

PARENTS' KNOWLEDGE, SUPPORT, AND
OPINIONS OF SCHOOL WELLNESS POLICIES IN
RURAL ELEMENTARY OKLAHOMA SCHOOLS

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Abstract: In 2004, the Child Nutrition and WIC Reauthorization Act was passed by Congress requiring all school districts participating in National School Lunch programs to develop school wellness policies. This act was further strengthened with the passing of the Healthy, Hunger-Free Kids Act of 2010, expanding the scope of school wellness policies. The policies are to include goals on all areas of student wellness including nutrition education, meal standards, physical activity and PE in addition to implementation, evaluation, and communication goals. With elementary aged students being naturally dependent on their parents, parent knowledge and support of school wellness policies is vital for success. The purpose of this study was to gain insight on parents' knowledge, support, and opinions of school wellness policies and the school's role in obesity prevention in rural areas throughout Oklahoma. To obtain this information, telephone interviews were conducted using a scripted questionnaire. There were 463 individuals who fully completed the telephone interview. Close-ended response frequencies were tabulated and calculated as a percentage of the total. Open-ended responses were examined for similarities and grouped into themes. Chi square statistics and student t-tests were conducted to examine differences amongst the variables. Results indicated that parents were knowledgeable of the existence of school wellness policies but lacked familiarity with 35.4% of respondents being not at all familiar. Parents are in support of the school playing a role in the promotion of reduced obesogenic behavior through providing healthy meals and requiring regular physical activity. Parents were more in favor of schools requiring physical activity for obesity prevention versus providing healthy foods and limiting others ($p=0.006$). School wellness policies need to be educative, informative, and realistic. There needs to be increased communication between the school and the parents about school wellness policies to increase parent familiarity. School wellness policies are mandated in order to promote healthy lifestyles and to address the current childhood obesity epidemic. Strong school wellness policies that are well communicated and involve the parents are recommended as a means to address the growing child obesity epidemic in the state of Oklahoma.

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CHAPTER I

INTRODUCTION

Children spend a majority of their awake time at school; seven hours a day, five days a week, nine months out of the year (Gaines, Lonis-Shumate, & Gropper, 2011). School is where they begin to develop relationships, create habits, and progress as a student and individual. No other institution has this much regular contact with young children. The daily practices that develop from a child's time at school shape the habits they will carry for a lifetime. Specifically, the eating and physical activity tendencies and behaviors that are developed in an elementary school child have the ability to play a critical role in childhood obesity prevalence (Gaines et al., 2011). Experiencing overweight and obesity in childhood and adolescence leads to a high risk of overweight and obesity in adulthood (Jaballas, Clark-Ott, Clasen, Stolfi, & Urban, 2011). Therefore, establishing healthy and active habits as a youth is critical in prevention of obesity throughout the lifetime.

Congress recognized the vital role that schools play in promotion of healthy lifestyles for their students. In response, they passed the Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act of 2004 (Schwartz et al., 2009). This act mandated that by the start of the 2006-2007 school year, all school districts

participating in United States Department of Agriculture (USDA) meal programs were required to establish school wellness policies. The USDA Team Nutrition website page directly states, “Each local educational agency that participates in the National School Lunch Program or other federal Child Nutrition programs is required by federal law to establish a local school wellness policy for all schools under its jurisdiction” (USDA, 2016). The policies were required to include goals for all areas of student wellness including nutrition education, physical activity, and any other school-based activities that would help to promote wellness (Probart, McDonnell, Weirich, Schilling, & Fekete, 2008). Additionally, there was to be a plan established that could measure whether the schools were meeting policy guidelines and school food authority representatives, administrators, parents, and the public were to be involved in the development of the local wellness policies.

In 2010, the Healthy, Hunger-Free Kids Act further strengthened the school wellness policy requirements by expanding the scope of the wellness policies to promote health and prevent childhood obesity and increase the accountability and transparency of policies (Welker, Lott, & Story, 2016). Research has suggested that utilization of local school wellness policies is associated with increased consumption of healthier food items and superior health-promoting practices in the school setting, such as regular physical activity (Hammerschmidt, Tackett, Golzynski, & Golzynski, 2011). Students who are well-nourished and physically active are more equipped to meet their full academic potential and display positive behaviors in the classroom.

