparities caused by the conditions of obesity and overweight. However, the manipulation of academic schedules and staffing needed to accommodate such a change to daily physical education is also unlikely because of financial burdens caused by the rising costs of education.

Amis, Wright, Dyson, Vardaman, and Ferry (2012, pp. 1408-1410) discussed the existence of several barriers that prevent public schools from implementing successful childhood obesity policies. These include an educational environment that does not value nor place enough emphasis on providing students with quality physical education, administrators who are overwhelmed or intimidated by the possible failure of new policies and initiatives amidst the mounting challenges of their current responsibilities, and the culturally-celebrated varsity model that places more value in interscholastic sports than widespread participation in physical activities.

Bisceglie (2008, pp. 36-37) stated that administrative leadership is key to the success of any school-based, obesity-prevention program, and selecting the correct individuals to fulfill roles within the program is as important as the program itself. As recommended by the American Cancer Society the establishment of School Health Councils helps define the mission and goals for educational wellness initiatives, defines the roles of individuals involved, and establishes a framework for program implementation and assessment (Shirer, 1999).

Family Dynamics' Influence on Children's Weight

The most paramount obstacle facing the movement to curb the worldwide prevention of childhood obesity and escalating population of overweight children is the role of family dynamics on children's activity levels and dietary habits. Whether the conditions are caused by poor role modeling in the home, absence of parents or lower socioeconomic conditions leading to poorly-balanced diets, obstacles exist that prevent school-based and clinical obesity-prevention and intervention efforts. Gerards, Dagnelie, Jansen, Vries, and Kremers (2012, p. 5) expressed several concerns over barriers that are prohibiting children from participating in clinical obesity treatment and prevention programs including parent denial of the overweight condition, unwillingness to engage in discussion regarding their child's weight, and the inability of the clinicians to motivate the parents to consider discussing or seeking treatment of their child's condition.

Research conducted by Babey, Hastert, Wolstein, and Diamant (2010, pp. 2153-2154) demonstrated a significant increase in obesity among children living in lower-income households than in children from middle to higher income families. During the course of the study conducted from 2001-2007, Babey et al. indicated that obesity prevalence among lower-income families was double the rate of families living in more favorable socioeconomic conditions. Obesity can no longer be thought of as solely a condition caused by over indulgence, when in fact many children who are suffering with overweight are malnourished because of poor nutrient intake and a diet consisting over-processed foods.

In a study of West Virginia 5th grade students, the effects of obesity and low household income were compared to students' academic achievement. Gurley-Calvez and

Hugginbotham (2010) deduced that both obesity and low household income have negative effects on students' academic achievement; through a series of multiple regression analysis it was determined that obese students performed below the average of their non-overweight classmates and obese students living in lower socioeconomic conditions performed ever lower on the same assessments. Forshee, Anderson, and Storey (2009, p. 83) reported that of the many household characteristics that shape and define a child's eating and exercise habits, the foremost predictor of a child becoming overweight is the BMI of the head of the household. According to Forshee et al. if the head of the household is an overweight or obese parent, the likelihood of the child becoming obese or overweigh increases significantly; whether caused by genetics, environmental factors, or learned behaviors. Ihmels, Welk, Eisenmann, Nusser, and Myers (2009, p. 67) conducted pilot testing for a Family Nutrition Physical Activity (FNPA) screening tool that has the potential to predict if a child is at risk of becoming overweight through the assessment of environmental conditions and behaviors in a child's household. According to Ihmels et al. the most prominent predictor that a student will become overweight, regardless of the students' current BMI percentile, is the presence of parental obesity/overweight in the household.

In a study of more than 200 parents Eckstein et al. (2006, p. 689) reported that many parents of obese, overweight, or at risk of becoming overweight (AROW) children were unable to identify that their children were overweight, although they were able to identify a sketch of seven children within their child's age range that depicted a child of similar stature. An integral step in the behavior change process is to identify a behavior or condition that needs to be changed. A common problem among overweight children is

their parents are unaware they are overweight or the parents are unaware behaviors exist that may contribute greatly to the risk of chronic health conditions.

According to Eckstein et al. (2006, p. 689), parents who were unable to identify that their child was overweight also had fewer concerns about the conditions of AROW, overweight, and obesity once their child was identified as such by a clinician. Eckstein et al. stated the concern for their children's health related to their weight was less in younger children and most parents felt their child was as active as children of lesser body weight; significantly more parents of older children expressed concern for their child's health relating to their weight and acknowledged physical limitations relating to activity. Darwin (2008, p. 25) questioned whether parents who allowed their children to live in conditions that allowed them to become obese should be considered guilty of child abuse. Darwin indicated that aside from a few hereditary conditions such as Turner Syndrome and Prader-Willi Syndrome or other conditions such as hypothyroidism, parents are directly responsible for the children's weight through their daily caloric consumption until early adolescence when eating habits become more independent.

Unmonitored independent eating habits and sedentary activities are two factors that greatly impact a child's weight during the adolescent years. Utilizing the Children's Depression Index and BMI scores Benson, Williams, and Novick (2013, pp. 26-28) concluded that there was no direct relationship between children's scores on the CDI and their BMI; however there is a positive correlation between childhood depression and behaviors identified as contributing factors to the conditions of overweight and obesity, those being increased time attributed to screen-related activities and the frequent absence of parents from the home. Even if parents feel they are not demonstrating poor dietary

behaviors, their absence from the home because of work obligations or social behaviors can be a contributing factor to a child's excess weight gain.

Moriarty and Harrison (2008, p. 375) stated that through a longitudinal study they deduced that prolonged television viewing habits negatively impact adolescents' eating habits and can greatly contribute to over-eating disorders. Extended periods of unsupervised time and engaging in sedentary behaviors places children at a greater risk of becoming overweight. These are two of the most difficult barriers to the prevention and intervention process because schools have little control over home-related behaviors.

Summary

In the review of literature section evidence was provided to describe the severity and health complications related to childhood obesity. Many of the factors contributing to childhood obesity prevention and barriers to the process were noted. The role of parents and educational stakeholders in the obesity prevention process was also described. Section one of this research proposal discussed the adverse health effects of childhood obesity, the worldwide prevalence of childhood obesity, and the perspectives of educational stakeholders described by various research studies. The investigation of educational stakeholders' perspectives in this rural Pennsylvania area may provide insight to improving obesity-prevention strategies designed for this population. All findings will be made available to the participating school districts in an effort to improve the health of the families living within the municipalities that comprise each district. The procedures used to investigate and analyze findings are described in the next section of this proposal.

Section 2: The Methodology

Introduction

The conditions of childhood obesity and overweight are well documented in the United States, but educational stakeholders' impressions of how these conditions are prevented, treated, and managed by schools are under researched. The purpose of this research study was to investigate the perspectives of educational stakeholders about school-based obesity-prevention initiatives. Through analysis of the data collected, there may be sufficient findings to provide strategies that will improve obesity-prevention techniques and children's health in rural Pennsylvania.

Included in this research methodology section are nine components: addressing the design of this research, the guiding research question, the context in which this research was conducted, the role of the researcher, measures taken to ensure the ethical protection of the participants, the method for selecting interview participants, an explanation of data collection procedures, an explanation of data analysis procedures, and steps used to increase trustworthiness. In the next section, the design of this investigation will be outlined. The research design section will contain descriptions of qualitative research and case study research.

Research Design

Qualitative Research

Darbyshire, MacDougall, and Schiller (2005, pp. 429-430) stated that a qualitative research approach when investigating childhood obesity issues is an appropriate methodology because of the complex, flexible, and adaptable data collection methods available to the qualitative researcher. Berliner (2002, pp. 18-20) indicated that

qualitative research also has the potential to make positive changes in the education of young people and is an acceptable method of research to investigate educational stakeholders' perspectives because of its broad-ranging ability to collect a depth of information. When embarking on an exploratory study that aims to investigate a population, Frankel and Devers (2000, p. 268) supported the use of qualitative research for the improvement of health education, especially when researchers are attempting to develop or refine theories.

Based upon the recommendations of Darbyshire et al. (2005), Berliner (2002), and Frankel and Devers (2000), a qualitative research method was selected in an attempt to gather data with which to investigate school-based childhood obesity prevention in rural Pennsylvania. Silverman (2010, p. 14) added that qualitative research sacrifices scope for depth, which means the purpose of qualitative research is to closely investigate a smaller community, system, or organization of individuals in an effort to collect data that will contribute to a fuller understanding of the sample being studied, with a lesser chance for generalizations. By focusing on the small, bounded systems of individuals in three neighboring school districts, this research study may contribute to the improvement of local obesity-prevention programs. While this research had the potential to identify perceptions and attitudes that would facilitate the implementation of broad-ranging concepts to improve international obesity-prevention efforts, the main focus was making immediate improvement in the region in which the research was conducted.

Case Study Research

According to Creswell (2012), "a case study is an in-depth exploration of a bounded system (e.g., activity, event, process, or individuals) based on extensive data

collection" (p. 465). Yin (2008, p. 4) described case study research as a qualitative methodology commonly used in educational research to gain understanding of a local phenomenon. The local phenomenon in this study was the educational stakeholders' perceptions of obesity-prevention efforts. The investigation of educational stakeholders' perceptions of obesity-prevention programs necessitated the use of a case study to closely examine a bounded system of individuals engaged in the process of improving student health.

This research study investigated perspectives of educational stakeholders about school-based obesity-prevention initiatives using individual interviews. Gillham (2000, p. 11) indicated that case study research allows a researcher to penetrate the surface of an organization and investigate the interior workings, happenings, and perspectives of the individuals within the bounded system. To gather data, a case study research approach was used, involving 18-20 individual interviews of stakeholders from three neighboring rural school districts. Rubin and Rubin (2005, p. 2) described qualitative interviewing as one of the most effective methodologies for gaining an understanding of social issues and identifying new solutions to old problems through the use of conversation. Hamel, Dufour, and Fortin (1993, p. 14) stated that case study research is very journalistic at its core, requiring a researcher to report on data collected through interactions with the individuals living and acting within the community of study.

Eisenhardt (1989, p. 546) indicated that case studies are a particularly strong methodology to establish new theories from the vast amounts of data that can be collected; these theories can be easily tested by later hypothesis testing, and because of the high level of trustworthiness of data-collection procedures, these theories tend to be

empirically sound. Through this research, I attempted to reveal how stakeholders perceived the effectiveness of their school districts' attempts to reduce and prevent the prevalence of overweight children in rural Pennsylvania. The research question will be discussed in further detail in the next section, followed by a discussion of the context of the study and a description of the area where the investigation was conducted.

Research Questions

The framework of this study was guided by the following question: What are educational stakeholders' perspectives of rural school-based, obesity-prevention programs? Goh et al. (2009, pp. 498-500) demonstrated great success in identifying barriers to healthy living through the collection of perspectives of individuals affected by the issue of obesity. This approach was modified for use on a smaller scale in this research study. Data were collected by interviewing stakeholders with various levels of engagement in the obesity-prevention process in each school district.

Context of Study

The setting for this study was a rural area of Pennsylvania. In this particular area of the state, the conditions of overweight and obesity are prevalent in one third of all elementary school students. According to the U.S. Department of Health and Human Services (2011), over 37% of the K-6 students in the county of study are obese or overweight. All three of the neighboring school districts participating in the study are located within the same county. In each school district, an elementary school was selected for inclusion in the study because of its rural location. From each rural elementary school, one administrator, one teacher, one school nurse, and three to five parents were the potential participants. The school referred to as NORTH is a K-3 school

with approximately 500 students; EAST is a K-4 school with approximately 400 students; and WEST is a K-4 school with approximately 360 students.

Description of the Area

The county of study can be categorized as a predominantly middle-class, rural area of the state with small towns and municipalities throughout the county. According to the U.S. Census Bureau (2012), the county population is described as 89.1% White, 5.9% Black/African American, 0.3% American Indian, 2.7% Asian, 0.1% Pacific Islander/Hawaiian, 11.3% Hispanic/ Latino, and 1.9% mixed race (two or more). As demonstrated by the demographic information, there is limited diversity. In 12.4% of households in the county, families speak a primary language of communication other than the English language. Most households have 2.54 persons per household living in the home, and 9.1% of the county lives in conditions described as below poverty level. The median household income is $60,540; 87.3% of individuals graduated from high school or obtained an equivalency degree, and 26.7% earned an undergraduate degree or continued their education beyond the undergraduate level (U.S. Census Bureau, 2012, p. 1).

Measure for Ethical Treatment of Participants

To ensure the highest possible level of ethical compliance, I completed the Protection of Human Research Subjects web-based training course offered by the National Institutes of Health (NIH) Office of Human Subjects Research. To ensure that the utmost standard of ethical treatment of research participants is followed, no research commenced until full Walden University Institutional Review Board (IRB) approval was granted. Full confidentiality of interview participants was maintained throughout the

research process. Data were maintained in an organized manner, and participants was referred to using codes designating their school and position.

Data were organized by the following abbreviated codes:

NORTH Principal, LP
NORTH Educator 1, LE1
NORTH Educator 2, LE2
NORTH Nurse, LN
NORTH Parent 1, LP1
NORTH Parent 2, LP2

EAST Principal, EP
EAST Educator 1, EE1
EAST Educator 2, EE2
EAST Nurse, EN
EAST Parent 1, EP1
EAST Parent 2, EP2

WEST Principal, WP
WEST Educator 1, WE1
WEST Educator 2, WE2
WEST Nurse, WN
WEST Parent 1, WP1
WEST Parent 2, WP2

Researcher's Role

For this research, I was the primary researcher. My experience as a health and physical education teacher for the last 9 years has provided me with an understanding of the prevalence of overweight and obese children in the region. In two of the school districts, I had no prior contact with the potential participants (i.e., administrators, teachers, school nurses, and parents). I currently work in the third district included in the study. I have a collegial relationship with the administrator, school nurse, and teachers in the building but would characterize these relationships as strictly professional. I do not

possess any authority over my coworkers, and their participation in the study was strictly voluntary.

As the sole researcher involved in this study, I was responsible for the facilitation of interviews, creation of interview transcripts, data analysis, and production of descriptive narratives describing the themes. During the data analysis process, I used the assistance of a colleague for a peer debrief process to ensure that themes had been accurately identified, but all other components of this research was completed without the assistance of others. The peer reviewer was only provided with deidentified data. The peer reviewer was employed as a professor at a local university in the Department of Nutrition and Dietetics and moderator of the Student Dietetic Association.

A letter of cooperation was obtained from each of the three participating school districts. The process of acquiring consent from the school districts required contacting the superintendent of each school district, describing the investigation and procedures that would be conducted, outlining the confidentiality measures that would be used, and informing each respective school board of how potential research participants would be selected. As the lone researcher, I had the responsibility to seek Walden University IRB approval to move forward with this study. Once approval was granted to begin the research process to gather data to support the research questions, I met with the superintendents of the school districts to begin the process of seeking approval to conduct the study in their respective school districts.

Method for Selecting Participants

Educational stakeholders from three rural elementary schools in neighboring districts were selected for participation in this study. Included in the study were one

administrator, two teachers, one school nurse, and two parents who were active volunteers in the school. For consideration to participate in this study, the administrator, school nurse, and teachers needed to have at least 5 years of experience in their current positions. Special consideration was given to stakeholders with less than 5 years of experience only if they had direct participation with obesity prevention initiatives. Coyne (1997, p. 628) indicated that a purposeful sample requires a researcher to select individuals who possess knowledge relevant to the research question. In this research study, potential participants were recruited based on their knowledge of obesity-prevention strategies used in their respective school districts.

The process of contacting and recruiting potential interview participants began with a descriptive invitation email sent to the faculty members in each educational building where the investigation was conducted. Individuals willing to participate in the research study were instructed to contact me via email by replying to the invitation to participate in the investigation.

Potential parent research participants were contacted through the PTA/PTO of each school. I attended the PTA/PTO board meeting to make a brief introduction and presentation about the purpose of my research and left a sign-up sheet so I may contact individuals interested in providing their perspectives on obesity prevention in their children's educational setting.

Because of the high level of my involvement in one of the district's obesity-prevention programs, only parents of previous students who had completed the third grade, did not have younger siblings, and no longer had an academic or interscholastic athletic relationship with me were recruited in order to eliminate perceived coercion to

participate. No teachers currently working in the afterschool programs were recruited as participants to avoid any coercion to participate because of my role as an after school activity coordinator. I am not an administrator and do not possess any administrative authority over the hiring or supervision of faculty members serving in after school program staff positions.

Data Collection Procedures

Following the approval of the respective school board of each district, potential research participants were contacted via email to invite them to participate in the research study. Phone calls were used to confirm each potential participant's interest. Consent forms outlining the purpose of the study, types of questions that were used, and the member-checking process was provided to each individual participating in the study.

According to Bogdan and Biklen (2007, p. 59), the case study methodology is an ideal research design for novice researchers because of the flexibility of data collection methods. The primary data collection method that was used in this research was individual interviews. Each interview was conducted using Holstein and Gubrium's (1995) active interview approach, which allows researchers to deviate from a scripted interview protocol to interject necessary probing questions, allowing them to collect a greater depth of information relevant to the research topic through conversation rather than interrogation.

Morinder, Biguet, Mattson, Marcus, and Larsson (2011, p. 1002) demonstrated the ability to use semistructured interviews to collect adolescents' perspectives on obesity treatment programs. This approach was modified to collect adult stakeholders' perspectives on school-based obesity-prevention programs. As childhood obesity can be

a rather sensitive subject for some individuals to discuss, Doody and Noonan (2013, p. 30) indicated that researchers must be prepared to deal with sensitive subjects by beginning with simple questions and moving on to more complex issues.

To ensure that high-quality interviews were conducted, the interview process was modeled after the interview process described by Salkind (2010, p. 634) by beginning with simple introductions, reminding the participant of the purpose of the study, and indicating how the interview participant had been selected for participation in the study. Salkind continued by reminding researchers about the need to assure participants of confidentiality throughout the entire research process, indicating how the results of the study will be disseminated, reminding participants of their rights to refrain from answering any questions they are uncomfortable with, and giving the participants a length of time they can expect to be engaged in the interview process.

According to Lamb, Orbach, Hershkowitz, Esplin, and Horowitz (2007, p. 1211), an established interview protocol improves the quality of the data collected during the interview process. Even though the interviews were conducted in a semistructured format, there was an established interview protocol (see Appendix A). Shaffer et al. (2004, p. 1583) suggested the use of interview checklists to maintain a questioning order and the use of audio recording to improve the quality of the interview process and reduce errors in data collection. All interviews were recorded using a laptop computer and a backup hand-held digital recorder.

Interview Protocol

Two interview protocols were used during this investigation (see Appendix A). Interview Protocol "A" was used for school personnel; administrators, teachers, and school nurses. The wording of the questions in protocol A were phrased to collect interview participants' perspectives about how obesity-prevention strategies affect their students. Protocol "B"(see Appendix B) was used to investigate parents' perspectives about how obesity-prevention strategies affect their children. The questions in Protocol B were very similar to the questions in Protocol "A"; however, the wording was altered slightly for non-school personnel to gather more family-specific information from parent interview participants.

Data Analysis Procedures

A process of code-based analysis was used to identify themes in the data collected during the interview process. These themes were used to create narrative descriptions of the stakeholders' perspectives of school-based, obesity-prevention tactics used in their respective schools. Lee and Fielding (2004, pp. 530-531) described qualitative analysis as a systematic process of coding and organizing textual data by identifying themes and concepts that contribute to a researcher's understanding of a phenomena. Miles and Huberman (1994, p. 245) described many strategies for increasing ones' ability to interpret information collected during a research study including identifying and describing recurring themes and trends in data, recognizing the plausibility of events and statements in data, and clustering this information based on thematic similarities. Each interview transcript provided data for a multi-step analysis approach that was used to increase a trustworthiness of the findings.