There is research completed that measures school adherence to wellness policy requirements and evaluates implementation of such policies but little has been conducted

that looks at involvement of a very significant group; the parents (Brissette, Wales, & O'Connell, 2013). Schools help provide a link to parents who can then reinforce the health-promoting behaviors at home (Hammerschmidt et al., 2011). Parents' knowledge of school wellness policy efforts is key for Oklahoma elementary school students to be able to carry their healthy lifestyle practices from school life into home life. Their awareness and involvement plays a noteworthy role in successfully implementing wellness policies in schools, locally, and state-wide.

The purpose of this study was to gain insight on parents' knowledge and familiarity of school wellness policies, to determine the amount of parent support for schools playing a role in promoting the reduction of obesogenic behaviors, and to gain insight on parents' opinions of school wellness policies and their feasibility in rural elementary Oklahoma schools. This was done by conducting interviews over the telephone with parents of elementary school students throughout rural areas in the state of Oklahoma. The telephone interview questions were created with three focus areas in mind; (a) the school's role in child health promotion and obesity prevention, (b) parents' knowledge of school wellness policies, and (c) barriers to implementation. The interview results were compiled and used to specifically address the research objectives that have been created and provide those of interest with information on how to improve and further develop school wellness policies.

Objectives:

1. Gain insight on parents' knowledge and familiarity of school wellness policies in rural elementary Oklahoma schools
2. Determine the amount of parent support for schools playing a role in promoting the reduction of obesogenic behaviors through school wellness policies
3. Gain insight on parents' opinions of school wellness policies and their feasibility in rural elementary Oklahoma schools

CHAPTER II

REVIEW OF LITERATURE

This chapter discusses childhood obesity, school wellness policies, parents' role in wellness promotion, the method of telephone interviewing, and the need for rural communities to promote wellness. These subcategories cohesively describe the nature of this research through evaluating the literature related to this realm of study.

Childhood Obesity

Overweight and obesity is the most widespread health threat facing children and adolescents in the United States (Murnan, Price, Telljohann, Dake, & Boardley, 2006). The Centers for Disease Control and Prevention (CDC) reported in 2012 that more than one third of children in the United States were considered overweight or obese (Ogden, Carroll, Kit, & Flegal, 2014). More specifically, the state of Oklahoma ranks 14th for their childhood obesity rate of 17.4% and, additionally, comes close to nearly having the lowest fruit and vegetable intake nationwide (Levi, Segal, Rayburn, & Martin, 2015).

Nationwide over the past 30 years, obesity rates have more than doubled in children and quadrupled in adolescents (Ogden et al., 2014). The increases have been

observed in all age groups, ethnicities, and education levels (Towns & D'Auria, 2009). These statistics are the driving force for government public health efforts across the country.

Obese children have an increased likelihood of also being obese in adulthood (Wolfson, Gollust, Niederdeppe, & Barry, 2015). Specifically, 24% to 90% of obese adolescents will be an overweight or obese adult (Johnson & Johnson, 2015). Having a BMI in the obese category (greater than the 95th percentile in childhood and adolescence) is associated with development of a wide array of chronic diseases such as cardiovascular disease, hypertension, and type 2 diabetes (Wolfson et al., 2015). This can lead to a shorter life-span, decreased quality of life, and higher health-care costs for an individual. Distressingly, for the first time in history, the current generation of children in the United States have a shorter life-expectancy than their parent's generation (Wolfson et al., 2015). It is said that obesity-related health problems are to blame for this upsetting statistic.

Childhood obesity results from children's lack of physical activity, poor diet, over-eating, and generally poor healthy lifestyle habits (Butte, Christiansen, & Sørensen, 2007). Overall, taking in more calories than burning off. Although there has been a plateau in childhood obesity rates within the past decade, showing the prevalence has not increased, the goal is to see a decrease (Ogden et al., 2014). The prevalence rate remains high, therefore, more public health efforts and fresh ideas are needed in an effort to combat the childhood obesity issue in the United States.

School administrators, teachers, health professionals, and parents should be concerned because of the negative impact obesity can play on not only the physical health, but also on psychological, behavioral, and social health (Murnan et al., 2006).