According to Lee and Fielding (2004, p. 537), code-based analysis will provide flexibility throughout the coding process to continue identifying emerging themes, while allowing the researcher to incorporate findings recorded through field notes. To begin the data analysis process, the data collected during the audio recordings from each of the individual interviews was used to create verbatim transcripts of the interviews. The transcripts were used to code the data to identify major themes discussed by the participants.

The data analysis process began with intensive reading as described by Gibbs (2007, p. 41), a process that requires a researcher to "intensively read" a text when coding; this term is modified from the visual arts phrase "intensive seeing" that suggests an artist must fully understand the complexities of an object before embarking on an attempt to represent the object in a work of art. Freebody (2003, p. 132) added that before the analysis process begins, a researcher must have an understanding of the role of the participants and their relationship within the bounded system. To achieve this goal, field notes were taken during the informal conversations with potential interview candidates during each interaction prior to the beginning of the actual interview. According to Hatch (2002), there are more meaningful interactions that contribute to investigative findings than interviews and observations alone. Janesick (2004, p. 144) described researcher field notes as integral to providing meaning and depth to interactions that occur when the researcher is present within the bounded system. As the researcher, I diligently record thoughts that occurred during my interactions with potential interview candidates.

Oliver (2005, p. 1286) recommended the utilization of reflection following the interview and transcription process to closely evaluate each individual participants' slang, non-verbal gestures, and mannerisms, in addition to interviewer notes to add more depth and quality to the descriptiveness of the interview transcripts. Following the intensive reading phase, review of field notes, and reflection on the interview process, the coding process began by using the steps described by Lee and Fielding (2004, p. 537) to conduct code-based analysis.

Transcription occurred by repeatedly listening to and typing the verbal interactions of the interviewer and interview participant into Microsoft Word documents. Payne and Payne (2004, p. 5) characterized the second step in the data analysis process following transcription as an organization of broad thematic categories. Miles and Huberman (1994, pp. 249-250) described broad theme categorization as clustering, grouping items by their similarities. The active organizing of thematic categories began with a color-coding process. Watson, Miller, Davis, and Carter (2010, p. 15) devised a color-coding technique to identify statements from the transcripts that are of similar thematic nature. This coding process began with assigning a highlighting color to portions of text that represent common themes. Each theme was assigned its own color for organizational purposes.

With the assistance of coding software, using the content analysis process described by Franzosi (2004, p. 549), textual phrases from each interview transcript was based on the similarity of the content and its derived meanings in context to the interview. Polkinghorne, (2005, p. 142) and Lee and Fielding (2004, p. 532) elaborated on the importance of using software tools for qualitative analysis, such as ATLAS.ti. To

maintain a high level of organization during the coding process, after broad themes were identified and color coded in Microsoft word, the text was entered into ATLAS.ti for further thematic analysis. The ability to make use of the software's coding and retrieval settings was utilized when the data was graphically organized into categories, when researcher notes for thematic categories were created, and when concept maps for the purposes of comparing the perceptions of stakeholders from each district were created.

Next, according to Elo and Kyngäs' (2008) technique, a content analysis technique, requiring the excerpts from each interview demonstrating thematic similarities, was objectively categorized into tables to demonstrate the frequency of each theme that emerged during the interviews. This process quantified the data providing support for the strength of each theme identified during the research. Themes identified in the findings were presented in narrative form and through the use of frequency charts that were shared with a collection of the stakeholders in the school community.

To increase the trustworthiness of the thematic analysis, I employed the use of a technique utilized by Steinert et al. (2010, pp. 902-903) which requires thematic analysis to initially be conducted by me and then by the peer reviewer. To complete this process, I collaborated with two faculty members from local universities specializing in children's health and nutrition. Once the finalization of the research themes was complete, a narrative of the themes was created and prepared for distribution to the research participants for member checks to be conducted. Each of the participants received a copy of the individual interview findings and a list of the major themes identified. Participants could request a meeting to discuss any concerns with the researcher's findings.

Methods to Ensure Trustworthiness

Reflexivity

According to Creswell (2009, p. 192), researchers should inform the readers of the research about their background and relationship with the study to alert the readers of possible bias. I used reflexivity in an attempt to control possible bias (i.e., I set aside my own beliefs in order to analyze the data as fairly as possible) (Krefting, 1991). As the lone researcher, I was committed to setting aside what I believed are the most effective obesity-prevention methods to allow others to share their perspectives. Through this process of setting aside my own beliefs, it may be possible to identify new strategies to improve school-based student wellness programming.

Member Checks

Koelsch (2013, pp. 176-177) described a member check as an opportunity to provide interview participants with individual interview findings and an opportunity to meet, reflect, and clarify their participation in the study. A transcript can collect data accurately conveyed at the time of the interview, but nervousness or time constraints may contribute to interview responses that offer a less than authentic representation of the individual's perspective. By providing research participants with an opportunity to reflect on their responses and offering participants an opportunity to meet and discuss their participation allowed the interview participants to provide more meaningful contributions in the research process. The qualitative research method allows researchers to utilize interview notes and interactions with individuals within the institutions being researched to strengthen the data representative of research participants' true perspectives. Dearnley (2005, p. 25) stated some individuals are fearful of how they will be portrayed during the

dissemination of study findings. An optional follow-up meeting provides a researcher an additional opportunity to ensure participants' perceptions are portrayed accurately and provides an opportunity to correct anything that was inaccurately represented in the interview transcripts.

Peer Review

According to Creswell (2009, p. 192), peer debriefing is a process where the primary researcher allows another individual to review study findings to ask questions about the identified themes, data collection, and data analysis process in an effort to improve the trustworthiness of the research. For the purposes of this study a colleague of mine from a local university served as peer reviewer. This was a three-step process. In the initial debriefing phase my colleague received the interview transcriptions for review following the completion of the transcript documents. Phase two consisted of my colleague reviewing the themes I identified from the transcript data. Phase three was a review of the narrative describing the themes identified during the interview process.

Code-Recode

According to Krefting (1991), it is possible to increase dependability in a qualitative study with the utilization of a code-recode process. According to Krefting (1991) the code-recode process requires a researcher to review a text and identify major themes and concepts then return to the same text after a period of time to review the identified themes and concepts with more rigor. This process enhances a researcher's ability to identify and analyze the findings over time, as a researcher becomes more exposed to and familiarized with the local problem or phenomenon being investigated.

Triangulation

Once the initial coding and thematic analysis is conducted, Miles and Huberman (1994, p. 245) recommended that researchers compare and contrast their data collected to draw meaning from not only how the data relates to the central research question, but also how data collected from one group relates to the data collected in a different group. During this investigation, data triangulation was used to increase the validity of the findings. As described by Guion et al. (2012), data triangulation compares perspectives from multiple groups of stakeholders such as a parent grouping, teacher grouping, administrator grouping, and nurse grouping to identify the emergent themes from each group of stakeholders. Findings from each collective group was compared to one another in an effort to provide supporting evidence of major findings or contrasting perspectives which may require further investigation. A second type of triangulation was also utilized during this investigation. According to Guion, et al. environmental triangulation was also utilized during this investigation since data collected in three separate investigative settings were compared to one another. Themes identified in one investigation setting, but not another, were compared and discussed.

Summary of Analysis Procedures

This proposed research study investigated educational stakeholders' perspectives of school-based, obesity-prevention techniques in rural communities. To collect the data, 18-20 individual interviews were conducted with stakeholders from three elementary schools. Data underwent thematic analysis, and the findings were presented in a narrative format with thematic frequency charts. To increase trustworthiness, member

checks, and peer debriefing were utilized. The hope is that by completing this study, findings may be revealed that may improve obesity-preventions strategies.

Findings

The finding for this study were gathered from 18 interviews conducted individually with educational stakeholders that included 6 parents, 6 teachers, 3 building principals, and 3 school nurses from three respective school districts in rural Pennsylvania. The investigation revealed 6 main themes comprised of 24 sub themes. All of the themes are interrelated and include barriers, solutions, suggestions, and perspectives of the methods used by three public elementary schools to address obesity in the elementary school population.

Through the data collected and analyzed in this investigation six interrelated themes emerged as the most prevalent responses from interview participants. The themes included: 1. barriers limiting and preventing effective student wellness initiatives, 2. increasing students' participation in physical activity, 3. family dynamics, schedules, and socioeconomic factors contributing to poor health, 4. lack of transportation limiting children's participation in physical activities, 5. parental engagement and input relating to obesity-prevention initiatives, 6. cafeteria environment and meal offerings. There were several sub themes that were mentioned to a lesser extent by the interview participants. The sub themes are discussed in the section following the main themes.

Barriers Limiting and Preventing Student Wellness Initiatives

When asked about present initiatives to prevent overweight and obesity in the elementary school population in their schools, many of the stakeholders were able to provide a few specific examples of measures taken to improve children's health;

however, as quickly as the stakeholders provided examples of improvements, they also offered detailed explanations why more measures were not implemented. Stakeholders felt the schools were limited in what they are capable of doing to address obesity and overweight because of budget and schedule constraints. The majority of respondents identified budget limitations, limitations of current facilities to accommodate expanded programming, and that health and wellness-related programs were not a curricular priority in their respective school districts.

Every single interview participant cited limited budgets or lack of funding as one of the main barriers which prevents schools from offering additional obesity and overweight-prevention initiatives. School personnel and parents of EAST elementary explained their school is limited by the size of its facilities and the number of students the school serves. The EAST school nurse explained, "Only a limited number of classes can use the playground simultaneously, and that limits the time each class can spend moving." An EAST school teacher explained the cafeteria schedule is very tight and the students have a very short amount of time to eat their lunch. The EAST school principal explained his staff is investigating ways to improve the cafeteria and academic schedule, and he stated that "student wellness initiatives may become more of a district-wide focus in the upcoming academic year."

Another barrier to addressing overweight students is the families' reactions to how a school handles the situation. According to school nurses from EAST and WEST elementary schools, in the past, families had extremely negative reactions to BMI notification letters that informed parents that their children had BMIs equal to or greater than the 85 percentile. Both schools no longer provide written notification to parents of

the children's height and weight, or BMI. Parents and Teachers from WEST elementary recalled past notifications that were sent to parents; they were unsatisfied with the lack of information concerning healthy children's BMIs that accompanied the BMI notification letter.

Perceptions of barriers that prevent schools from facilitating after-school and family nutrition seminars included lack of funds to conduct programming, busy family schedules and lack of interest in the programs from parents. After interviewing teachers at WEST elementary, both felt that a lack of funding was not a barrier to implementing student wellness initiatives, however both parents from WEST elementary perceived a lack of funding to be a reasons there district had not chosen to address any wellness related initiatives for elementary school students. Even if a barrier is not truly an obstacle, the perception that it may prevent a school from implementing new programs may prevent discussions from taking place to develop and implement new programming.

Increasing Students' Participation in Physical Activity

Overwhelmingly, the stakeholders agreed that it is necessary for students to increase the amount of physical activity in their lives. Even though all the stakeholders were in agreement that students require additional opportunities to engage in physical activities, not all stakeholders agreed that extra physical activity time should be conducted at school, whether it be before school, during the school day, or after school. Both the EAST and WEST building principals were in favor of more community-initiated recreation and sport-related activities, while the NORTH building principal suggested expansion of the current after-school program model.

Parent stakeholders suggested programming immediately after school is most convenient for family schedules and provides alternatives to traditional after-school care programs for children. The parent stakeholder group also identified more frequent physical education classes as a method they would like to see implemented in an effort to increase activity in the student population. Parents offered many suggestions to increase physical activity in schools; these suggestions are addressed in section dedicated to parental engagement and input towards obesity-prevention initiatives. All three school nurses included in the study were in-favor of any programs that could increase the amount of physical activity the children receive at school. The EAST school nurse would like to see after-school programs added, while the NORTH and WEST school nurses would like to see an increase in after-school program offerings and an increase in after-school program participation.

NORTH teachers suggested adding scheduled movement activities to the curricular classroom day, such as 10 Stretches at 10:00, or utilizing spaces such as the gym, cafeteria, or teacher resource room during the winter months for additional movement opportunities when weather prevents outdoor recess. Four participants from the teacher stakeholder group recognized the importance of providing opportunities for movement, but felt that standardized testing performance dominates the landscape of teaching, and classroom instructional time in many cases could not be compromised to provide additional movement activities. Teachers from EAST and WEST also felt that student health initiatives were not a district priority at the current time. The EAST and NORTH school principals were both in favor of investigating ways and means to increase physical activity, while the WEST school principal was satisfied with the amount of

physical activity children receive in school. The WEST principal felt families should seek opportunities in the community to participate in, such as recreational and fitness activities for children to maintain healthy body weight.

Family Dynamics, Schedules, and Socioeconomic Factors Contributing to Poor Health

Stakeholders from all stakeholder groups, teacher, parents, principals, and nurses all identified family schedules as a barrier to participating in after-school activity programs, community sports, and recreation programs to increase the amount of vigorous exercise in children's lives. A teacher from EAST stated, "It's difficult for single parents to travel to activities and that takes away time from preparing meals at home, and limits what families can afford to participate in." A parent from WEST stated, "Time commitment is another one (barrier); some families may not have time to contribute multiple days per week to practices and games."

WEST school principal offered another insight, "Sometimes parents have a selfish agenda…there are some parents who are not supportive of the athletics and other activities; it's a 'me' society and sometimes the parents have the wrong agenda." School personnel acknowledged that family schedules also make it difficult to engage parents in school-related activities. The lack of family participation in similar evening programs has extinguished some of the desire for EAST and WEST school personnel to conduct family health programming. WEST school nurse commented that even if family nutrition seminars were held in the evenings, "I don't think families would attend evening seminars to improve their health. We've offered other seminars about drug prevention, alcohol prevention, tobacco prevention, but the parents don't come." The EAST school

nurse and principal also supported this trend by describing an informative seminar held to explain new cafeteria offerings to parents. Both stakeholders stated that, "only one family showed up."

Stakeholders feel there are numerous family and socioeconomic factors that contribute to overweight elementary school students; several stakeholders feel that nutrition education programs and outreach to families are possible solutions to assist families in developing healthier behaviors. Stakeholders from all three research sites indicated socioeconomic conditions are contributing factors to decreased health of students. The stakeholders identified three sub themes associated with socioeconomic conditions. The sub themes included financial situations that require families to rely on less nutritious dietary selections for family meals, reliance on school lunch and breakfast programs, and lack of funds necessary to participate in recreational physical activities.

The findings of this investigation paralleled the research conducted by Babey, Hastert, Wolstein, and Diamant (2010, pp. 2153-2154) which demonstrated increased prevalence of obesity in lower socioeconomic households than in higher socioeconomic conditions. According to the EAST school nurse, the free and reduced-lunch population of lower income families was greater than 50%, and the percentage of elementary students with a BMI above the 85th percentile was the highest of the three research sites at 35% (EAST, 2013). According to the NORTH (2013) school principal, with a free and reduced lunch percentage of less than 40% of the student population, the school district had slightly less obese and overweight elementary school students, with only 31% of the students with BMIs greater than the 85th percentile. The WEST school principal reported that his school had less than 10% free and reduced lunch population and also had the

lowest percentile of students with 18% of elementary school students possessing a BMI greater than the 85th percentile (EAST, 2013).

The most common set of factors described by stakeholders that contributed to overweight and obesity in elementary school children were family dietary habits, family schedules, and socioeconomic conditions that limited healthy dietary options and participation in exercise opportunities. Stakeholders from each school also stressed there is only so much impact or influence the school can have over a family's lifestyle. The WEST principal best described this dilemma by stating, "There is a fine line that schools walk with parents between being suggestive and intrusive when making health-related recommendations to families." Half of the stakeholders interviewed identified attitudes or beliefs held by families or students that make school-based initiatives less effective including resistance to change or uninterested in changing health-related behaviors, preference for sedentary activities, picky eaters, and an overall lack of support for school-related initiatives and programming.

Lack of Transportation Limiting Children's Participation in Physical Activities

There are many related factors that contribute to a lack of transportation necessary for children to participate in after-school and community recreational activities. These factors are compounded in a rural community where walking to or taking public transportation to these activities is not feasible. Research conducted by Davison and Lawson (2006, pp. 13-14) suggested that neighborhoods with stronger transportation infrastructures, more accessible public transportation, sidewalks, proximity to parks etc., have a higher association with more physically active children and more rural areas generally did not demonstrate corresponding high levels of physical activity. Of the 18

interview participants of the current study, 14 participants cited a lack of transportation as a barrier to implementing after-school programs and to children participating in fitness-related programs in the community.

A teacher from EAST elementary school stated, “living in a rural community makes it difficult because driving is required to get everywhere; the isolated location and lack of cooperation between families and lack of carpooling makes it harder on families to register their children for youth sports teams. A family may have the means to provide transportation to children, but the timing of the transportation may not be conducive to drop off and pick up times required for the activity.” A parent from WEST elementary stated, “Some community sports leagues begin practices and games before parents return home from work. If children do not have a ride, it makes participation in these activities difficult.”

According to the EAST nurse, lower-socioeconomic conditions may prevent families from owning two vehicles, and the primary vehicle may be required for an adult to travel to work. Economic factors may also prevent families from owning a vehicle at all. Neither of the two schools that offer after-school programming provide transportation home from these activities, which prevents children without necessary transportation home from participating unless they are dependent upon other families with children participating in the programs. Providing transportation home from after-school activities is a large expense according to the NORTH School Principal.

The lack of transportation was evident in all three school districts, which prevents children from maximizing their participation in physical activities held after school or in the community. There are numerous sub themes that contribute to limited transportation

including family schedules, socioeconomic conditions, rural isolation, and limited finances for school-provided transportation home from after-school activities. There is no easy solution to limited transportation in rural communities. Public transportation is limited; school-funded transportation is very costly according to the NORTH and EAST school principals, and there are socioeconomic and employment factors that prevent many families from providing transportation for their children.

Parental Engagement and Input Relating to Obesity Prevention Initiatives

Stakeholders felt there are not enough opportunities to engage families in wellness-related programs because of participation in other parenting programs, lack of communication, and lack of support for this type of initiatives. Of the parent stakeholders who participated in the study, five of the six stated they wanted a greater opportunity to provide input regarding student health and wellness initiatives regarding nutrition and physical activity.

According to data gathered through the interviews with EAST school personnel, there is currently no school district plan to include parents as partners in the healthy development process. WEST parents felt there were very limited opportunities to provide input regarding the development and implementation of school programs, and the majority of the opportunities to provide feedback were related to academic programs. NORTH parents felt there were opportunities to provide feedback, but they were not provided often enough and communication related to these opportunities was not readily available or distributed with enough time to make attendance feasible.

A teacher from NORTH responded that parents were previously invited to participate in after-school programming with their children, but this practice was

discontinued. The NORTH principal referred to three opportunities for families to become more engaged in the healthy development process including, "volunteering for the school wellness committee, volunteering on the cafeteria advisory committee, and attending family nutrition nights or nutrition activity assemblies with their children." The principal continued by stating, "The cafeteria advisory committee has not held a meeting in quite some time and he was not aware if it even still existed."

Principals from EAST and WEST elementary schools were not aware of any student wellness initiatives that included parents as partners in the healthy development process. The NORTH school principal shared descriptions of programs that focus on collaboration with NORTH universities to provide nutrition education to families through hands-on activities that parents and children can participate in together. The NORTH principal continued by stating these programs are funded through a combination of grant money and Wellness Committee budget money, and the principal stated, "it gets more difficult to fund programs of this nature every year."

The parents from all three school districts supported the concept of providing resources to improve family health. Parents from NORTH expressed concerns that opportunities to become involved in wellness initiatives were not well publicized and parents recommended posting all family health-related events on the district calendar. NORTH parents and teachers requested to have more input in the after-school programs offered and suggested the school district utilize a survey to gauge interest in alternative programming for next year's program. Parents at WEST elementary also stated they would like to be more involved in planning opportunities for their children to participate in after-school activities.

Parents from each school district offered several measures they feel should be taken to increase the amount of physical activity that is available to children during the day to prevent overweight and obesity in elementary schools including increasing frequency of physical education, extending recess and providing more structured activities at recess, lengthening the school day to accommodate increased time for the arts and physical activities, increased opportunities for movement during the school day, addition of after-school programs or expanding the current after-school programs and providing transportation home from after-school programs. Parents and teachers from all three school districts also felt it was necessary to address children's awareness of health concepts by offering health education at earlier grade levels, establishing health curriculums for lower grade levels, and offering family and consumer science activities at lower grade levels.

Parents from all three schools felt evening programming was valuable to improve family dietary practices while teachers from EAST and WEST felt the program would not be effective citing poor attendance would severely decrease the effectiveness of such measures. EAST school principal and nurse agreed that evening programs have not been effective in the past, citing that only one family attended the seminar facilitated by the school district explaining the new cafeteria improvements. The WEST school principal stated in his previous school they had great successes in providing evening family nutrition seminars, but there is not as great a need to conduct such programming in his current school because there is a much lower prevalence of overweight students, and he also felt the students eating habits were much healthier than in his previous school.

In summary, parents would like more input in the design of overweight and obesity programming; and all parents agree that increasing physical activity in schools could benefit the students. All the parents did acknowledge that the schools are limited by budgets, but feel there are improvements that could still be made. School personnel's perceptions of the effectiveness of evening programming differed, based on attendance at other academic area events held in the evenings. Parents offered suggested improvements of ways for parents to provide more input in program development and implementation, and suggested improvements should be made to communication processes relating to student health initiatives.

Cafeteria Environment and Meal Offerings

Schools have made changes to cafeteria offerings; however, stakeholders from all schools identified that there was still some level of displeasure with the quality of the meals and the excessive amount of food that is thrown away at lunch time. Many barriers exist preventing the cafeteria programs from making additional improvements. School personnel and parents from each school district acknowledged that USDA Standards forced schools to revise cafeteria standards to be aligned with the new School Lunch Program standards for reimbursable school lunches. According to the United States Department of Agriculture, Food and Nutrition Service (2014), President Barack Obama and First Lady Michelle Obama successfully sponsored, drafted, and signed the first major revision to school food service standards since the mid 90's in an effort to improve the health and well-being of school-aged children.

None of the parents interviewed from any of the school districts strongly supported the school lunches in their current capacity; two parents, one from WEST and

one from EAST, acknowledged that the school lunch is adequate for its intended purpose of providing a balanced meal to children whose parents do not have time or finances to provide them with a daily packed lunch. The other four parents included in this investigation voiced their disapproval with the school lunch program and unhappiness with the repetitive menu, the amount of food that is wasted because students do not like the taste, and that children were forced to take items or be subject to pay for items a la carte which would make the lunch more expensive.

Teachers from all three schools felt improvements could be made to the school lunches, but acknowledged that budget restrictions and finicky eaters make it difficult to provide healthier options. A teacher from EAST indicated, "Our school is stuck with affordable lunch options, lesser quality food to keep lunch costs affordable and there are too many repeated items like breadsticks, chicken fingers, pizza, and hot dogs." Teachers from WEST elementary also provided similar statements that described the school lunch program as aimed at making money not improving student health.

The building principal from EAST felt the meals in the cafeteria were age-appropriate and adequate to meet the dietary needs of the students, while the school nurse from EAST disagreed and felt that the food contained too many over-processed components and stated, "The new government standards are not helping; it's actually creating more waste. The amount of food wasted is tremendous because the new selections, like the whole grain breads and crusts, are not enjoyed by students." The WEST principal provided details about an electronic system maintained by the district-controlled food service which allows parents to enter a web portal to make restrictions

and limitations on their children's purchases at lunch. This option is not available at either of the other school districts.

The NORTH school principal felt that the cafeteria meals were of lesser quality because the district uses a contracted food service provider who concentrates on making a profit and does not have the students' well-being in mind when the menus are created and added, "I wouldn't want my family eating that food." The NORTH school nurse's perceptions also differed from the NORTH principal, as the nurse stated, "The cafeteria offerings are fair, because it's difficult to serve large numbers of people and keep them all happy. The meals are always balanced, not necessarily highest quality products, but not unhealthy either because there are always cost constraints."

Through an investigation of school-aged students' perceptions of school lunch, Keller (2013) found that students preferred the snack options available for sale through the cafeteria more than the lunches. More than half of the interview participants, with representation from each stakeholder group and each school district, were in agreement that snack sales at lunch should be discontinued and were unnecessary. Parents and teachers from NORTH elementary, in addition to the WEST nurse, and an EAST teacher, stated they would like to see the elimination of snack sales at lunch, because many students throw away their lunch and only eat the snacks. Only one interview participant from EAST elementary was in favor of continuing to offer snack sales in addition to lunch, and this parent admitted her children are very active and eat well-balanced meals and healthy snacks as part of their diet, so one snack at lunch was acceptable, but the parent continued by stating "I think there needs to be limits or criteria established regarding the amount of snacks purchased."

Summary of Findings

Through 18 individual interviews this investigation revealed six major themes related to educational stakeholder perspectives' of obesity prevention in rural elementary schools. These themes were:

1. Barriers limiting and preventing effective student-wellness initiatives
2. Increasing students' participation in physical activity
3. Family dynamics, schedules, and socioeconomic factors contributing to poor health
4. Lack of transportation limiting children's participation in physical activities
5. Parental engagement and input relating to obesity-prevention initiatives
6. Cafeteria environment and meal offerings

The majority of these themes have inter-related contributing factors making it difficult to decide which factors are most responsible for high levels of overweight and obese elementary school children in each school district. The stakeholders were in agreement that children need to receive more physical activity, but stakeholder perceptions of how that should be accomplished differed among stakeholders. Each school provides varying degrees of interventions for obesity; NORTH provides the greatest amount of programming specifically dedicated to student wellness; EAST provides very limited services and had the highest prevalence of overweight students; and WEST provided a limited health curriculum, cafeteria choice restrictions for parents, and limited after-school programs and had the lowest percentage of students who were overweight or obese. There may be socioeconomic factors that contribute to the percentage of students who are obese or overweight, taking into account that the school

with the lowest participation in the free and reduced lunch program also demonstrated the lowest number of overweight students. Parents, teachers, and nurses stated they were willing to address the issue moving forward, but suggested the need for support and training to do so, and two of the three building principals felt they could do more to address the issue. One barrier to implementing more student wellness initiatives was financial flexibility to do so and carrying out this agenda without disrupting valuable academic instructional time in the classroom.

Conclusion

This section of the research study outlined the investigation procedures, the process of obtaining consent to conduct the investigation, and the process by which potential research candidates were contacted and selected. Also included in this section are the methods that were used to increase trustworthiness which include member checks, peer debrief, code-recode, and triangulation. Through the investigation of stakeholder perceptions, the findings included potential answers and improvements that can be incorporated into school-based obesity-prevention programs. Six main themes emerged from the investigation that provided valuable information concerning educational stakeholders' perceptions of obesity prevention initiatives, factors that contribute to overweight elementary school students, and also several suggestions to improve current practices used in their respective school districts.

In the next section a policy recommendation will be described to improve the dietary habits of elementary school children through a creative and inexpensive positive reinforcement program. The program provides positive reinforcement to students who demonstrate healthy eating habits in the cafeteria; it also strives to communicate

information regarding children's eating habits demonstrated in the cafeteria with their parents. To implement this program in-service training must be provided to teachers and lunch monitors to successfully implement the program. The process by which the new policy will be implemented is described in the next section.

Section 3: The Project

Introduction

The research conducted in this qualitative study was carried out to investigate educational stakeholders' perceptions of the obesity-prevention methods used in three rural Pennsylvania school districts. In this section, a policy plan is described to address the concerns and suggestions of the interviewed stakeholders, in conjunction with recommendations of current research. Included are the goal of the project, the justification of the methods used in the project, and the implications of the project. Revealed in this investigation of educational stakeholders' perspectives on obesity research were causes of the increased pervasiveness of overweight and obese elementary school students, barriers to implementing successful prevention and intervention strategies, and suggestions to overcome barriers. Many of the causes associated with increases in the number of overweight elementary school students are well documented socioeconomic and family influence factors, according to Peterson, Bell and Hasin (2009, pp. 30-31).

Description and Goals

I chose to address the issue of overweight and obesity in elementary school populations because, as U.S. Department of Health and Human Services (2010, p. 2) research has indicated, overweight and obese children and adolescents are highly likely to become overweight and obese adults, placing themselves at an elevated risk for adverse health conditions. The research of Caballero et al. (2003, p. 1032) suggested that dietary changes, increased physical activity, and including parents in the intervention process are effective strategies for decreasing an individual's excess body weight or maintaining

healthy body weight. According to Tovar et al. (2012, pp. 7-8), the issues of obesity and overweight are compounded in rural communities with limited health care resources, few health clubs or fitness facilities, and the existence of family factors that contribute to higher percentages of overweight and obese children.

For example, only one of the three research sites has actively implemented measures to increase physical activity for children, adopted a nutrition education curriculum for elementary school students, and provided outreach for families that desire to become healthier. From the findings of this investigation, it appears that schools require a very inexpensive, straightforward approach to addressing the issue of overweight and obesity that does not rely on greatly altering academic schedules and does not require the use of additional facilities. Two of the research sites stated that budget restraints prevent them from expanding or implementing student wellness initiatives, while the third research site did not consider obesity prevention through nutrition education of increasing physical activity as an area that needed to be addressed. The goal of this project was to present a policy recommendation for a research-based nutrition education program for use in schools, pair this program with a plan for positive reinforcement of healthy eating behaviors in the school cafeteria, and incorporate a strategy to communicate students' cafeteria dietary habits with parents on a regular basis in an inexpensive manner.

Review of the Literature

In a study conducted by Odum et al. (2013, pp. 209-210) that investigated school personnel perceptions of factors that contribute to obesity, the data identified parents and the home environment, poor family dietary practices, children who are in control of their

own diets, child inactivity, and overuse of electronic devices to be the main emergent factors responsible for the pervasiveness of childhood obesity. According to Peterson., Bell & Hasin (2009, pp. 30-31), even though schools attempt to improve cafeteria offerings, limit food-related classroom celebrations and rewards, improve nutrition education, and increase physical activity, these factors are often ineffective at balancing societal factors such as busy family schedules and dietary patterns. Peterson et al. (2009, pp. 30-31) also stated that other less commonly associated factors also prevent families from practicing healthier dietary habits, including family food preference, lack of concern for health, craving, and emotional eating habits. In addition to barriers that prevent healthy eating, Peterson et al. acknowledged that factors preventing families from increasing physical activity included limited finances to join or purchase equipment necessary for activities, preference for screen-related activities, lack of a physically active role model, poor weather conditions, depressed emotional state or lack of confidence to participate in activities, and lack of other children to engage with in physical activities.

When presented with the barriers that prevent families from participating in physical activity and healthy eating, school personnel often look for options to improve students' health. According to Golley et al. (2011, p. 128), the ability of school personnel to provide effective obesity-prevention and intervention programs increases when parents are engaged and supportive throughout the behavior change process, which can be quite difficult. When looking at this issue of changing health-related behaviors, the theory of planned behavior (Ajzen, 1991) and the trans-theoretical change model of health behavior (Prochaska & Velicer, 1997), Rosenstock et al. (1988) described the necessity of a supportive environment conducive to behavior change throughout all phases of the

behavior change process. Many of these approaches include providing nutrition education, improving meal offerings, providing family nutrition education, and increasing physical activity before, during, and after school, but, as described by Haire-Joshu et al. (2008, p. 81), the most effective measure is direct parental involvement in the intervention process.

A large cohort study conducted in rural Mississippi by Haire-Joshu et al. (2008, p. 81) provided evidence that parental participatory models of obesity-intervention programs are able to increase children's fruit and vegetable consumption and improve dietary patterns. With the guidance of modeling healthy behaviors and the involvement of parents in the obesity-prevention program, children were able to develop healthier dietary behaviors. Haire-Joshu et al. were unsuccessful in their effort to reform overweight children's eating habits, citing that overweight preschool-aged children who have regular access to high-calorie snacks and high-sugar drinks quickly develop a strong sense of food preference that is very difficult to change or modify without eliminating or reducing the availability of those foods in the household. Children who are dependent upon their families to prepare their food are also unable to make dietary changes without parental support.

Integrating parent and family populations into school-related initiatives is challenging because of many factors described by Hornby and Lafaele (2011, pp. 39-49), which include parents' attitudes toward their role in educational programs, parents' level of satisfaction with school-provided services and academics, parents' perceptions of their own level of education, cultural and language barriers, working schedules, transportation issues, and strained family structures such as divorced parents with custody/visitation

issues. Even when health promotion programs are offered in the evenings, when schedules are less conflicting, there are still several barriers preventing parental involvement.

Public health and family medical practices are more readily equipped to address early intervention strategies, according to Horodynski and Stommel (2005, p. 371), because family doctors and nurses have repeated access to families and are involved in the health care promotion process earlier than schools. According to Horodynski and Stommel (p. 371), medical practices and community health agencies can conduct activities such as toddler food sampling, nutrition seminars, and serving size counseling, which can all help establish healthier eating habits prior to the school-aged years.

As schools cannot always overcome all the barriers associated with engaging parents in overweight and obesity initiatives, schools need to focus on what they can control. As most schools begin with kindergarten, students around the age of 5 may already have poor eating habits. A family-centered approach can be used to redevelop dietary habits, according to Davis et al. (2003, p. 25), who demonstrated how social learning theory was used to implement the Pathways curriculum. This curriculum is designed to engage students' families by assisting students with the three central components of the Pathways program: enhancing knowledge and values, developing a sense of personal control, and engaging in increased physical activity and healthy eating. According to Davis et al. (2003), the Pathways program educates families about how to build a home that is supportive of changing behaviors and seeks to engage multigenerational family structures common to Native American households.

Caballero et al. (2003) discussed how the Pathways program used a multicomponent approach to effectively reduce children's caloric intake; the components used were "changes in dietary intake, increase in physical activity, and a classroom curriculum focused on healthy eating, and a family-involvement program" (p. 1032). As described by Caballero et al. (p. 1033), the family involvement program was designed to educate parents about methods to create an environment conducive to the development of healthy behaviors and provide them with knowledge to prepare healthier meals and snacks for their families. This was accomplished by providing families with samples of snacks and suggestions of foods to try in the home and events that were hosted at the school to allow parents and children to practice their cooking skills together as they learned ways to prepare healthier foods.

Another barrier to successful prevention and intervention is failure to recognize that health-related behavior changes are necessary. As indicated by Southwell et al. (2011, p. 637), parents who recognized that their children were overweight often failed to recognize the severity of health-related complications associated with the excess weight. According to Jeffery et al. (2005, p. 23), parents have a difficult time recognizing that they are overweight and have an even more difficult time recognizing that their children are overweight or obese; the research suggested that parents have the most difficult time acknowledging overweight and obesity in male children. Jeffery et al. suggested that several factors likely play a role in parents' lack of awareness of overweight and obesity in their children, including "denial, reluctance to admit a weight problem, or desensitization to excess overweight because overweight has become the norm." The data collected during the current investigation revealed that two of the three school

districts did not provide BMI letters, and no information was provided to parents in any of the school districts regarding what are considered healthy weights for children.

As school districts often are not providing information to parents about healthy weights for children and parents are having a difficult time recognizing what a healthy weight is for their children, there is a great deal of pressure on the teacher to address this sensitive issue through dialogue with parents and students. As mentioned by several of the interview participants in the current study, it was suggested that teachers have required training about how to speak with students and families about sensitive subjects such as obesity and dietary habits. Callabero et al. (2003, p. 1033) also identified that the provision of training for all parties involved including cafeteria staff, classroom teachers, health teachers, and physical education teachers was necessary to make the environmental changes to the school more effective. Not only was initial training provided in the Callabero et al. study, but follow-up visits were also conducted to ensure that the most effective measures were being used in kitchens and classrooms to provide support, encouragement, reminders, and motivation to stick with the healthy changes.

Po'e, Heerman, Mistry & Barkin (2013, p. 436) evaluated G.R.O.W., a multileveled approach to obesity intervention for 3- to 5-year-old children. According to Po'e et al. (2013, pp. 446-447), the program's effectiveness lies within its ability to fully engage parents and children as partners in the intervention process while using low-health-literacy materials and strategies, combined with the use of social media for correspondence and motivational support. In addition to the effective strategies described in the G.R.O.W. program, Po'e et al. (pp. 446-447) stated that the intervention was successful because of its delivery in community centers and the program's high level of

flexible facilitation that adapted to families' needs. Based upon the research on the Po'e et al. community-based model for obesity prevention, those designing a school-based intervention model should attempt to fully engage parents as partners in the intervention process, make use of social media, and provide educational resources that are easily understandable so families can implement them without a great deal of difficulty.

Rationale

This project is pertinent because the county where the research was conducted possesses one of the highest rates of childhood overweight and obesity in the State of Pennsylvania, according to the Pennsylvania Department of Health (2011) Growth Screening Report. The findings of my study revealed that to some degree, each of the 18 interview participants felt that there were issues with students not receiving adequate exercise or practicing proper dietary habits within their school district.

Suggested recommendations offered by interview participants may provide solutions to common barriers to improving dietary habits in the cafeteria and in the home. To directly address children's eating habits, the policy recommendation will include a program to provide positive reinforcement of healthy eating demonstrated in the school cafeteria, which will be used to assist children in developing healthier dietary behaviors. According to Wyatt (2004, p. 15) and Stark, Collins, Osnes, and Stokes (1986, p. 377), providing positive reinforcement, cues, or reminders to children is effective in improving dietary habits. Not only will this program concentrate on reminding students to eat healthier, it will provide an avenue for communication with students' parents to alert them of their children's eating habits in the cafeteria.

A study conducted by Epsein et al. (2001, p. 177) provided evidence that interventions targeting the improvement of parental dietary patterns are effective methods for improving fruit and vegetable intake for children. There is a need for clinical assistance in providing this type of service because it is beyond the scope of most public schools to provide meaningful dietary interventions for families without the services of dieticians or nutritionists. As most school-based obesity-prevention methods are limited by budget, school personnel must exercise the most cost-effective methods associated with developing healthy student behaviors.

The research of Katz et al. (2011, p. 23) described the use of an indirect parental involvement/engagement strategy that included providing a trademarked nutrition education program to students and sending written information home to parents. Katz et al. (pp. 25-26) noted that while the nutrition knowledge of students and parents improved, dietary patterns and student BMI remained unchanged as a result of the intervention. The limited effectiveness of the trademarked program researched by Katz et al. supports the use of direct parental engagement strategies described by Hingle, O'Connor, Dave, and Baranowski (2011) and the use of more hands-on, student-centered activities described by Wall, Least, Gromis, and Lohse (2012) to more effectively develop healthy family behaviors.

Discussion of the Project

The findings of this research indicate that schools are in need of strategies to reward positive eating habits that minimize the amount of waste at lunch and reinforce positive eating habits. There were also indications from seven of the 18 interview participants that teachers require further training about how to communicate with families

in a sensitive manner about concerns over inappropriate snacks brought into the classroom and poor dietary patterns. After seeking and receiving approval from the school board, superintendent, and building principal to address these concerns, a training session will be provided to the school faculty, including classroom teachers and lunchtime monitors, to address concerns over inappropriate dietary patterns and excess student waste. According to Callabero et al. (2003, p. 1033), training provided to staff directly involved with the implementation of intervention programs can improve their effectiveness. The staff training session not only will provide educators with necessary tools to use when communicating with the children, but also may engage the faculty in collegial dialogue on the topics of healthy eating.