Obesity during childhood can lead to peer rejection, low self-esteem, and depression; all conditions that can contribute greatly to a child's education and school time experience. Therefore, using school time as a way to implement wellness policies in order to promote the prevention of childhood obesity is a very useful intervention strategy.

School Wellness Policies

With children spending more than half of their awake time at school, the education system plays a large role in child development—mentally, socially, and physically (Schetzina et al., 2009). Schools are a natural and logical place to promote healthy eating practices and regular physical activity (Hammerschmidt et al., 2011). The federal government recognized this role and consequently mandated school wellness policies (Schwartz et al., 2009).

The Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act of 2004 required all local education agencies participating in the National School Lunch program or any other federal Child Nutrition programs to establish written school wellness policies by the start of the 2006-2007 school year (Gaines et al., 2011). The federal legislation required these policies to encompass goals for various areas of healthy lifestyle promotion including nutrition education, physical activity, nutrition guidelines for all foods available on the school campus during the school day, an assurance that school meals follow federal law, a plan for measuring implementation of the policy, and the involvement of parents, students, the food authority, school board, school administrators, and the public in the development of the policies (Schwartz et al., 2009).

To further strengthen the Child Nutrition and Women, Infants, and Children Reauthorization Act of 2004, the Healthy, Hunger-Free Kids Act of 2010 was passed (USDA, 2016). This act required changes in Child Nutrition Programs to give children more access to nutritional benefits, improve diets, reduce obesity, and strengthen program integrity. Specifically, section 204 of the Health, Hunger-Free Kids Act of 2010 expands the scope of school wellness policies. This entails bringing stakeholders into the development, implementation, and review of local school wellness policies and requiring periodic assessment and public updates on the implementation of the wellness policies, in addition to the previous requirements set in 2004 (USDA, 2016). Overall, current local school wellness policies should be tailored to the needs of the specific school districts while still encompassing the latest required national components (Schwartz et al., 2009).

The five major content categories required by the federal government for school wellness policies include (1) nutrition education and promotion, (2) meal standards, (3) nutrition standards for competitive and other foods and beverages, (4) physical education and physical activity, and (5) implementation, evaluation, and communication (Metos & Nanney, 2007). Collectively, these content categories supply a well-rounded list of wellness policies. Evidence suggests the most successful school-based programs have comprehensive policy approaches (Schetzina et al., 2009). Cohesiveness coupled with personalized policies that fit the needs of the specific population creates for greater effectiveness in all areas including diet, physical activity, nutrition education and general obesity prevention.

Section 1: Nutrition Education and Promotion

Nutrition education is the core of school wellness policies. It has the ability to help individuals understand how dietary intake affects the body and be able to apply that knowledge to achieve a behavior change, such as making healthy food choices (Forgac, 1999). It provides the teachers with an opportunity to get directly involved in promotion of the school wellness policies. They are able to ensure that nutrition education programs provide children with the knowledge, skills, and experience they need to make positive behavior changes. Proper education on the core principles of nutrition will create a better understanding of how daily habits can shape one's overall health and well-being (Forgac, 1999).

Research studies have shown that comprehensive, longitudinal, health education programs have an impact on health promotion and disease prevention (Manios, Moschandreas, Hatzis, & Kafatos, 2002). A six-year study involving first graders assessed the effectiveness of a school-based health and nutrition education program in changing certain chronic disease risk factors. A variety of biological and behavioral parameters were measured before and after completion of the intervention. After 6 years, results showed significant changes in biochemical, dietary, and physical activity measures for the intervention group compared to the control group (Manios et al., 2002). The intervention group displayed lower cholesterol levels, lower total energy intake along with lower total fat and saturated fat intake, higher leisure time devoted to physical activity, and improved cardiovascular run test performance. Nutrition education instilled in childhood school settings have the potential to help individuals lead a healthier lifestyle and reduce risk factor levels for chronic diseases throughout the lifespan.

Promoting wellness and healthy lifestyles leads to positive changes beyond the reduction in obesity rates. Teachers, parents, and children have all noted that better nutrition and increased physical activity time leads to improvement in academic performance indicators (Schetzina et al., 2009). A study has suggested that parents like schools focusing on prevention of obesity more so than the treatment (Murnan et al., 2006). In a survey conducted by Murnan et al., more parents were opposed to the idea of schools being a place for the treatment of obesity than those who favored it. Rather, those who opposed felt that the school should be seen as a place of obesity prevention. Nutrition education and wellness promotion are simple ways teachers and staff can become involved in the success of school wellness policy implementation focused on the prevention of obesity.