Developing Healthy Habits Through Health Education

A study conducted in Pennsylvania of over 1,000 students attending schools with a free and reduced-price lunch population greater than 50% by Wall et al. (2012, p. 42) demonstrated that carefully designed nutrition lessons with student-centered activities can positively impact elementary school students' vegetable intake. A school district such as EAST that currently does not offer any nutrition education but has a free and reduced-price lunch population over 50% should consider implementing a curriculum such as the Pennsylvania Supplemental Nutrition Assistance Program Education (SNAP-Ed) as indicated by Wall et al. (pp. 37-38).

The third phase of the project is the "Picture Perfect Lunch," a program designed to reward students who demonstrate positive eating habits with non food rewards and recognition among their peers. This can be achieved through relatively inexpensive measures including materials found at dollar stores or donated items. In an effort to put

the right food in children's bodies, an incentive program in the cafeteria is one strategy schools can use to foster the development of healthy behaviors. In an effort to encourage children to eat a balanced nutritional lunch at school, which may prevent over snacking when the child arrives at home, packers and buyers are both invited to participate in the program by packing or selecting one food item from at least four of the five food groups from the lunch line. The daily slideshow of the "Picture Perfect Lunch" will be shown in the cafeteria as students enter. An example of the monthly lunch slides is available in Appendix A. After paying, students who buy a school lunch will stop at a check point to have their lunch reviewed for four of the five the healthy components. All students who pack a lunch will have their lunch components checked by a cafeteria monitor to ensure that the lunch has a minimum of four food groups represented. Students who meet the requirements of four out of five healthy components will receive a colored popsicle stick indicating they have met the daily requirements. When the students throw their trash away, a second check point will review what they have eaten. Students who have eaten four of five healthy components of their lunch will receive an entry form for eating all the healthy components of their lunch for a chance to win a one of several monthly prizes, in addition to a grand prize. All entry forms must be signed by the student's parent/guardian to make the entry form valid. The inclusion of the parental signature also provides information regarding the child's eating habits on checkpoint days. This communication between the school and the home may provide parents with opportunities to speak with their children about the importance of healthy eating.

Parental Role in the Behavior Change Process

Jolla, England, Orleans and Heart (1996, p. 463) indicated that the increased frequency and intensity of parental involvement in obesity-prevention programs can greatly affect the knowledge and attitudes of families in regard to healthy eating and physical activity participation. The evidence provided by the research of Jolla, et al. suggested that schools need to make a greater emphasis on engaging parents not only in academic matters, but also in health-related initiatives.

Based upon the research of Conner, Hugh-Jones, and Berg (2011 p. 38), designing interventions with the assistance of the Theory of Planned Behavior supports the involvement of including parents in the behavior modification process. By communicating regularly with parents about whether or not their child has eaten a balanced lunch and by providing an entry form for monthly prizes that needs to be signed may initiate a discussion or provide family time for a dialogue if children do not regularly earn a Picture Perfect Prize slip.

According to Conner, et al. (2011), the Theory of Planned Behavior Concept is greatly reliant upon students' perceptions of other people's approval of their decisions and perceptions of other peers' behavior. Since many students seek approval from their parents, earning a daily entry form that must be signed by their parents is an effective measure to both communicate with parents regarding the cafeteria selections of their child and the eating habits practiced by their child in school. Po'e et al. (2013, p. 436) suggested use of low level literacy tools to increase the effectiveness of conveying importance to families with lower levels of education; to meet this recommendation a simple flyer was prepared and the communication tool will only require a simple

signature. An example for the flyer providing informative information for families is available in Appendix A. As a result of the regular communication with parents, students' eating habits may improve if they know their parents will be made aware if they are choosing to eat the lunch that was packed for them or the lunch they purchased.

Positive Reinforcement

The children who demonstrate proper eating habits identified through the Picture Perfect Lunch Program will have the opportunity to have their entry form drawn at the end of each month to win a number for prizes. The prizes will be used to provide motivation to continue proper eating habits. Examples of prizes could be pencils, erasers, pencil sharpeners, colored pencils, box of crayons, Frisbees, or other toys that can be used at recess such as hula hoops or jump ropes. At the conclusion of the program, two grand prize winners will be drawn from the collection all parental signed entry forms collected since the beginning of the program. Examples of grade prizes could be gift certificates to children's stores, local amusements, or theme parks.

Program Limitations

While no health behavior model is perfect, this system does reinforce positive eating habits, provides students with motivation to eat balanced diets, and has the potential to reduce waste, and unnecessary after-school snacking, in addition to providing parents with an avenue to communicate with their children concerning their daily dietary habits. However, families with poor dietary habits, poor attitudes towards nutrition, or lack of knowledge of proper nutrition for children may not be motivated enough to engage in conversation, read about a balanced lunch, assist their children in changing their daily eating habits, or modify what is packed for their children's lunches. The daily

communication component alone is not an effective intervention; education for parents needs to be provided through school and community health agencies that stress the importance of proper eating habits. This must be accomplished through well-attended events such as "back to school" or "open house" nights.

There are some potential barriers to the success of the program including that the school needs to buy into the concept and recognize there is a need for change; there needs to be a chairperson or coordinator to create the tickets and purchase the prizes, and someone needs to inquire about possible donations of prizes, or the school must have some funding available to secure prizes for the campaign. The parent engagement component is an indirect engagement strategy and is less effective than direct parental engagement strategies, but the process of involving parents in the health behavior change process needs to begin with small steps. There are opportunities for program expansion and inclusion of evening family health seminars in the future.

Timetable for Project Implementation

Because of the simplistic nature of the policy recommended, the timetable for implementation is rather short, and can be accomplished in the summer months leading up to the start of a school year. The first step is the facilitation of a teacher in-service session with materials made available through Yale's Rudd Center for Food Policy and Obesity. A presentation created by Dr. Schwartz (2013), the Director of Research and School Programs for the Rudd Center for Food Policy and Obesity will be modified for use in the in-service seminar that focuses on "Talking with Parents and Students about Childhood Obesity" (Schwartz, 2013). Following the use of the Rudd Center Presentation, a presentation featuring the Picture Perfect Lunch program policy will be

introduced to the faculty and staff in attendance. A copy of the materials is available in Appendix A.

The training can be completed in a two hour session allowing schools to minimize the in-service time dedicated to obesity prevention and maximizing time dedicated to other curricular areas of need. Once the training is provided, the program can be implemented as quickly as donations for prizes are secured. This process can take anywhere from a week to several months. To make the program more effective, it is ideal to begin the program immediately after Open House/Back to School night. The large parent audience at these events is ideal for explaining the new healthy eating initiative to the school community. To increase the effectiveness of the program, it is important to increase parents' awareness of the issue and knowledge of the program so they may assist their children during the process of improving dietary habits. Since parents will be required to sign students prize entry forms it is important that the program is thoroughly explained and presented in an easily understood manner.

Responsibilities for Implementation

As previously stated, there are some additional responsibilities associated with implementing a new program including the creation of prize entry tickets, writing letters, requesting donations, buying donations, possibly fund raising for the purchase of donations, meeting with the PTA to ask for contributions towards donations, and continuing to provide educational reminders and encouragement to students, families, and faculty. As the health and physical education teacher and a member of the wellness committee, I would take the lead role in facilitating the school in-service session. The in-service session will include background information about childhood obesity, strategies

to speak to children about activity levels, ways to approach discussing dietary habits with sensitivity, and procedural information for the Picture Perfect Lunch Program. To complete the training, I will also use the services of a NORTH university professor of nutrition and dietetics, who specializes in family nutrition counseling, as the presenter for teaching faculty members about the importance of approaching the topic of weight and dietary habits with sensitivity.

Following the in-service, I will meet with the building principal to review the specific implementation plan for health education lessons that will be taught during health class. This will require the new nutrition education lessons to be approved by the district curriculum committee at the September curriculum committee meeting. Also during this meeting with the principal, the informational materials alerting parents about the Picture Perfect Lunch Program will be reviewed. The building principal will introduce the Picture Perfect Lunch Program during each grade level's back to school night in September. Demonstrating administrative support for the new healthy eating initiative is important to reinforce the schools commitment to assist families in making healthy changes during the school year.

During the implementation of the Picture Perfect Lunch Program, the Wellness Committee will take on the responsibility of securing prizes. The Lunch monitors, physical education teacher, and principal will all share a role in the checkpoint responsibilities for evaluating the components of lunches. This program also provides an additional avenue for parental participation in school-based obesity preventions initiatives; parents may volunteer to serve as guest judges to hand out popsicle stick as students exit the lunch line. At the end of each month, the principal will draw three

names from each grade level to award the healthy eaters with prizes. During the last prize drawing of the year, the principal will announce the grand prize winners over the school intercom before dismissal.

Project Evaluation

The evaluation of this project includes a survey distributed to parents of children involved in the program that will gauge their awareness of the program and will attempt to identify any changes in dietary patterns. In addition to parent surveys, the school will be able to quantify the number of parent volunteers who came to assist during lunch. An interview with cafeteria lunch monitors and custodians will be held to gather their perspectives on the effectiveness of the program and will help to determine if there was a decrease in overall waste during lunch.

The final evaluation tool that will be used is a Pre and Post BMI evaluation occurring in September at the beginning of the school year and in May/June at the conclusion of the school year. This measure may not be effective at reducing student BMI, but it offers awareness and may help encourage the importance of maintaining healthy student body weight and preventing increases in their BMI percentiles.

Implications for Social Change

This qualitative case study addresses a global need to improve the exercise patterns and dietary habits of youth to reduce adverse health effects in adulthood. The importance of this research is immeasurable and holds the potential to improve the health of the next generation. The findings of this study will add to the current literature of educational stakeholders' perspectives about obesity-prevention methods. Specifically it fills a gap in the school practice of addressing obesity in rural communities. The suggestions made by

participants are all useful and may be applied to several other settings in the global community as researchers and stakeholders search for answers to address increases in childhood obesity.

Conclusion

The recommended policy in section 3 has the potential to improve student health, decrease excess cafeteria waste, indirectly engage parents in a positive reinforcement program to promote healthy eating habits, and provide parents with an avenue to engage in conversation regarding healthy eating at home as a result of communication provided regarding children's eating habits in the cafeteria. To implement a policy of this nature, in-service training must be provided to teachers and lunch monitors, and information must be shared with parents. There will be an increase of responsibilities to implement this policy, but the responsibilities can be distributed amongst several faculty and staff members to not overwhelm any one particular faculty member. In section 4, a reflection of the investigation and policy recommendation will be provided. The section includes a discussion of the potential strengths and weaknesses of the policy recommended and implications for future research.

Section 4: Reflections and Conclusions

Introduction

As terms such as *globosity* are created to describe the rising trend of obesity in the international community, this preventable health condition has extended its reach to virtually every community on every continent throughout the world. The purpose of this investigation was to interview educational stakeholders to gain their perspectives about the methods used in their schools to address childhood obesity prevention in rural communities. The findings of this investigation revealed several themes relating to the prevention of the conditions of overweight and obesity in the elementary population, in addition to revealing several barriers to the school-initiated prevention initiatives. In response to the emergent themes, a policy recommendation is provided that includes the Picture Perfect Lunch, proposed to reinforce positive eating habits, promote the intake of balanced meals, reduce after school binge snacking, reduce excess cafeteria waste, and improve communication between the cafeteria and the home. The first portion of this section will address the strengths and weaknesses of the proposed project to address childhood obesity in rural communities. The remainder of this section will be a discussion of the entire project study's potential to promote positive social changes in rural communities and improve the overall health of students, as well as implications for future research.

Project's Strengths and Weaknesses

The strengths of the Picture Perfect Lunch Project include the low cost of implementation, flexibility of implementation days, increased communication between the school and home, and the potential to develop healthy dietary patterns in young

children. The Picture Perfect Lunch Policy provides regular opportunities for children to practice healthy behaviors, provides an opportunity to discuss with parents the elements of healthy meals for both buyers and packers, provides an avenue for increased parental engagement, and has the potential to reduce food waste in the cafeteria. The curriculum lessons used to increase awareness of healthy eating are research-based, standards-based instruction and are proven to increase children's knowledge of the importance of increasing fruit and vegetable consumption. The teacher in-service materials are also provided by a research-based program designed to improve educators' nutrition-related communication skills. The weaknesses include a required commitment and acceptance of the program by faculty and staff, the necessity for training to implement the program, increased workload to implement the program and secure prizes, and a financial commitment of school resources. The parental engagement portion of the Picture Perfect Lunch program does not use a direct engagement strategy, but it does have the potential to increase communication between the school and the home.

Scholarship

This project has provided me with a renewed perspective on my role as a physical education teacher. This investigation has given me the desire to remain well informed of the latest and most effective research-based strategies in preventing and addressing childhood obesity. Health and physical education teachers often rely on what is familiar, which results in complacency. This project has expanded my knowledge of techniques used around the world to keep children active. It has also reinforced the need to assist children in developing healthy behaviors and to increase the role of parents in school-initiated programs. A quote from Leo Tolstoy describes the situations I found myself in

prior to beginning this project study: “Everyone thinks of changing the world, but no one thinks of changing himself.” It was my ignorance and my lack of foresight that prevented the obesity-prevention programming in my school from reaching its fullest potential. Now, as a consumer of research, I am recharged, refocused, and eager to implement new initiatives, revise current programs, and provide more avenues for parental involvement throughout our programs.

In addition to increasing my professional and clinical knowledge, the process of completing this EdD Program has required ample personal growth, including improved time management and stress management, and has allowed me to become more accepting of critique and constructive criticism. Throughout this process, my communication skills have also improved through interaction with my peers via the online classroom environment. Although I still prefer verbal communication, I can more clearly express my views through text.

All of these are valuable skills I will put to good use during future research endeavors aimed at improving the health of young people in my community. One of the reasons I choose to complete my studies at Walden University was the institution’s dedication to promoting positive social change. It is my goal to continue to be a catalyst of social change in my local community.

Project Development and Evaluation

The Picture Perfect Lunch project was specifically designed to address the perspectives of several educational stakeholders who identified that students were not eating balanced lunches, were throwing away the majority of the food their families paid for, and were only eating snacks sold in the cafeteria. The continuation of these poor

eating habits places children at risk for becoming overweight, leads to excess after school snacking, and develops a mindset that we live in a disposable society.

Though the development of my project, I was presented with the challenge of analyzing data and providing a rational solution to meet the needs of the school communities represented in my research study. Some of the most prominent barriers identified by the educational stakeholders of each rural school were a need to increase communication between the school and children's parents/guardians and ways to improve the cafeteria experience while not greatly altering the daily schedule or requiring vast amounts of funding or school resources to complete the project.

Through my own knowledge and concepts provided by researchers such as Caballero et al. (2003), Po'e et al. (2013), and Conner et al. (2011), I was satisfied that a positive reinforcement program for healthy eating habits was a simple yet potentially effective method to address each school's need for a strategy to improve student dietary patterns. As a method of evaluation, I will need to communicate with those most involved in the process, including teachers, lunch monitors, custodians, parents, and administrators. Semistructured one-on-one interviews will be used to investigate the program's effectiveness.

Leadership and Change

After college, I accepted a health and physical education teaching position with the knowledge that our nation was in a state of declining health. As the U.S. Department of Health indicated, risk behaviors such as improper diet and sedentary lifestyles continue to place Americans at risk for living with adverse health conditions as a result of preventable factors. As an individual with knowledge of exercise science and a family

background that promoted vigorous participation in sport and fitness-related activities, I considered myself healthy. What I did not see myself as was part of the solution. Initially, I only thought of my role as that of a teacher, not as that of an activist for social change. As I continued to grow as a professional through attendance at professional conferences and through my master's program, I began to realize that I had the potential to positively influence children on a daily basis. A quote from Mahatma Gandhi most accurately describes my mental state when arriving at work each day: "Be the change that you wish to see in the world." The completion of this project has provided me with the tools to make more impactful changes in my community. Through these tools, I can assist people with improving their health and inspire them to be more productive members of our communities.

Analysis of Personal Growth

As a child, I was told by a close family friend that school never ends until someone calls you "doctor." I never thought this goal was unattainable; I also did not know the dedication and perseverance it would require. Now I remain dedicated to my goal of improving the process by which children are educated through the physical domain, increasing the input and involvement of children's parents in developing healthy behaviors, and not only educating children, but also providing opportunities to educate entire families through enjoyable, interactive learning experiences.

My awareness of learning theories and behavior change theories has increased dramatically. I am more aware of the global learning community, and my contributions to research move beyond the boundaries of my school district, my state, and even my nation. Through my interviews with other educators, I have also come to the realization

that collegial discourse is a valuable tool for improving the school environment, and we have the solutions to many of the problems that exist in our schools. We just need to ask the right questions of the right people and listen intently to the answers provided.

For me, an interest has developed into a life's mission as I end this chapter of my life and begin the first steps in forming a not-for-profit organization to bring affordable family fitness to our community. This is a goal I would not have even dared to consider 3 years ago. Through my collaboration with community stakeholders, local university faculty, and administrators in three school districts, I now know this dream is much more attainable than I would have imagined. Margaret Mead stated, "Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has." Equipped with an improved ability to convey my dream and communicate the course of action to others, I and a small group will enact changes that will improve the lives of many.

The Project's Potential Impact for Social Change

One of the most troubling barriers to living a healthier lifestyle that emerged from the findings of this investigation was that families are too busy to exercise or prepare healthy meals. This research has the potential to help families refocus and reprioritize their lives to allow more time for physical activity and heighten awareness of the nutritional needs of their children. The identification of barriers may be most useful in assisting other rural communities in addressing the issues of implementing successful overweight prevention programs. This project study encompasses the potential to increase awareness of healthy behaviors, prevent children from becoming overweight through the implementation of programs, and increase parental involvement in the

overweight intervention and prevention process. A quote from president Barrack Obama speaks to the timeliness of the issue of addressing the health of the youth of our nation: "Change will not come if we wait for some other person, or if we wait for some other time. We are the ones we've been waiting for. We are the change that we seek." If the issue of childhood obesity is left unaddressed, our nation will experience an overall decline in health, despite improvements in modern medicine as described by King, Matheson, Chirina, Shankar, and Broman-Fulks (2013, p. 386). If the problem is left untreated and unaddressed, then who will grow to become the leaders of our nation? Children may never reach their fullest potential because of the effects of a greatly preventable condition.

Implications, Applications, and Directions for Future Research

My initial suggestion for future research is to conduct a pilot study of the effectiveness of the Picture Perfect Lunch Policy to determine what effect the new policy has on improving student dietary habits and increasing awareness of the benefits of healthy eating habits, as well as to quantify the increase of conversations in the household regarding children's eating habits through the use of a lunchtime reporting system. The process of evaluating the Picture Perfect Lunch could be conducted as a program evaluation that includes both interviews and survey research. The overall goal of conducting future research on this subject is to continue improving the quality of health among elementary school students in rural Pennsylvania, increase awareness of healthy eating concepts, and engage parents in the healthy behavior development process. Another suggestion is to seek additional methods to directly involve parents in the behavior change process.

Conclusion

In this investigation, I sought to collect educational stakeholders' perspectives on school-based obesity-prevention initiatives in rural Pennsylvania. After interviewing 18 individuals, including six teachers, six parents, three principals, and three nurses from three neighboring school districts, I found that six main themes emerged. These themes provided insight on factors contributing to overweight and obese elementary school children, perceptions of current district-level practices to prevent excess weight gain, and suggestions by stakeholders to improve student wellness programs and initiatives. This investigation has provided valuable information to address a local problem of childhood obesity. If left unaddressed, the issue of childhood obesity can negatively impact the health of affected individuals. In most cases, excess weight gain can be prevented through a healthy diet and regular participation in physical activity; however, when this problem is not addressed, overweight children become overweight adolescents and adults who may suffer from a multitude of adverse health conditions related to the excess weight.

To close, I would like to use a quote from the late Nelson Mandela: "Education is the most powerful weapon which you can use to change the world." The research is available that demonstrates the dangers of childhood obesity. Research demonstrating best practices and examples of success in preventing and reducing the prevalence of childhood obesity are also available. As an educator, I believe that it is necessary to provide students with active learning experiences so that children have opportunities to develop health behaviors. In many cases, it is also necessary to provide opportunities to

educate families about ways to become healthier. If the research is ignored, the overall health of our students will decline.

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Appendix A: Picture Perfect Lunch Program

THE START OF SOMETHING NEW

[redacted] Elementary School feels the mental and physical health of our students is very important. We believe that putting the right foods in our body not only nourishes the physical body, but the mind as well. In combination with our "Food is Elementary" program, we are introducing the "Picture Perfect Lunch" incentive in the cafeteria. Packers and buyers are both invited to participate by packing healthy items and choosing foods from the lunch-line included on the list to follow.

ELEMENTARY PICTURE PERFECT LUNCH

A daily slideshow of the "Picture Perfect Lunch" will be shown in the cafeteria as students enter. Students will then stop at the first check point to have their lunch reviewed for the healthy components. When they go up to throw their trash away, a second check point will check for what they have eaten. Students will receive an entry form for eating all of the healthy components of their lunch.

Q: When will this program be initiated?
A: The program will begin the week of February 10th

Q: What will count as a balanced meal?
A: Students who choose 4 out of the 5 healthy options from the "Picture Perfect Lunch" daily slide and eat most of the meal will receive a token. These options will include fruits, vegetables, fat free or 1% milk, whole grains, and healthy proteins.

Q: How can packers earn tokens?
A: Packers can also pass through the checkpoint to have their lunch reviewed for healthy options.

Healthy meals include:
Whole grains: bread, rolls, cereal, brown rice, oatmeal-based granola bars, crackers, tortilla shells
Fruit and vegetables: fresh fruit or fruit packed in water or 100% juice, sliced fruit and vegetables, 100% fruit juice, dried fruit without added sugars
Low fat or fat free dairy: string cheese, milk, cheese, yogurt
Lean protein: Grilled or shredded chicken, sliced turkey, tuna, hardboiled eggs, peanut or other nut butter, unsalted nuts, tofu, low fat cheese

Grand Prize:
Two winners will be selected to win a $250 Hershey Park Gift Card

WHAT CAN THEY WIN?

Students will be able to enter the monthly lottery with the tickets they have earned over the previous month. The check point days will not be announced so students will need to consistently choose healthy options at lunch. All entries that are not drawn for a monthly prize will be eligible to win a grand prize.

(Over)

EXAMPLES OF PACKER MEALS

- Whole grain bread and sliced turkey sandwich, low fat yogurt, piece of whole or cut up fruit
- Whole grain crackers, low fat cheese, chopped vegetables, low fat dressing, applesauce
- Whole grain tortilla, tuna, fruit cup in water or 100% juice, carrot sticks
- Leftover dinner idea! Grilled or barbeque chicken, whole wheat macaroni or pasta salad, grilled vegetables, banana

ADDITIONAL FOOD IDEAS

- **Whole Grains**
  - 100% whole wheat or whole grain bread
  - Low fat granola bars
  - Whole grain cereal
  - Whole wheat/grain pretzels
  - Whole wheat rolls and buns
  - Whole wheat pitas
- **Fruits**
  - Bananas, apples, pears
  - Grapefruit, oranges, clementines
  - Mangos, papaya
  - Peaches, plums
  - Grapes, raisins
  - Strawberries
- **Vegetables**
  - Romaine lettuce, spinach, broccoli, kale
  - Avocado, celery, peppers
  - Potatoes
  - Carrots, celery
  - Cauliflower
  - Tomatoes
- **Dairy**
  - Fat free or low fat milk
  - Low fat cheese and string cheese
    - Cheddar, mozzarella, Swiss, cottage cheese, American
  - Low fat or fat free yogurt
  - Soy milk or yogurt
- **Lean Protein**
  - Grilled or skinless chicken, turkey, pork
  - Tuna
  - Hardboiled eggs
  - Beans and legumes
    - Black beans, kidney beans, lentils, soy beans, pinto beans
  - Tofu
  - Unsalted nuts and seeds
    - Almonds, cashews, hazelnuts, peanut butter, pumpkin seeds, walnuts
  - Lean beef

March Lunch Menu

2014

North Elementary School

- Hash Browns

- Breakfast Pizza

- Orange Juice

- Baby Carrots

- Low fat, Fat free, or Chocolate Milk

- Bacon, Egg and Cheese

Here's your mission, choose 4 for nutrition!

- Chicken Patty on Whole Grain Bun

- Fresh Celery Sticks

- Vegetarian Beans

- Low fat, Fat free or Chocolate Milk

- Apple Slices with Yogurt Dip

Here's your mission, choose 4 for nutrition!

- Tomato Soup

- Steamed Broccoli

- Raisins

- Toasted Cheese Sandwich

- Low fat, Fat free, or Chocolate Milk

Here's your mission, choose 4 for nutrition!

- Steamed Carrots

- Whole Grain Dinner Roll

- Cheddar Cheese

- **Salad Bar!**
- Chopped Romaine Lettuce
- Assorted Salad Toppings

- Low fat, Fat free, or Chocolate Milk

- Celery Sticks

- Mixed Fruit

Here's your mission, choose 4 for nutrition!

- Green Beans

- Fresh-cut Vegetables

- Chilled Peaches

- Oven Baked Pizza with Whole Grain Crust

- Low fat, Fat free, or Chocolate Milk

Here's your mission, choose 4 for nutrition!

NORTH ELEMENTARY PICTURE PERFECT LUNCH

A North School District Wellness Initiative

Picture Perfect Lunch: Purpose

North Elementary School feels the mental and physical health of our students is very important.

We believe that putting the right foods in our body not only nourishes the physical body, but the mind as well.

In combination with our "Food is Elementary" program, we are introducing the "Picture Perfect Lunch" incentive in the cafeteria.

Packers and buyers are both invited to participate by packing or choosing healthy foods from the lunch-line included on the list to follow.

Picture Perfect Lunch: Objectives

1. Improve current Nutrition Education
2. Introduce a plan for positive reinforcement of healthy eating behaviors in the school cafeteria
3. Incorporate a strategy to communicate students' cafeteria dietary habits with parents on a regular basis in an inexpensive manner
4. Reduce excess cafeteria food waste

Picture Perfect Lunch Goals

- Encourage students to pack or select healthy choices from 4 of 5 food groups.

Picture Perfect Lunch Goals

- Reduce Cafeteria Waste

Picture Perfect Lunch Goals

- Increase communication and parental involvement in the healthy behavior development process.
- Inform parents about the dietary choices made by their children in the cafeteria
- Provide parents with an avenue to speak with children about nutrition in the home.

Picture Perfect Lunch

- Protein
- Vegetable
- Fruit
- Grain
- Dairy

Students must select or pack 4 of 5 components to earn a colored popsicle stick.

Picture Perfect Lunch

Checkpoint Charlie

As students leave the lunch line, each tray will be checked for the necessary components.

Picture Perfect Lunch: Packers

- Students who pack a lunch will have their lunch checked when the buyers are called up to purchase their lunches.

Picture Perfect Lunch:

What to look for -

- **Whole Grains**
  - 100% whole wheat or whole grain bread
  - Low fat granola bars
  - Whole grain cereal
  - Whole wheat/grain pretzels
  - Whole wheat rolls and buns
  - Whole wheat pitas

Picture Perfect Lunch:

What to look for -

- **Fruits**
  - Bananas, apples, pears
  - Grapefruit, oranges, Clementine's
  - Mangos, papaya
  - Peaches, plums
  - Grapes, raisins
  - Strawberries
  - 100% Fruit Juice
  - 100% Fruit Cups, not in syrup

Picture Perfect Lunch:

What to look for -

- **Vegetables**
  - Romaine lettuce, spinach, broccoli, kale
  - Avocado, celery, peppers
  - Potatoes
  - Carrots, celery
  - Cauliflower
  - Tomatoes

Picture Perfect Lunch:

What to look for -

- **Dairy**
  - Fat free or low fat milk
  - Low fat cheese and string cheese
    - Cheddar, mozzarella, Swiss, cottage cheese, American
  - Low fat or fat free yogurt
  - Soy milk, almond milk, or yogurt drinks

Picture Perfect Lunch:

What to look for -

- **Lean Protein**
  - Grilled or skinless chicken, turkey, pork
  - Tuna
  - Hardboiled eggs
  - Beans and legumes
    - Black beans, kidney beans, lentils, soy beans, pinto beans
  - Tofu
  - Unsalted nuts and seeds
    - Almonds, cashews, hazelnuts, peanut butter, pumpkin seeds, walnuts
  - Lean beef

Picture Perfect Lunch

- Checkpoint 2
  - Each student who earned a colored popsicle stick will have their tray checked.
  - Student who ate the majority of each component will earn an entry form.
  - All students who earned a popsicle stick will return their stick to the can.

Picture Perfect Lunch

- Each student who earns an entry form for monthly/grand prizes must have the back of the form signed by their parents.

- Regular communication with parents may help improve/develop children's healthy eating habits.

Picture Perfect Lunch: Prizes

- Monthly prizes include:
  - Water Bottles, Frisbees, Stickers, Pencils, Erasers, Pencil Sharpeners, Nerf Balls, and tickets to high school and local college sporting events.
- Grand prizes include:
  - 2 - $250.00 gift certificates to Hershey Park
    - Paid for by the Wellness Grant and the PTA

Picture Perfect Lunch: Review

Provide positive reinforcement for healthy eating habits.

Improve student health through proper nutrition.

Increase communication with parents.

Provide opportunities for parents to speak with children about nutrition.

Reduce excess cafeteria waste.

Appendix B: Interview Protocol A

Interview Protocol for School Personnel

- What initiatives are currently in place to prevent and reduce the prevalence of the conditions of overweight and obesity in your school district?
    - What are your thoughts and impressions about the after-school activities provided to students?
        - How can the current after-school programs be improved?
        - What are some barriers or reasons that families do not participate in after-school programs?
    - What are your thoughts and impressions of nutrition education provided to students?
        - How can the current nutrition education for the students be improved?

- What are your thoughts and impressions of the meal offerings in the cafeteria?
    - What changes would you like to see implemented?

- What strategies does the school district use to incorporate parents in the healthy behavior development process?

- What are your thoughts and impressions on family health education provided by the school district?
    - How can current family health education programs be improved?

- Which obesity-prevention activities do you feel were most valuable or most effective at improving students' health?
    - Which programs do you feel are ineffective and should be improved or eliminated and why?

- What are your expectations of future obesity-prevention initiatives and activities?
    - What are other factors that may be impeding the process of improving students' overall health?
    - How can these initiatives and activities be improved to facilitate healthy behavior changes in the students?

Appendix C: Interview Protocol B

Interview Protocol for Parents/Guardians

- What initiatives are currently in place to prevent and reduce the prevalence of the conditions of overweight and obesity in your school district?
    - What are your thoughts and impressions about the after-school activities provided to students?
        - How can the current after-school programs be improved?
        - What are some barriers or reasons your family does not participate in after-school programs?
    - What are your thoughts and impressions of nutrition education provided to students?
        - How can the current nutrition education for the students be improved?
- What are your thoughts and impressions of the meal offerings in the cafeteria?
    - What changes would you like to see implemented?

- What strategies does the school district use to incorporate parents in the healthy behavior development process?

- What are your thoughts and impressions on family health education provided by the school district?
    - How can current family health education programs be improved?

- Which obesity-prevention activities do you feel were most valuable or most effective at improving your child's health?
    - Which programs do you feel are ineffective and should be improved or eliminated and why?

- What are your expectations of future obesity-prevention initiatives and activities?
    - What are other factors that may be impeding the process of improving students' overall health?
    - How can these initiatives and activities be improved to facilitate healthy behavior changes in the students?

Appendix D: Theme Frequency Chart

USDA School Lunch Improvements	EN, WP2, LP, EP, ET1, LSN, WSN, WP, WP1
BMI Screenings and notification as intervention	WSN, WP, LT2, EN, WP, EP, LSN, LT1 *WP1*
Wellness Policy	LP, EN, EN, WSN, EP, EP, WP, WP, LT1, LT1 *EN*
Physical Activity & After-School Programming	Proponents - WP1, WP1, WP1, EN, WP1, ET1, LP1, LP1, LP2, LP, LSN, LSN, LSN, WSN, WSN, WSN, WP, WP, WP, WP2, WP2, WP2, EP2, WT1, WT1, WT1, WT2, WT2 *Programs available through community or other district schools -EP, WP,* WP1, LP1, WSN, *Anti – School Programs EP, WP1* outlier * LT1 –
Suggestions to Improve After-School Programming	LP2 , LP, LP, LT1, LT2, LSN, LT1, LP, LSN 5/6 felt improvements necessary
School Related Barriers	EN, WP2, WP2, EN, EN, EP, ET1, LP, LP, LP, LSN, LT1, LT2, LT2, WSN, WP, WP1, WP, WP1, WP2, WP2, EN, EN, EN, WSN, LSN, EP2, WT1, WT2
Parental Influence of Students Health	EN, EN, EN, EP1, LSN, WP2, WP1, WSN, EN, EN, EP1, EP, EP, EP, ET1, WP, ET1, LP1, WSN, WSN, LP2, LP, LSN, LSN, LT1, LT1, LT1, LT1, LT1, LT1, LT2, LT2, WSN, WSN, WP, LT2, WP, WP1, EN, LT1, EP2, WT1, WT2
Parental Lack of Nutrition/Exercise Education Awareness	LT1, LP2, LP2, LP2, LSN, EP1, EP2, WT1
Transportation	WP2, LP2,EP1,LT1, LT2, WP, ET1, ET1, EN,WSN, LP1, LSN,LT2,WSN, EP2
Socio-Economic Conditions –	LP2, LSN,WSN, WP, EN,EN,EN, EP1,ET1, ET1, LP1,LP2,LSN,LT1, LT2,LT2,LT2,LP2, EP2, WT2 **WP , WP* – "Upper Middle Class"

Family Schedule Contributed to unhealthy lifestyle or inability to participate in activities	EN, WP2, . ET1, ET1, ET1, ET1, LP2, LP, LT2, LT2, WSN, WP1, WP1, WP2, WP2, WP2, EP2, WT1,WT2
Socioeconomic conditions prevent participation in activities	WP1, EN, EN, EP1, WP,WP,. EP1, ET1, EP2, WT2
Nutrition Education	LP1, LP1, LP2, LP, LSN, WP2, LT2, WP, WP, WP, WP1, WSN, WP, WP, WP2, WP2, WP2, LSN, LSN, EP2, WT1, WT2 *WP1* *WP – anti expansion of nutrition ed.*
Elimination of additional Snack sales at lunchtime	EN, LSN, LSN, LT1, LT1, LP1, LP2, LP2, WT1
Disapproval of School Lunch offerings	WP1, EN, EN, EN, ET1, WP1, ET1, LP1, LP2, LP, LT2, LT2, LP1, EP1, WP2, WP1, EN, LT1, LP, LT1, LT1, EP2, WT1, WT2
Parents want more input in obesity prevention	LP1, LP1, LP1, WSN, LP, EP2, WT2
Positive Cafeteria reactions	EP,ET1, LSN, WP, WP, WP, WT2
Excessive waste in cafeteria	WP2, WP1, LT1, WSN, ESN, WP1, WT1
Suggested Increases in Physical Activity	WP2, WP2, EN, ET1, EN, EP, EN, ET1, LP1, LP1, ET1, LP1, LP1, WSN, LP1, LP, LT1, LP2, LP2, LP, LSN, WP1, WP2, WP2, WP2, WP2, LT1, EP2, WT2
Nutrition Education Improvements	EN, EP1, EP1, EP , EP , EP, LP1 , LP1, LP1, LP, LP1, EP1, EP1, WSN, WP1, WP1, WP2, WP2, LT1, LT2, EP, LT2, WSN, LT1, LT1, EP2, WT2
Improved Wellness-related communication	EP, LP1, LP1, LP1, EP1, EP1, EP1, EP, EP, LP1, LP2, WP1, WP1, WP2, WP2, WP2, EP1, LP2, LT2, EP2
Increase Parental Participation	LP1, EP1,ET1, ET1, WP, WP, LP2, LT1, LT2, LT2, EP, LP1, WSN, LT2,. LT2,LT2, LT2,LT2,LSN, LSN, LSN,LSN, LSN, ET1, EP2, WT2, WT2
Suggested improvements for cafeteria	LSN, LP1, LP1, LP1, LP2, LP2, LT1,LP, WP2,EN, WP,ET1, LP, LP, LSN, EP2, WT2, WT2, WT2
Suggestions to improve role of the school/teachers	LP, LT2, LT1, LT1, LT2, LT1, LT1, LSN, LT2,. EP, LP, LP, LT2, LT1

Appendix E: Thematic Interview Excerpts

Prevention Intervention Examples
USDA School Lunch Improvements
Improved meal offerings, more fresh vegetables and fruit, more beans, all whole grains, and no-fat milks options **EN** In elementary school the one big initiative was to bring in a fresh fruits and vegetable program in the cafeteria, children have to take them, the cafeteria added whole wheat, some whole grains and reduced-fat milks to meet the USDA standards **WP2** After-school program, rollerblading program, nutrition education, family nutrition nights, wellness policy, salad bar, changes in the cafeteria, changes in holiday celebrations, recess run, newsletter, **LP** Well-developed wellness policy, measures to protect individuals with food allergies, district meets and exceeds USDA standards for reimbursable school lunch program **EP** Recent Changes mandated by USDA, phys ed classes, very limited health curriculum **ET1** The USDA required changes and the salad bar also helps expose kids to various taste, textures, smells **LSN** The cafeteria made necessary changes to meet the new USDA standards. The initiatives didn't work really well with high school students at the beginning of the year. Most of the kids were just throwing out lunch. **WSN** We also have healthy choices program in our cafeteria. All of our lunches meet the USDA criteria for the reimbursable school lunch program. **WP** From the cafeteria standpoint we do have the USDA standards and provide students with extra fruit and vegetables **WP1**
Wellness Policy Improvements
We Invite parents to be involved in nutrition education, family nutrition night, wellness committee, and food advisory committee (The two committees do not meet as often as they should do to time constraints. **LP** Extreme cases can be referred to a NORTH family assistance program. **EN** Birthday/holiday prize trays from the cafeteria – healthy food and small prizes available for sale but they are not cheap. **EN** Wellness policy addresses acceptable food to be brought into the classroom for snacks and parties, also protects children with food allergies. There are options available to purchase from the PTA and cafeteria. **WSN** Willingness to continue providing resources through NORTH family help network **EP** Well-developed wellness policy, measures to protect individuals with food allergies, district meets and exceeds USDA standards for reimbursable school lunch program **EP** The snacks for parties actually are provided through the PTA so we are very aware of the foods our children with food allergies consume during classroom celebrations. **WP** Because of food allergies we do have a special program where parents can order foods and treats from the cafeteria. **WP** Monthly health cooking session, family nutrition nights, limited classroom celebrations, monthly handbook lists non-food rewards, teacher requests healthy snacks for holiday

parties, teacher monitors student snack and treat intake and holiday parties, recognizing students among their peers who bring healthy snacks for classroom snack time, grade level trip to NORTH grocery store, phys ed program, after-school program, lunch program follows USDA standards, has students identify each food group in the lunch offered, school breakfast program, high school student act as staff for after-school programs provide motivation to participate, height and weight screenings, salad bar **LT1** ***Wellness policy mostly created to protect food allergy events, not as much emphasis on nutrition EN*** Important for schools to educate and enforce policies on parents sending in food for snack and holiday celebrations. **LT1**
BMI Screenings and Notification as Intervention
The phys ed teacher does teach occasional health classes and completes screenings for BMIs. **WSN** Our school uses BMI screenings and we send information based on the screenings home to the parents. **WP** After-school programs, district wellness policy, nutrition education curriculum, family nutrition nights, BMI screenings, USDA school lunch program. **LT2** Phys Ed, Height/Weight screenings, community sports, recess, **EN** **I think they need to get away from using BMI has a health indicator, system is flawed. I was a little upset to get the letter from the school district saying my son was overweight. The school district actually stopped sending a letter home. If you want information you actually have to call and request information. I think we need to provide more information on how to make small changes in your child's life, not have to make drastic changes to improve their health. Parents who are ill informed may take this the wrong way or they aren't aware of the appropriate measures to take. It can be dangerous for the health of the child. WP1** If we would all the sudden start to see an influx of people who are obese, I think that would be appropriate to facilitate more fitness and nutrition programming. **WP** BMI testing percentiles are available to parents, but a letter is no longer sent home to parents, too little information provided on the importance of health screenings. **EP** BMI's are valuable to inform parents about children's health **LSN** More frequent height/weight screening and provide more education why they are necessary. **LT1**
Increasing Physical Activity & After-School Programing
My biggest concern relating to parents perception of after-school programs are the possible complaints a school would receive if they recommended that a particular student should participate in a programming of this nature. We tutor for math class and other academic areas so why can't we provide additional services to students who are overweight or are struggling with their health. But, If the programs are available to everyone certainly wouldn't have those complaints. WT2