Section 2: Meal Standards

Childhood obesity can be prevented and/or treated by two main modifiable aspects: dietary intake and physical activity (Murnan et al., 2006). The school has the ability to play a large role in both of these. As for dietary intake, the school provides breakfast, lunch, and snack options from vending machines. Students have a wide variety of dietary options and opportunities at school creating for the foods and beverages consumed to make up a significant proportion of their total daily nutrient intake (Rovner, Nansel, Wang, & Iannotti, 2011).

Implementation of wellness policies for meal standards with high nutritional value requirements helps children incorporate healthy foods and beverages during their breakfast and lunchtime meals at school (Probart et al., 2008). Wellness policies for meal

standards should be in compliance with the USDA nutrition standards and hopefully take steps beyond the national standards to create more stringent standards (Taber, Chriqui, Powell, & Chaloupka, 2013). Nutritional information in regards to calories, saturated fat, sodium, and sugar should be available for all student and parents. This aids in students and parents being aware of what they are being served and also ties in with the nutrition education section of wellness policies.

Section 3: Nutrition Standards for Competitive and Other Foods and Beverages

While school breakfast and lunch are the major components of the school food environment, there are a number of other foods and beverages available for students throughout the school day known as competitive foods (Welker et al., 2016). Competitive foods consist of options such as a la carte items in the school cafeteria, school stores, and vending machines. Vending machines and competitive food items are popular in schools due to their ability to bring in money for school funding (French, Story, Fulkerson, & Gerlach, 2003).

In contrast, a la carte food availability in schools has been negatively associated with fruit and vegetable consumption and positively associated with total and saturated fat intake (Rovner et al., 2011). A study indicated that in more than 75% of schools offering a la carte items offered items such as pizza, burgers, fries, and high-fat cookies and cake (French et al., 2003). Most of the schools (95%) surveyed had soft drinks and candy in their vending machines. This creates for schools having the battle of wanting the extra profit from competitive foods, but not the poor nutrition these foods are associated with.

In response, wellness policies should advocate for USDA nutrition standards to be followed in vending machines as well as school breakfast and lunch (Schwartz et al., 2009). These nutrition standards are known as Smart Snacks and require foods and beverages sold outside the school meal program to be whole-grain rich, fruits or vegetables, or have a fruit, vegetable, or dairy product as their first ingredient (Welker et al., 2016). Additionally, they must contain 10% or greater of the Daily Value of a nutrient of public health concern, such as calcium, vitamin D, fiber, or potassium, and follow guidelines for calories, added sugar, fat, and sodium.

A study has shown students were more likely to consume fruits and vegetables if they were offered to them in easy access options such as vending machines (Rovner et al., 2011). Specifically, in younger students the availability of fruit and vegetables and chocolates and sweets was positively related to the corresponding food intake. Therefore, replacing soda and foods of low nutritional value in vending machines with options such as flavored waters and healthy snacks prevents students from having the option to indulge in snack foods that contain little nutritional value (French et al., 2003). The USDA suggests USDA Smart Snacks standards should be followed in vending machines options, class parties that serve food, and school celebrations that serve food (USDA, 2016). This section of wellness policies aids in the promotion of high nutrition standards in all foods and beverages consumed during school time, not only breakfast and lunch time.

Section 4: Physical Education and Physical Activity

Elementary school children expend around 50% of their total energy expenditure while at school (Metos & Nanney, 2007). This substantial statistic shows the impact

schools have on the amount of physical activity students receive each day. School wellness policies should advocate for the requirement of physical education curriculum in grades Kindergarten through 12th and adequate time for recess that promotes physical activity on a daily basis (Schwartz et al., 2009).

Frequently, the largest barrier for individuals not participating in adequate physical activity throughout the day was lack of time (Hammerschmidt et al., 2011). An online survey conducted in low-income schools across the state of Michigan reported that 75% of their student respondents cited lack of time as their main barrier for adequate physical activity in the school day. Furthermore, 22% of student respondents reported the main barrier to physical activity was no one enforcing the school wellness policies and lack of priority for physical activity at their prospective schools.