Afterschool programs certainly could be very helpful in helping students maintain a healthy body weight I don't think it's a must, but it's pretty close to being necessary. I think they're about 90% necessary WT2

I think it might be necessary to offer after-school activities because there's a lack of movement and activity from the family standpoint. If the parents would initiated a little bit more you wouldn't have to worry about having afterschool programs. Due to how busy everybody is nowadays we almost have to have in afterschool programs of the kids can have some sort of physical activity. WT1

We have physical education classes that include lots of aerobic activities and concentrate on providing lots of cardiovascular fitness activities. WT1

We do talk to the students about the importance of fitness. We Stress the importance of keeping active and staying in shape. WT1

I think after-school programs are good to some degree. The "be safe program" is great. I watch what they do after-school, l they do a really nice job keeping the kids moving is fantastic because against the kids a place to be when the parents artwork. They have a tap dancing class a yoga class and lots of other things to keep the kids busy. WT1

We have a six-day rotating schedule with health and physical education classes. WP1

We have a lot of community activity organizations that the school does a wonderful job encouraging kids to participate in. WP1

The PTA does an event called Our Fitness Walk, one morning getting the kids outside doing laps around are nature center. WP1

Need more programming, we did use the healthy feet walking program – promoted moving – prizes of little foot key chains but funding ran out for the program. **EN**

Does not feel it is necessary for schools to offer after-school programming for kids to maintain healthy body weight, but it is necessary that there are activities in the community as a whole that are supported by the school. **EP**

I'm a proponent of community organizations running programs that really get the kids involved. I think as much of the students should be involved in exercise, it is very important. **WP**

We don't have very many after-school programs or I wish we had more. **WP1**

We have an environmental center behind her school with lots of trails throughout; it is underutilized; it is a way to get the kids out moving more. WP1

I think after-school programs are necessary to assist students reduce and maintain healthy weight due to the lack of activity at home and cost of community sports activities. **ET1**

Only one of the three district schools offer after-school programming, the elementary school, but nothing for the older children. **LP1**

Good core activities covers a wide range of interests in the after school program including basketball, soccer, hockey, rollerblading, dance, karate ,disc golf. **LP1**

Free daily after-school programs are making a huge difference to families that can't afford to pay for community recreation. **LP1**

After-school program, roller-skating positive reward program connects appropriate behavior and achievement with an opportunity to exercise. **LP2**

After-school program, rollerblading program, nutrition education, family nutrition nights, wellness policy, salad bar, changes in the cafeteria, changes in holiday celebrations, recess run, newsletter. **LP**

After-school fitness program, year-long, nutrition programming exposing kids to healthy foods, wellness policy promoting use of non food rewards and sets limits on acceptable food for classroom celebrations and snack. **LSN**

Programs are appropriate to the age level of the children and are fun to keep the kids motivated. **LSN**

Programs, and really any physical activity, assist children maintain their BMI, energy balance. **LSN**

I think it's a wonderful thing to offer kids after-school programs. We do have a program called Be Safe. It is a child care service, not an overweight obesity-prevention program. We have people that come in to provide different programs for the kids in Be Safe. The parents have to pay for this after-school care and there is a waiting list. The program is not school-run. An outside group facilitates the programming. Some of the people who were brought in to run programs for the Be Safe kids include Tap lessons piano lessons Zumba yoga, flags, batons. ***WSN***

No I don't think it is absolutely necessary to offer after-school programs to help students maintain a healthy body weight, it could help some but In some cases I think it may be more of a deterrent and may actually hurt the student's body weight. The busier your family is - running from one activity to the next such as from an after-school program to soccer practice - a parent may be more inclined to stop for fast food along the way. In some sense having more after-school activities may cause more overweight and obesity. WP1

I think it's better for the kids to be involved in the Be Safe programming than go home if they are just going to sit in front of a television or video game. They run around and play in the gym. The kids who stay after school get more interaction and socialization time with their peers in addition to the exercise **WSN**

I think it's better for the kids to be involved in the Be Safe programming than go home if they just going to sit in front of a television or video game. They run around the play in the gym. The kids who stay after school get more interaction and socialization time with their peers in addition to the exercise. **WSN**

Our school district has extracurricular activities, interscholastic sports, some intramurals during eagle block which is an activity period at the end of the day. These are only at the high grade levels. Some of the activities include Zumba and aerobics, each for 45 minutes at the end of the day, in addition to academic assistance, book clubs, year book, school newspaper and other clubs. **WSN**

We have the Be Safe program in our school. They make sure that the children who are enrolled do get out for exercise every day. **WP**

Be Safe provides both structured and unstructured recreational activities. For the most part the children have the options to play basketball, go on the swing sets, jump rope and other recess type activities. **WP**

Be Safe program is tailored to the parents' needs so some students are here for a half-hour, for some parents some children are here as long as 5 o'clock. T**here are**

approximately 75 students enrolled in the Be Safe program out of 380 total students. **WP**
I think the issue of after school programs comes down to budgets. If we could eliminate budgets and prioritize our needs, I think after-school activities are wonderful and certainly are necessary for children. **WP2**
At the middle school there are many activities interscholastic sports for the students but there are none at our elementary school. If we can get the staff to buy and conduct the programs that would be fantastic because right after school, unfortunately, there are not many parents who are available to conduct the programming. **WP2**
If we could offer programs in kindergarten up I think that would be wonderful. **WP2**
Does not feel it is necessary for schools to offer after-school programming for kids to maintain healthy body weight, but it is necessary that there are activities in the community as a whole that are supported by the school. EP
* Some high school after-school programs student coaches are better than others **LT1**

Suggestions to Improve After-School Programming

Lack of interest in activities, do not offer lower impact or less competitive activities such as yoga or weight lifting. **LP2**
Children lack interest in activities provided. **LP**
Does not provide transportation home from after-school programs. **LP**
Should poll students to see if there are other after-school activities that should be offered to increase participation. **LT1**
Failure to transport students home from after-school program. **LT2**
Seek to set attendance requirements for minimum days/wk for after-school participation. **LSN**
Providing transportation home from after-school would increase participation. **LT1**
Incorporate trips and rewards for participation in after-school programming, setting up a reward system for consistent participation – minor league baseball game, or ice skating. **LP**
Children may have a lack of interest in current programs. **LSN**

Specific comments towards Physical education

Our physical education program is provided to students approximately 2 days per week on a six-day cycle for 40 minutes. **WP**
There's no way that our current school day can provide any additional physical education time. There's no way we can meet the recommendation of 60 minutes per day per student. You need to ask the question are we here to educate children or be the cure-all for society. **WP**
Physical education department does a great job of keeping all the students engaged in activities at the same time. We frequently make use of the nature center next to our school by taking hikes when the weather permits. **WP**
I'm not sure if it's possible but I would like to see kids have gym every day. EP2

Nutrition Education Comments

I don't know what is exactly provided or if any is provided. I know the nurses office there are posters that I don't know if there's any significant time contributed to discussing nutrition concepts with students of these grade levels. WT2
We don't address it too much. we do over the food groups, we tell the kids to stay away from too much candy. I'm not sure if it really works, but I do talk about it now and then. We stress more about the importance of exercise, and less about the nutrition aspect, because it's not something the kids have direct control of in their lives. WT1
Cooking program at the elementary school. **LP1**
Nutrition education program is really good, but not done nearly enough, not enough classroom time contributed to the subject overall, introduces kids to new food experiences. **LP1**
Family consumer science at middle school, cooking program at elementary school. **LP2**
Nutrition intern to assist in the delivery of nutrition education, outreach to parents, positive eating reinforcement. **LP**
Nutrition education is appropriate to the age level of students, repeated exposure to healthy food increases likelihood to eat healthier foods. **LSN**
Looking at the problems of society as a whole we always need to start education on these topics earlier. By the time students are in middle school it's too late. In kindergarten students can certainly understand the basic concepts - learning about antioxidants, fruits, vegetables and learning about what sugar does your energy levels. I would love to see a nutrition class right along with science in the elementary school level. **WP2**
I don't think a curriculum would address the issues much. You can talk to the children until you are blue in the face, but it's the parents who are cooking dinner. So it's depend upon the parents desire to make healthy changes in the family lifestyle. WP1
Nutrition education program is good, needs more volunteers and involvement from parents, maybe high school student volunteers. Possibly offer some nutrition activities during the after-school program so more parents can attend. **LSN**
Evening family seminars do a nice job of introducing families to healthier options. **LSN**
Cooking program provides cultural experiences and nutritional education. **LT2**
We do emphasize to our parents, children supposed to have a healthy breakfast before school. **WP**
We do try to educate kids through our lunch program what are the more healthy choices, but we're not there to tell them what they have to order. **WP**
Nutrition education, we can start to build the foundation by third grade. **WP**
There's not much formal nutrition education provided outside of any health classes the gym teacher would teach or information provided on the monthly newsletter or cafeteria calendar. **WP1**
I think nutrition education is adequately presented through the health class and in the classrooms. The teachers do touch on a lot of the important topics. It's not one dedicated curriculum but there is emphasis placed on the importance of this topic. **WSN**
Here the nutrition education is provided through the health and physical education program. It's not a focus in our curriculum but our physical education teacher ties in several topics into his program for the children. **WP**

<u>If we would all the sudden start to see an influx of people who are obese I think that would be appropriate to facilitate more fitness and nutrition programming. WP</u>

The family makes the most impact on a child's nutrition education and knowledge. **WP**

I think it would be more productive to go back to educating the students why it's necessary for them to eat the fruit and vegetable. **WP2**

I think we need to start providing nutrition education earlier beginning immediately in kindergarten. My children will receive a day or a week of nutrition education for the year, certainly isn't anywhere near what would allow them to understand the importance of fruits, vegetables and healthy eating and nutrition concepts **WP2**

If we started immediately in kindergarten, would reinforce the message to parents that healthy eating needs to become a priority. **WP2**

School-related Barriers to Program Implementation and Prevention/Intervention

Time and money are the two biggest barriers to children participating in physical activities after school or in the community. If it's not one that is both. WT2

Every once in a while the topic of obesity prevention comes up but it's not really priority, I think it's a lack of motivation to address the issue. I have the school district could find the money and the time to create programs it's not a priority for them at this time. WT1

Only limited number of kids can be on the playground simultaneously, need to expand facilities. **EN**

I think the issue of after-school programs comes down to budgets. If we could eliminate budgets and prioritize our needs, I think after-school activities are wonderful and certainly are necessary for children. **WP2**

Because of budget and not being able to elongate the day I'm a big advocate of having a more structured gym class, a more structured sport available every single day to the students, **WP2**

Discussed the addition of after-school programs and nutrition programs for parents, but district is not able to implement due to budget constraints. **EN**

Need more programming, healthy feet program – promoted moving – prizes of little foot key chains but funding ran out for the program. **EN**

Lack of funding for new programming. **EP**

Programs dependent upon funding, not a priority for the district. **ET1**

I don't think our school can afford to run any programs EP2

Limited by funding, if the budget was bigger we could have more equipment, larger facilities, more people involved, more staff running programs. **LP**

Food service provider – aims profit – not focused on health. **LP**

With a larger budget we could incorporate more hands-on projects with families during family nutrition night and reward them with gift card for their attendance. **LP**

Budget limits the number of programs we can conduct. **LSN**

School limited by current facilities to provide more after-school programs. **LT1**

Lack of funding to support curriculum development in this area. **LT2**

Lack of paid staff to provide health education and after-school program staffing. **LT2**

Unfortunately programs cost required funding to run that is not always available. This holds us back from providing more programs to the students. **WSN**

The Be Safe program has limitations. It's on a first-come first-serve basis. Enrollment is limited based on the number of employees. There is no transportation provided to take the students home. **WP** I can't say I have any expectations because I really think the district has things they focus on and obesity and overweight prevention is not something they are choosing to focus on right now. I would like them to. **WP1** We have an environmental center behind our school with lots of trails throughout; it is underutilized it is a way to get the kids out moving more. WP1 I don't think there's any family health education provided in our district. WP1 So they're certainly making efforts to improve the meals in the cafeteria but it all comes down to money. It requires more money to buy the healthy stuff in bulk to be the children's healthier meals **WP2** I think there's a lot of emphasis in schools placed on education. We don't have the freedoms to run around, participate in movement activities, and recess is minimized because such an emphasis is placed on their success in academics. **WP2** Parents get stressed about BMI notification letters **EN** Lack of movement and activities at recess. **EN** New cafeteria information night – only one family showed up. **EN** I don't think families would attend evening seminars to improve their health. We've offered other seminars about drug prevention, alcohol prevention, tobacco prevention, but the parents don't come. **WSN** Parents can feel the school day is too long for their children and do not encourage participation in after-school program. **LSN**
Comments Addressing Lack of Student Health Related Initiatives
No real measures being taken to address overweight or obesity across the district. **ET1** Nothing currently begin done to communicate with parents about developing healthy behaviors; all the emphasis on parent seminars is related to academics. **ET1** I can't think of any initiatives that include parents and children and programs that promote fitness or nutrition. WT1 I'm not aware of any programs that are place right now to reduce obesity in our district WT2
Parental Involvement/Influence
Parental Influence on Students Health
Time and money are the two biggest barriers to children participating in physical activities after school or in the community. If it's not one that is both. WT2 Think it's a lack of the awareness and uneducated parents that just don't know any better; some parents just don't care about the way they feed their family it's easier to let them eat whatever they want. A lot of it is because parents are not aware or paying attention to their children's eating habits. WT1

Busy lifestyle prevents kids from participating in afterschool sports both parents working, I think there's a lack of family values Fars parents spending time with their kids when they should be. I think there should be more communication between parents and children and more family time spent together doing things. WT1

New cafeteria information night – only one family showed up. **EN**
Parents learn and adhere to wellness policy; very strict to protect children with food allergies. **EN**
Parents get stressed about BMI notification letters. **EN**
"I don't think it's so much the school's responsibility……quote." **EP1**
Parents can feel the school day is too long for their children and do not encourage participation in after-school program. **LSN**
I think that as a society we do not get as much exercise as our bodies require. Children included do not receive enough exercise that their bodies require. Parents have created for children more of a lifestyle that does not require a lot of exercise on a daily basis, partly because the convenience of cars. WP2
The causes of overweight and obesity depend upon the students families- there's only so much you can expect the school district to do. WP1 EP2
Some parents cook healthy at home and some parents could do fast food all the time so it's difficult to reinforce positive eating habits here at school when they go home they're not hearing the same message. WSN
Parents not active enough in promoting fitness and active activities for children and allow too much screen related entertainment. EN
Children who have obese parents are often time obese themselves and the parents have a difficult time recognizing their child is obese. EN
Parents need to make it a priority to keep kids active and well fed. EP1
Parents are putting children at a high risk for heart disease and diabetes by providing too little activity for children and improper nutrition. EP
Laziness on the part of the parents to get kids more involved in activities, ignorance or being unaware of what activities are available, socioeconomic conditions prevent families from affording activities. EP
Parents have a lack o f understanding what is a healthy lifestyle, some are stuck with the most cost-effective foods. Parents are making sure bellies are full to the best of their ability, empty calories are a major concern, over-processed foods and less nutritious foods stick to kids because they are less active. EP
Parents aren't taking the initiative to get kids involved. ET1
With regard to after-school programs some parents may not want their children to be athletic; they may not want their children to get injured. WP
Lack of knowledge of importance of exercise and proper nutrition contributes to overweight. ET1
Overweight parents have a difficult time recognizing overweight conditions in their children and do not associate their health conditions to become potentially harmful to their overweight children. LP1

Think there's also a fear factor for sure to let your kids play unattended in your neighborhood. Parents also make the plan to let their kids outside, some families tend not to make that time in their schedules. WSN
I do believe there is a problem students not eating properly, getting enough exercise. Kids don't go out like they used to. Kids aren't encouraged by their parents to play outside as much, but sometimes it's because parents don't have time to watch their kids while they are outside. WSN
Parents need to monitor and limit time spent watching TV and playing video games, or on ipod. LP2
Families do not make healthy eating and exercise a priority. LP
Children are completely dependent on parents for meals, very hard to change eating habits, in many homes healthy eating is not enforced. LSN
Some families may think school is becoming too involved in their lives if we tell them how to eat. Nutrition is a hard sell, some people are not interested in improving their diets, some families do not value fitness or positive nutrition. LSN
Some families do not stress participation in physical activity and do not provide nutritious meals for their families – economic causes and lack of education. LT1
Lack of encouragement from families for students to remain involved in the after-school program. LT1
Lack of attendance at family nutrition nights. LT1
Lack of attendance from families at monthly cooking assemblies. LT1
Some parents do not have positive attitudes towards exercise and nutrition. LT1
Disconnect between healthy initiatives at school and the behaviors in the home. LT1
Some parents have a negative attitude towards participation in sports and after-school programming. LT2
Lack of knowledge of healthy living is passed on to the next generation. LT2
I don't think families would attend evening seminars to improve their health. We've offered other seminars about drug prevention, alcohol prevention, tobacco prevention, but the parents don't come. WSN
Even in my own neighborhood there is no one really out in the neighborhood riding their bikes. It's safer to allow your kids to play something inside than go out alone. WSN
Sometimes parents have a selfish agenda, but not the majority of our parents who come to our evening activities. There are some parents who are not supportive of the athletics and the activities; it's a "me" society and sometimes the parents have the wrong agenda. WP
<u>Lack of education in the community leads to the assumption you can't eat healthy on a small budge. LT2</u>
It's a fine line that you walk sometimes because some people don't like to feel infringement upon their lifestyle. The parents have to be responsible to educate themselves on ways to make their children healthier. It's a matter of if they want to take the time to make themselves aware and further their knowledge on these topics. WP

I don't think a curriculum would address the issues much. You can talk to the children until you are blue in the face, but it's the parents who are cooking dinner. So it's depend upon the parents desire to make healthy changes in the family lifestyle. WP1 Overweight is not always a hereditary trait, but often times is visible through dietary patterns. **EN** Some parents do not provide snacks for students**. LT1**
Lack of Parental Awareness/Education
Lack of knowledge of the importance of ht and wt screenings. LT1 **Parents unaware of children's purchases at snack shack, mostly candy, no healthy snacks. LP2** **Parents may be unaware of what their children's nutritional needs are. LP2** **Parents are unaware of how to shop healthy on a budget. LP2** **Much of a student's exercise and nutrition are a result of the home situation, socioeconomic, education level, or awareness of parents, multiple jobs, grandparent care givers, lack of ability to transport to activities, lack of funds to register for activities. LSN** Parents aren't aware of what their kids do or do not eat at school which increases the importance of providing a healthy balanced meal at home. **EP1** **Eating healthy on a budget takes some discipline and knowledge. EP2** **WT1**
Family Schedule influence on student health
Time and money are the two biggest barriers to children participating in physical activities after school or in the community. If it's not one that is both. WT2 Busy lifestyle prevents kids from participating in afterschool sports both parents working, I think there's a lack of family values Fars parents spending time with their kids when they should be. I think there should be more communication between parents and children and more family time spent together doing things. WT1 New cafeteria information night – only one family showed up. **EN** **Parents are working all day and they're getting home late and cooking dinners so as far as exercise goes the kids have a lot of homework and exercising is a last thing on parents' minds. We have created a schedule; it doesn't allow time for exercise. And most Americans are living sedentary lives. WP2** **Parent work schedules prevent kids from participating in activities. ET1** **It's difficult for single parent homes to travel to activities and takes away time from preparing meals at home, and what the families can afford to participate. ET1** **Quick snack options relied on by families are not the most healthy options. ET1** **Healthy eating seminars may not be effective because there is limited participation in events of that nature during evenings, due to busy schedules and lack of interest. ET1**

Lack of finances to register kids for community programs, lack **of finances to provide healthy meals, fast food is quick, cheap, and easy for busy schedules. LP2** **Lack of transportation , schedules conflict with programs, schedules conflict with community sports. LP** **Families have work schedules that conflict with the timing of the after-school program. LT2** **Family work schedules prevent families from preparing healthy home-cooked meals and reliance on processed foods. LT2** **Busy scheduled force reliance on school lunches.** **Many of the kids go to daycare or after-school care because parents work late and by the time they get home it's too late to play outside. WSN** **Cost is a huge factor in why some families do not participate in after-school programs and community activities. Time commitment is another one; some families may not have time to contribute to 2, 3, 4 days a week of practices and games. WP1** **No I don't think it is absolutely necessary to offer after-school programs to help students maintain a healthy body weight, it could help some but In some cases I think it may be more of a deterrent and may actually hurt the student's body weight. The busier your family is - running from one activity to the next such as from an afterschool program to soccer practice - a parent may be more inclined to stop for fast food along the way. In some sense having more after-school activities may cause more overweight and obesity. WP1** **There's a lot of homework and by the time the kids finish that it's dark; does not leave time to play. WP2** **I think there will be less barriers for children to participate in after-school programs if they were immediately after school rather than when they are offered at 6 o'clock at night which requires changing dinnertime, makes it more difficult to have a nice sit-down healthy planned out meal with your family. WP2** **So if soccer was from 230 to 330 and go home it just creates a better atmosphere for families to interact with one another enjoy meals together. WP2**
Socio-Economic factors and student health
Time and money are the two biggest barriers to children participating in physical activities after school or in the community. If it's not one that is both. WT2 **Cost is a huge factor in why some families do not participate in after-school programs and community activities. Time commitment is another one, some families may not have time to contribute to 2, 3, 4 days a week of practices and games. WP1** **Community sports and activities are expensive preventing many kids from playing EN** **Some parents avoid participation in sports because they do not have insurance and do not want to risk their child getting injured. EN** **Finances prevent some student from participating in community sports. EP1**

I think that there may be some instances of financial inability to participate in activities but not so much our community. We're a middle income community, but certainly there are always instances where finances play a role in children's ability to participate in activities. WP **A financial obligation to register and pay a fee can be a stopping point for some families. WP** **Finances prevent some student from participating in community sports. EP1** **I think after-school programs are necessary to assist students to reduce and maintain healthy weight due to the lack of activity at home and cost of community sports activities. ET1**
Socio-Economic Conditions – affect on student health
We are fortunate in this district to not necessarily have the need to educate the family since we are in they more highly-educated community. Because we're located in a middle income to wealthy community, the parents can afford fruits and vegetables. WP ***Our students to bring a lot healthy food – carrots, sandwiches, yogurts, cheese sticks. WP*** **Eating healthy on a budget takes some discipline and knowledge EP2** **Lack of finances to register kids for community programs, lack of finances to provide healthy meals, fast food is quick, cheap, and easy for busy schedules. LP2** **Much of a student's exercise and nutrition are a result of the home situation, socioeconomic,** education level, or awareness of parents, multiple jobs, grandparent care givers, **lack of ability to transport to activities, lack of funds to register for activities. LSN** **I'm sure the cost of the programs prevent some families from participating. In the Be Safe program the parents have to pay to enroll their children, they also have to pay for some of the additional programs that are available to Be Safe kids. WSN** **When you live in poverty, eating healthy costs more money so the diets of schools in the lower socioeconomic community have more processed foods than our school does, located in the middle income community. WP** **Lower socioeconomic families are reliant on less expensive foods, often less nutritious foods. EN** **There a many students on free and reduced lunch, dependent on school meals EN** **Birthday/holiday prize trays from the cafeteria – healthy food and small prizes available for sale but they are not cheap. EN** Produce is expensive, fast food is cheaper and easier to accommodate busy schedules. **EP1** **Processed foods are more affordable, obesity is more common in lower socioeconomic households, inability to purchase and prepare healthier meals. ET1** **Student are dependent upon parents and school lunch. *More than half the students are on free or reduced lunch, example of cafeteria worker who gained weight since beginning to eat cafeteria food everyday ET1** **Parents lack necessary finances to feed family healthy meals. LP1**

Lack of finances to register kids for community programs, lack of finances to provide healthy meals, fast food is quick, cheap, and easy for busy schedules. LP2 **Much of a student's exercise and nutrition are a result of the home situation, socioeconomic,** education level or awareness of parents, multiple jobs, grandparent care givers, **lack of ability to transport to activities, lack of funds to register for activities. LSN** **Some parents do not provide class-time snacks for students. LT1** **Lower socioeconomic conditions contribute to buying cheaper less healthy food. LT2** **Reliance on school lunches could contribute to unhealthy eating habits due to limited menu, burgers, pizza, chicken fingers, hot dogs. LT2** **Lower socio-economic condition force reliance on school lunches could contribute to unhealthy eating habits due to limited menu, burgers, pizza, chicken fingers, hot dogs. LT2** **Lack of finances to register kids for community programs**, lack **of finances to provide healthy meals; fast food is quick, cheap, and easy for busy schedules. LP2**
Transportation-related influences on student health
I suppose transportation could prevent children from participating in after-school programs. Programs immediately after school might eliminate the need for after-school care. WP2 **Lack of transportation home from after-school programs and to community sports. LP2** **Lack of transportation prevents some kids from participating in activities. EP1** **Kids get punished if they come to games or practices late, but it's not their fault if they parents schedules conflict with sports EP2** **Some families do not participate in after =-school activities because they cannot provide transportation home. LT1** **Parents are unable to provide transportation for their children to participate in after-school programs. LT2** **They may not have the time to provide the transportation or the dedication of bring their children to the playing field several nights a week. WP** **Rural community makes it difficult because driving is required**, isolated, lack of cooperation between families, limited or lack of carpooling. **ET1** **Transportation to activities can prevent some kids from getting involved. ET1** **Lack transportation to get to activities. EN** **Transportation is not provided home from Be Safe after-school care, but it is offered from 2:15 – 5:00. WSN** **Lack of transportation prevents some kids from participating in the program, some families have negative attitude towards exercise, kids lack interest in activities. LP1** Much of a student's exercise and nutrition are a result of the home situation, **socioeconomic,** education level, or awareness of parents, **multiple jobs,** grandparent care givers**, lack of ability to transport to activities,** lack of funds to register for activities. **LSN**

Parents are unable to provide transportation for their children to participate in after-school programs LT2 **Transportation is not provided home from Be Safe program. WSN**
Health Related Comments
I know it's an advantage for us to have the environmental center; the teachers have to take more advantage of it. I know it's a change from what they're used to teaching. Outside they need to make use of the stages in the whiteboards that are provided to us by getting the kids out there, at least out there for just to walk to the environmental center before election. **WP1** The only really after-school thing we have here is the student government. Has nothing to do with obesity. WP1 If we had more after-school programs I think my son would be interested in attending. WP1 At our school the majority of our children are very active. We have some kids who are overweight but many times you look at their genetics and see that their parents are also overweight with similar body types. Even the overweight children in our school are active and I've seen them participate in our community soccer leagues and other NORTH community sports leagues. **WP** The school got rid of the vending machines; the students really didn't need the soda and snacks that was for sale. **WSN** High school green house project, collaborates with a NORTH college, limited number of participants in the program. **EP** High school green house project, sold at market down town on Fridays, limited number of participants and it was not conducted every year, sporadic dependent upon available funding. **ET1** The majority of teachers do speak with their classes about healthy snacks and are not accepting of candy. **ET1** At the younger grade levels there is only phys ed and recess. We have outdoor classrooms and nature trails, but they are underutilized. **WSN** They had to buy the whole lunch because it costs so much more to buy the items a la carte. Some of the parents told the kids to take everything and just throw out what they don't want because it was more affordable if took everything. **WSN** At the upper grade levels mathematics teachers and family consumer science teachers integrate their subjects to make the content more meaningful to the students. **WSN** We do have a newsletter that provides some tips to make families healthier. Sometimes are steps about healthy eating, sometimes tips about exercise, sometimes to about brushing your teeth or personal hygiene. It's hard copy newsletter for everyone at the younger grade levels but the high school it's all electronic communication. **WSN** The need is really not here to implement additional programs, there are a few kids that are overweight, but I think we address the issues well through our cafeteria programs and our health and physical education programs and health classes. We set a foundation here in our school by providing the basic education allowing the parents to have input in the students diets, so I think we adequately meet the needs of our students. **WP**

We Invite parents to be involved in nutrition education, family nutrition night, wellness committee, and food advisory committee. (The two committees do not meet as often as they should do to time constraints.) LP
Family Schedules
Produce is expensive, fast food is cheaper and easier to accommodate busy schedules. EP1 **Parents work schedules prevent some kids from begin able to participate in activities. EP1 EP2** **Many kids go to daycare so they are unable to engage in fitness activities or sports. EN** **Healthy eating seminars may not be effective because there is limited participation in events of that nature during evenings due to busy schedules and lack of interest. ET1** **Time constraints prevent some parents from allowing kids to participate in after-school programs. LP1** **Parents often wok hours that do not allow them to make healthy dinners and the family becomes reliant on fast food. LP1** **Lack of finances to register kids for community programs, lack of finances to provide healthy meals; fast food is quick, cheap, and easy for busy schedules LP2** **Lack of transportation , schedules conflict with programs, schedules conflict with community sports. LP** **Parents schedules do not allow attending to volunteer in nutrition program. LP** **Not all families have the schedule to prepare healthy meals every night and fast food is affordable, easy, and the kids like it. LP** **Timing of after-school program may be different since no transportation home is provided, work conflict. LSN** **Families have work schedules that conflict with the timing of the after-school program. LT2** **Family work schedules prevent families from preparing healthy home cooked meals and reliance on processed foods. LT2** **Reliance on school lunches could contribute to unhealthy eating habits due to limited menu, burgers, pizza, chicken fingers, hot dogs. LT2** **I don't think families would attend evening seminars to improve their health. We've offered other seminars about drug prevention, alcohol prevention, tobacco prevention, but the parents don't come because they are too busy with homework, making dinner, or are tired from work, WSN** **Many of the kids go to daycare or after-school care because parents work late and by the time they get home it's too late to play outside. WSN** **Think there's also a fear factor for sure to let your kids play unattended in your neighborhood. Parents also make plans for their kids outside, some families tend not to make that time in their schedules. WSN** **Family work schedules prevent families from preparing healthy home-cooked meals and reliance on processed foods. LT2**

Parents often work hours that do not allow them to make healthy dinners and the family becomes reliant on fast food. LP1 **Lack of transportation , schedules conflict with programs, schedules conflict with community sports. LP**
Cafeteria – Elimination of Snack Sales
No need for additional snacks in addition to regular lunch, no need for ice cream, the kids don't eat the lunch if they know there is ice cream. EN **Would like to see elimination of additional snack line and more focus on having students each their lunch components, cost of ingredients prohibits what is able to be served. LSN** **Food service is focusing on profit, not always students' best interest – discontinue snack line or offer fruit, no chips and treats. LSN** **Snack line not necessary – balanced lunch does not need to be supplemented. LT1** **Food service is a business – looking to make money not make students healthy. LT1** **Snack shack at upper grade level school defeat purpose of balanced lunch. LP1** **Parents unaware of children's purchases at snack shack, mostly candy, no healthy snacks. LP2** **Snack shack allows student to buy as many snacks as they can afford, no policy on limiting snacks. LP2** Elimination of excess snacks WT1
Disapproval of School Lunch offerings
I'm a little concerned about the new lunch program because it is offering pizza every day. They do a great job of having fruit and vegetables available everyday but there is no accountability or reinforcement to make sure the kids eating a healthy meal and not just eating a hot dog pizza every day. You almost need to have the parents to pick a specific menu what they should receive each day. WT2 the cafeteria nowadays I think it's more moneymaker vendors worry about keeping the kids healthy nutrition of the children. We are much more concerned about the money aspect and we are concerned about the nutritional value of the lunches. WT1 **Sometimes the cafeteria meal selections are a little unusual. My son pointed out there having fish with macaroni cheese next week. WP1** **My kids will eat some school lunches, but not others. I don't let them buy everyday because the alternative choices of hamburgers, chicken patty, and pizza are not foods they should eat every day. EP2** **I am not in favor of lots of breaded processed foods for the children. EN** **Not a fan of the format of lunches, or the meals. EN** **Government standards not helping its actually creating more waste. Great amount of food wasted because the new whole grain selections are not enjoyed by students. EN** **Too many repeated items breadsticks, chicken fingers, pizza, hot dogs. ET1** **I don't think there needs to be anything added to the menu. Their hands are tied; there's only so much you can do and if we did make changes, how many children**

will actually take those options. You have to keep the meals kid-friendly which aren't always the healthiest options. WP1
Our school is stuck with affordable lunch options, lesser quality food to keep lunch costs affordable. ET1
Child and parent feel cafeteria food is disgusting and child does not want to eat the choices offered. LP1
My children do not buy school lunch , 1) not interested in the food offered, 2) child has an allergy to a popular cafeteria item. LP2
Food service made improvements, but limited by provider because they are here to make a profit – wouldn't want my family eating that food. LP
Very strong disapproval with the cafeteria offerings, over processed, high sodium, high fat content, similar to tavern food, very limited fresh items. LT2
Extreme Dissatisfaction with current food service provider suggested to seek other options that focus on health rather than profit. LT2
Salad bar not available at middle and high school. LP1
Salad bar and sandwich stand not available to younger students only in upper grade levels. EP1
Our system right now is forcing kids to take the fruit and vegetable or they get charged more, which I think more is not the best way to teach the children to eat healthier meals. WP2
Parental input in cafeteria process/meals. WP1
Upper grade levels have salad bars, but not the lower grade levels. **EN**
Food service is a business – looking to make money not make students healthy. **LT1**
Less than 50 % participation in school lunch program – with almost 40% of school free/reduced lunch shows a small portion of the population that has an option to provide lunches for their children actually choose to eat school lunches. **LP**
School-provided breakfast seems less nutritious then it should be. **LT1**
Snack line not necessary – balanced lunch does not need to be supplemented. **LT1**
Parents want more input in obesity prevention
No opportunities for parents to make recommendations to cafeteria menu offerings or foodservice provider. LP1
Parents not consulted in the development of new programs, not offered an opportunity to get involved in developing healthy eating goals during lunch time. LP1
Parents want more input to cafeteria menu and a voice in selecting food service. **LP1**
The PTA had a food committee. They're working with strategies to prevent foods that come in that were harmful to children with allergies food allergies. **WSN**
Parents were invited to participate on Wellness Committee and Food Advisory Committee, but the invitation was limited to a few select parents and the meetings did not take place very often. LP
I would like an opportunity to make suggestions to the school, even a survey would be nice. **EP2**

Not aware of any parent involvement strategies that address nutrition physical activity. I think the district should make more of an effort to include parents. As long as this is done without being preachy, as long as it's very matter of fact. WT2
Positive caf feedback
Compliments cafeteria, lunches are very presentable, well-planned menus that meet the dietary needs of students, **food service director does a good job of informing families what is available through newsletter, monthly menus, has offered seminars in the past that were poorly attended, once a month distributes information related to food service. EP** Cafeteria made big changes, more fresh products, all whole grain, but the students dislike the new "healthier" options – the kids talk about the new yucky foods. **ET1** Cafeteria offerings are fair, difficult to serve large number of people and keep them all happy, always balanced, not necessarily highest quality products, but not unhealthy either, always cost constraints. **LSN** We also have healthy choices program in our cafeteria. All of our lunches meet the USDA criteria for the reimbursable school lunch program. **WP** Parents can make sure that their children order certain things through our cafeteria. Parents can limit choices to the main meal and they can limit snacks through an electronic cafeteria service. The parents can go into the program from home and they can restrict certain items from their children's account. Our school district runs its own food service; we do not rely on an outside food service. **WP** I think our cafeteria is very good. I think they do a very nice job the calendars of activity monthly. The parents have input on what their children are allowed to purchase. And we're lucky enough to the live in the community and teach in a community where parents can afford to pack their children lunch if they don't approve of the lunch selection that day. **WP**
Excessive waste in cafeteria
The kids here throw away about three quarters of their lunch, the amount of waste is incredible some of the stuff isn't even opened up affords thrown away. WT1 The our cafeteria does a good job of providing balanced meals but without anyone there to reinforce what the student should eat it all will and wind up in the trash. **WP2** Think there could be a little bit healthier food; the children have the option to have pizza five days a week and the pizza does look awfully greasy. I understand the kids will eat it, it's not too healthy… Kids being kids. There are healthy options available everyday; students are always going to choose what they think tastes best of the healthy options. WP1 Allow students to throw away too much of their lunch- too much waste – creating excessive snacking when students get home. **LT1** There are kids who won't eat anything green and some kids just will not try new, but are required to take the vegetables at lunch. **WSN** Kids throw a lot of food out because they don't like it. There's no one here to reinforce healthy eating habits at lunchtime for the kids. I think it's a very difficult thing. **ESN**

I wish they didn't have to push the fruit and vegetable so much to students who don't want them because they just get thrown away. WP1
Suggested Changes to increase physical activity
I think schools need to make more of an effort to implement healthy programs for children before the state gets involved in mandates of program that might not fit the NORTHe. WT2 The kids need gym every day or a longer recess on days they don't have gym class EP2 Increasing the frequency of physical education class, lengthening recess, providing after-school programs all have the ability to accomplish the goal of increasing students' activity time. **WP2** Because of budget and not being able to elongate the day I'm a big advocate of having a more structured gym class, a more structured sport available every single day to the students. **WP2** More frequent more intensive physical education. **EN** Need to integrate more physical activities into the school day, need more frequent phys ed. **ET1** Most effective method would be provide more structured recess and implement an exercise program for kids before or after school - also would reduce injuries and fighting. **EN** School currently does not offer after-school programs, but the principal is in favor of after school programming in all forms including the arts, in favor of getting kids moving because he feels they do too little, proponent of participation in community sports such as basketball, wrestling, baseball and feels the community offers high quality youth leagues and community sports. **EP** Need for more structured recess, 10 minutes of organized exercise, 10 minutes of free time. **EN** Most effective way to keep kids healthy is keep them away from video games so any programming in school or in community will make the most impact. **ET1** Need to expand after-school program offerings. **LP1** Need to increase physical education frequency in all grade levels more than 2/6 days in elementary school, more than 1/6 days in middle school, more than one marking period/yr in high . **LP1** Providing the programs right after school is effective, no transportation from home to activities is required, but there will be costs associated to transport kids home, or transportation required of parents. **ET1** Add more structure to the after-school programs, switch programs every year, or for each grade level. **LP1** Increasing activity and nutrition education needs to become a district-wide priority. **LP1** Programs get kids moving in the most effective ways to prevent obesity overweight whether it's a program in the school or program in the community. **WSN** Maybe add programs such as yoga or different dance classes for less competitive kids who don't want to get as sweaty. **LP1** Like to add to the compliment of programs possibly "girls on the run" new balance. **LP** Provide transportation home from after-school programs to increase participation. **LT1**

Need to increase physical education for all grade level, at least every other day, currently 2/6 in elementary school, 1/6 in middle school. **LP2** Increase after-school program opportunities, after-school clubs, and interscholastic sport opportunities in middle school to reflect the system created in elementary school. **LP2** Most important way to address overweight and obesity issue is to continue providing programs that get kids moving. **LP** Increase phys ed number of times per week or allow classes to use gym/ cafeteria when they are not in use for additional fitness activities. **LSN** I think they should get the kids up and moving more. Take the kids through walk in the environmental center tied into a math lesson, tied into an art lesson so still getting exercise in getting out, moving while they're learning. WP1 I think it comes down to increasing activity and improving nutrition, so I think the any programs that incorporate more activity during the day and that includes improving recess, even improving indoor recess to add movement activities. **WP2** Adding an hourly activity that every hour you can get your heart rate up for even a few minutes at least once an hour to get refocused, re-energize. **WP2** I think there will be less barriers for children to participate in after-school programs if they were immediately after school rather than when they are offered at 6 o'clock at night which requires changing dinnertime, makes it more difficult to have a nice sit-down healthy planned out meal with your family. **WP2** So if soccer was from 230 to 330 and go home it just creates a better atmosphere for families to interact with one another enjoy meals together. **WP2** More movement activities in the classroom, 10 stretches at 10. **LT1**
Nutrition Education Improvements
Programs that promote healthy eating habits. Teaching kids that grazing all day is healthier than one big meal, when to stop eating at night, how much water should you drink each day. In the classroom I teach children strategies on how to decode words in reading passages but we never teach children strategies on how to improve their health. It is take the same approach used in the classroom and apply this is health nutrition and activity. WT2 I would certainly like to see more education and emphasis put on nutrition education whether it's through assemblies something fun. It annoys my wife when the BMI numbers are sent home and doesn't say what could or should be done to improve the situation. WT2 Yeah I think that nutrition education curriculum is would be effective because even only have an assembly the kids are speaking that language for days afterwards if they give out pencils are hats it does stick for a while to add something whether it's part of a curriculum or an assembly I think creating awareness is effective. WT2 Addition of nutrition education unit or curriculum, educate the children to influence the . **EN** Upper grade level had family and consumer sciences, needs to be introduced at younger grade levels to begin the development of healthy behaviors sooner. **EP1**

Nutrition information needs to be sent to families via email and resources such as recipes should be located on the website. **EP1** Nutrition education provided through science and health curriculum, but not a true curricular priority, needs to be addressed at upcoming curriculum meetings. **EP** Health needs to become more of a curricular priority **EP** Would like to see nutrition education a defined portion of each grade level curriculum, even if it's only one unit or integrated into other curricular areas. **EP** Lack of academic time allotted to nutrition education. **LP1** Nutrition education needs to cross over into the classroom in addition to hands on activities. **LP1** Nutrition must become a larger part of the curriculum. **LP1** Would like to see increase in guest presenters in the nutrition education program. **LP** Increasing activity and nutrition education needs to become a district-wide priority. **LP1** If the school offered a cooking class for families it would be popular and maybe even fun. **EP1** Better job of providing health education at lower grade levels, risk factors, risk behaviors. **EP1, EP2** Educating the students early helps create healthy behaviors, by the time they are in high school it is too late to tell them they need eat healthy. **WSN** Now the school doesn't provide any resources or tips to make families healthier, there isn't any reason that we couldn't because we all have a newsletter; currently there's nothing that I know of. WP1 I don't think there's any family health education provided in our district. WP1 Our school district does not have a family health education programs that I'm aware of other than the new healthy guidelines for the cafeteria and the information they provided us on those two guidelines I don't know of any family health education programs but think it would be a great idea to facilitate programs, would better educate the parents. **WP2** I think it's necessary to go back and educate the children through educating the parents why it's necessary to tell their kids to take the fruit and vegetables every day. **WP2** Monthly cooking program fails to engage entire class for the duration on the activity, needs to integrate more technology during the hands on portion of the lesson. **LT1** Missing classroom components to teach health/science concepts. **LT2** Nutrition education provided through science and health curriculum, but not a true curricular priority, needs to be addressed at upcoming curriculum meetings. **EP** Lack of education in the community leads to the assumption you can't eat healthy on a small budget. **LT2** Offer a project or a webinar or slideshow the student would have to watch with their parents; they could watch at home it may be more effective **WSN** All grade levels should visit the supermarket field trip each year, the trip is free, PTA pays for bussing. **LT1** Better educate parents about empty calories, eating breakfast, getting adequate sleep, and importance of exercise. **LT1**
Communication Concerns relating to student health

I don't even know if there are ways for me to get involved in health related programs at my children's school EP2
School is lacking ways to engage parents from the community, there could be a forum for more participation since it is a timely topic that is popular in the media. **EP**
Communication about family nutrition nights only provided to elementary school students, parents of older children do not receive the same opportunities. **LP1**
Website needs to be updated with all district wellness events, monthly calendar needs to be updated. **LP1**
Ask parents for suggestions on how to improve programs. **LP1**
More outreach from the schools can only benefit the families in the community more – even if people are busy resources need to be publicized and posted. **EP1**
Need to improve communication between school and home…newsletter provides some tips, but the older students do not receive the newsletter. EP1
Not enough opportunities for parents to offer feedback on activity programming, cafeteria meal planning. **EP1**
BMI testing percentiles are available to parents, but a letter is no longer sent home to parents, too little information provided on the importance of health screenings. **EP**
Need to meet with health and phys ed departments for suggestions for improvement. **EP**
Parents want more input to cafeteria menu and a voice in selecting food service. **LP1**
Need to improve communication and dissemination of events and resources for families to improve health. **LP2**
I know there a district-wide strategic planning committee the parents can provide input to but I don't believe it has anything to do with nutrition for health for obesity prevention. WP1
I think the school has to take a look at including parents in the parent involvement development of these wellness programs. I don't see how the school would be able to implement the programs without the assistance of the parents. WP1
Our school principal is very into parent involvement but we do not offer any programs that are focused on nutrition and including the parents in developing healthy behaviors. **WP2**
I would love to see maybe parents becoming more involved in lunch time. I know parents enjoy seeing their children throughout the day especially in the elementary school. I'd love to see parents coming in to just volunteer in the cafeteria to get to see their children, not only to get to reinforce those positive eating principles. **WP2**
I think the cafeteria provides a really nice opportunity for developing healthy behaviors. The time the kids can relax a little bit so I think it's a great place for parents to become more involved if their available during the day. I know many parents' schedules don't allow that but for the ones that do it will be a great opportunity to make a real difference. **WP2**
Limited communication and resources from the school. We do receive some health tips in the school newsletter, but nothing beyond that. **EP1**
Family nutrition nights, not well advertised outside of elementary school community – feels parents of older children would attend if they knew about the events. **LP2**
Limited opportunities for parents to provide feedback about obesity-prevention activities. **LT2**

Not aware of any parent involvement strategies that address nutrition physical activity. WT2
Opposition to additional health education
Health education is hit or miss – tobacco education example, educating the kids does not always influence the parents. **ET1** Healthy eating seminars may not be effective because there is limited participation in events of that nature during evenings due to busy schedules and lack of interest. **ET1**
Suggestions to improve parental participation in wellness
I think the district should make more of an effort to include parents. As long as this is done without being preachy, as long as it's very matter of fact. WT2 I think schools need to make more of an effort to implement healthy programs for children before the state gets involved in mandates of program that might not fit the NORTHe. WT2 **Add more parent involvement, invite parents to play and exercise with kids. LP1** **Parents are not aware of the social and emotional side of being overweight, more emphasis needs to be directed toward educating parents on more than the health risks or being overweight. EP1** **Invite parents to exercise with children in school sponsored programs to set positive examples. ET1** **Families need to see that gardens and produce markets are ways to reduce grocery bill and eat healthier. ET1** **The district has a health and wellness committee the parents can be a part of. WP** **We currently do not have any elements of family health education, other than our calendar and our newsletter that occasionally mentions a tip to improve family health. WP** More information about healthy weight and how to help children achieve it should be provided by school through classes, cooking classes seminars in fun positive environments. **LP2** Better educate parents about empty calories, eating breakfast, getting adequate sleep, and importance of exercise. **LT1** Limited avenues of parental engagement in obesity-prevention activities, healthy goal setting, and program development. **LT2** Limited district-wide programs to educate families how to become healthier. **LT2** It is more necessary to educate parents in why…and ways to get kids involved in activities and away from video games and junk food, not necessary to eliminate screen-related activity just monitor and reduce. **EP** Not enough outreach to families to educate them on healthy eating and ways to keep grocery bills lower. **LP1** Provide more education for the students through outside presenters and support groups. They offer a smoking cessation group, but we'd like to offer some more groups. It could support students who are struggling eating healthier, students are struggling to lose

weight. It's too difficult for the nurse to leave the office to assist in providing programs of that nature. **WSN** Need to establish district-wide strategic plan on how to address health in the home. **LT2** Need to establish collaborative partnership with NORTH health care providers. **LT2** Need to conduct a district wide family needs assessment. **LT2** Need to host a community wellness fair. **LT2** Need to provide more resources to families so they can also seek help from professionals. **LT2** Nutrition education program is good, needs more volunteers and involvement from parents, maybe high school student volunteers, possibly offer some nutrition activities during the after-school program so more parents can attend. **LSN** Recommended new program, crock pot club, try to find donations from NORTH businesses to invite families to come and make meals they can take home in storage bags freeze and use at home. **LSN** Would like to eliminate birthday celebrations, no more food coming in from home, removal of faculty room vending machines. **LSN** Need to communicate more with the families, ask parents what other activities they would like to see included, might open the door to community member volunteers, new programs, increased attendance and participation. **LSN** Need to seek more opportunities to collaborate with public health outlets to continue working with families on educating families on healthier practices. **LSN** I think after-school programs are necessary to assist students to reduce and maintain healthy weight due to the lack of activity at home and cost of community sports activities. **ET1**
Suggested improvements for cafeteria
You almost need to have the parents to pick a specific menu what their child should receive each day. WT2 Maybe if you haven't the salad bar the kids develop themselves kids would totally get on board. A lot of times the kids will enjoy more they have a chance to make it WT2 Suggestion to include snacks throughout the day as opposed to offering one lunch WT2 Offer sampling days for kids to try new foods, add salad as a daily option **EP2** Food service is focusing on profit not always student's best interest – discontinue snack line or offer fruit, no chips and treats. **LSN** Salad bar not available at middle and high school. **LP1** Snack shack at upper grade level school defeats purpose of balanced lunch. **LP1** Child and parent feel cafeteria food is disgusting and child does not want to eat the choices offered. **LP1** Suggested to provide snacks like fruit, salads, yogurt parfait, at snack shack, not candy **LP2** Suggested to offer salad bar at middle school and high school, only in elementary school. **LP2** Suggestion - lunch monitors provide positive recognition of healthy eating habits. **LT1** Would like to see fresher more nutritious meals, made from scratch , expanded salad bar 2 or 3 x per week, and offered to middle and high school. **LP**

I think it's also very necessary to educate the cafeteria staff to encourage the children with little tidbits of information why they should be eating healthier selections every day. **WP2** Upper grade levels have salad bars, but not the lower grade levels. **EN** We do not offer school breakfast. **WP** There is a need to go out on a limb to try new things with the kids and not stick with more traditional kid-friendly dishes that are less nutritious. **ET1** Would like to see fresher more nutritious meals, made from scratch. **LP** Expanded salad bar 2 or 3 x per week, and offered to middle and high school. **LP** Would like to see elimination of additional snack line and more focus on having students each their lunch components, cost of ingredients prohibits what is able to be served. **LSN**
Comments Suggesting improved role of teachers in health related initiatives
Need to see increase in staff support of nutrition education program. **LP** Lack of curriculum development from the district. **LT2** Must educate teachers how to have these conversations with parents and students. **LT1** Not all teachers communicate importance of healthy snacks and recognize students who bring healthy snacks. **LT1** Lack of connection or collaboration with community health providers. **LT2** After-school program is loud and bothersome to some teachers. **LT1** In-service training to educate teachers on how to talk with students about sensitive subjects like their weight and eating habits. **LT1** Teachers need training on how to speak to children and families about sensitive subjects like eating in a non-confrontational way. **LSN** No strategic plan to include parents in helping students develop healthy behaviors in school. **LT2** We need to have the willingness to work together, willingness to revamp our curriculum, willingness to invite parents to the table, willingness to offer programming. **EP** Faculty needs more training on how to speak with students and families about weight, nutrition, physical activity. **LP** This entire topic needs to become a district . **LP** Use programs established at elementary school as pilot for other district . **LT2** Provide training to lunch monitors to provide positive rewards to students who demonstrate healthy eating behaviors. **LT1**
Family and Child attitudes towards wellness
Getting the kids to buy into the concept of healthy eating and exercise is difficult. **WSN** Children are picky eaters at this age and fast food is so easy and kids like it, so these are difficult concepts to change. **LSN** Kids prefer sedentary activities, prefer screen activities, no longer interested in playing outside. **LP**

If kids are forced to do something they're going to do exactly the opposite even if the Apple looks yummy they're going to not take the Apple because are being forced to do so. **WP2**
Some families do not stress participation in physical activity and do not provide nutritious meals for their families – economic causes and lack of education. **LT1**
Some families only view after-school programming as free child care not a tool for developing healthy behaviors. **LT1**
Rural community makes it difficult because driving is required, isolated, lack of cooperation between families, limited or lack of carpooling. **ET1**
I think we need to provide more research to families as evidence health needs to become a priority. **LP**
I feel bad for the cafeteria people because they're just trying to make things that everyone will eat. **WSN**

Curriculum Vitae

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STUDENT-FOCUSED PHYSICAL EDUCATION & HEALTH TEACHER
Dedicated to instilling an appreciation for physical activity and a foundation for a healthy lifestyle in students

EDUCATION

Walden University	2/11-present	Ed.D - Teacher Leadership Specialization	
University of Scranton	3/06-5/08	MS - Educational Administration	*Summa Cum Laude*
East Stroudsburg University	9/01-5/05	BS - Health & Physical Ed.	*Magna Cum Laude*
Holy Ghost Preparatory School	8/97-6/01	High School Diploma	*Cum Laude*

PRESENT EMPLOYMENT

Plainfield Elementary School, Pen Argyl Area School District, Health & Physical Education Teacher

CERTIFICATIONS

PA Department of Education: Level II Teaching Certificate, Health and Physical Education
American Red Cross: First Aid/Pediatric & Adult CPR/AED - Instructor

WORK-RELATED RESPONSIBILITIES

Teacher of Health and Physical Education Classes - 500 students grades K-3, *2005-present*
After-School Activities Coordinator - Supervise staff and 300 participating students, *2007-present*
Grant Writer and Acting Grant Coordinator, *2007-present*
Wellness Committee Member, *2006-present*
Pen Argyl Area School District Staff Wellness Day Presenter, *2006-present*
Pen Argyl Area School District Safety Committee Member, *2005-2007*; Secretary, *2009-2011*
American Heart Association Jump Rope for Heart Event Coordinator, *2005-2012*
American Diabetes Association, Walk at School Event Coordinator, *2007-2012*
Field Day Event Coordinator, *2005-present*

PROFESSIONAL ORGANIZATIONS & GROUPS

Pennsylvania State Educators Association
American Alliance for Health, Physical Education, Recreation and Dance
Pennsylvania State Association for Health, Physical Education, Recreation and Dance
Slovak Gymnastic Union Sokol USA, Director of Men, *2009-present*

Kappa Delta Pi, International Honor Society in Education, *2005*
East Stroudsburg University Health and Physical Education Club, *2001-2005*
Sons of the American Legion, Post 960 Levittown, PA, *1998-present*

ACCOLADES AND ACKOWLEDGEMENTS

Colonial Intermediate Unit # 20: Excellence in Education Award received for Fun and Fit After-School Program, *Spring 2010*
Highmark Healthy High 5 School Challenge: *The Best Practices*, Fun and Fit After-School Program featured in *Spring 2009 & Spring 2010 publications*
Boy Scouts of America: Eagle Scout rank attained *June 27, 2000* & Order of the Arrow member

PROFESSIONAL DEVELOPMENT CONFERENCES ATTENDED

American Sokol Directors Development Conference, Chicago, IL, *Fall 2012*
American Sokol Directors Development Conference, Fort Worth, TX, *Fall 2011*
American Sokol Directors Development Conference, Cleveland, OH, *Fall 2010*
Center for Nutrition & Activity Promotion, Grant Workshop, Bedford, PA, *Winter 2011*
Center for Nutrition & Activity Promotion, Grant Workshop, Penn State University Hershey Children's Hospital, PA, *Fall 2010*
Keystone Health and Wellness Conference, Lebanon Valley College, *Summer 2008*
American Cancer Society School Leadership Conference, Hershey, PA, *Fall 2008*
PA Department of Health, Obesity Prevention Seminar, Scranton, PA, *Fall 2008*
American Cancer Society School Leadership Conference, Lebanon Valley College, *Summer 2007*

GRANTS WRITTEN AND COORDINATED FOR PLAINFIELD ELEMENTARY SCHOOL

Aetna Foundation Regional Grant, $25,000 Recipient, 2012-2013
Action for Healthy Kids Grant, $1500 Recipient, 2013
Active Schools Acceleration Project, $2500 Recipient, 2012
Hospital Central Services Center Grant, $500 Recipient, 2011
Highmark Healthy High 5 Super Grant, $50,000 Recipient, *2010-2011*
Highmark Healthy High 5 Grant, $10,000 Recipient, *2009-2010;* $7,700 Recipient, *2008-2009*; $3,500 Recipient, *2007-2008*
Green Knight Economic Development Fund Grant, $5,000 Recipient, *2010-2011*, *2009-2010*, *2008-2009*
Target Foundation Grant, $2,000 Recipient, *2010-2011*

LEADERSHIP AND COMMUNITY SERVICE EXPERIENCES WITH CHILDREN AND YOUTH

Pen Argyl High School Baseball Pitching Coach, JV Baseball Assistant Coach, *2011-present*
Green Knight Baseball Club, Off-season Conditioning Coach and Skills Clinic Staff, *2009-present*
Connie Mack Baseball Team, Pitching Coach, *2010-present*
Plainfield Athletic Association Baseball Coach, *2006-2008*
Plainfield Athletic Association Board Member, *2006-2007*
Boys Scout Troop 102, Emilie United Methodist Church, Assistant Scoutmaster, *2001-present*

OTHER WORK EXPERIENCE

Stiles Landscape and Lawn Service, Bangor, PA, Landscaper, *Summer 2006*

Casino Beach Pier, Seaside Heights, NJ, Parking Lot Attendant, *Summer 2005*
Parks and Recreation Department of Bucks County, Maintenance, *Summers 2002-2004*
Middle Bucks Institute of Technology, Clerical Support, on call *2001-2004*
Levittown Pacific & Langhorne Athletic Association Little League Baseball, Umpire, *2003*