All local school wellness policies should require schools to allot time for recess daily in grades Kindergarten through 8th to allow students to participate in physical activity each school day (Schetzina et al., 2009). School staff should ensure that students are spending that full amount of time being active. Doing so will help eliminate the amount of down time seen in recess that inhibits students from fully exercising the full allotted time (Hammerschmidt et al., 2011). This will allow for increased assurance that children are reaching their physical activity requirements while at school. Students who are physically active and well-nourished are better able to reach their full academic potential and subsequently will demonstrate positive behaviors in the classroom (Hammerschmidt et al., 2011).

Teachers often see incorporating extra physical activity time as an interference with their limited teaching time, which will in turn decrease standardized test

performance results. In contrast, increased physical activity is positively associated with academic performance (Schetzina et al., 2009). This association should illustrate to school professionals the importance of supplying adequate physical activity time. An online survey completed by parents illustrated that more than half of respondents saw teachers providing “brain breaks” at regular intervals as the biggest facilitator for physical activity in their children (Hammerschmidt et al., 2011). Physical activity in the classroom and school day can create for better physical, psychological, and mental results.

Section 5: Implementation, Evaluation, and Communication

By the start of the 2006-2007 school year, school wellness policies were required to be established and implemented in all local school agencies participating in national school lunch and breakfast programs (Schwartz et al., 2009). By school year 2010-2011, 99% of students enrolled in a public school were part of a school district that had a wellness policy in place (USDA, 2016). Conversely, far fewer students were part of a district that had wellness policies that encompassed all five required elements set by the federal government. This signified that evaluation of local wellness policies was necessary.

One study has reported that nearly 83% of parents interviewed were not aware of the Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act of 2004 (Murnan et al., 2006). This was indicated by parents of elementary students in the state of Ohio after completing a mail-in questionnaire. Although the Healthy, Hunger-Free Kids Act of 2010 required additional provisions to strengthen wellness policies,

addressing the limitations of existing local policies and supporting their implementation remains a priority (Brissette et al., 2013). Hence, evaluation tools such as WellSAT were developed. WellSAT was developed by a group of researchers who hoped to create a tool that could be used by state departments of public health and local school district personnel to evaluate individual schools' wellness policies (Brissette et al., 2013). Implementing the policies is the first aspect, but evaluating and assuring progress is vital for wellness policy success.

Lastly, communication is what ties successful implementation and evaluation together. Communication about the wellness policies is how families and the community get involved in the wellness promotion interventions (Borra, Kelly, Shirreffs, Neville, & Geiger, 2003). With proper communication, there are better chances of the wellness policy practices being implemented in the school setting to be continued in the home life setting. Successful communication tools could range from online forums, regular newsletters, or parent meetings. Teachers consider it essential for parents to be aware of wellness policies and support healthy lifestyles at home (Borra et al., 2003). School officials, parents, and children need to be working together cohesively and communicating to see results. Involvement of all groups will lead to better success for the school districts as a whole (Schetzina et al., 2009).

Parents' Role in Wellness Promotion

A parent is the most influential person in a child's early life. They naturally play the primary role in guiding and influencing their child in each aspect of life and additionally, have a vested legal responsibility to do so (Wolfson et al., 2015). Parental

influence is strongest in the elementary school age range (Clark, Goyder, Bissell, Blank, & Peters, 2007). Young elementary students will have limited control over their own choices making them dependent on others, most especially on their parents (Wolfson et al., 2015). Hence, parents are often the focus of public health interventions designed to reduce the prevalence of childhood obesity (Clark et al., 2007).

The majority of the public also embodies parents with a high level of responsibility for their child's obesity; more so than they blame other factors such as schools, government, healthcare, and the food industry (Wolfson et al., 2015). Childhood obesity is often equated with "individual failings" by both the parent and child, and even parental neglect. The public's view of parents' behaviors and choices with their kids, as well as the policy attitudes of parents themselves, is critical in the success of efforts to reduce childhood obesity (Wolfson et al., 2015). Evidence confirms that parents must be included in the fight against child obesity.

Parents have the ability to guide the development of proper eating habits in young children (Golan, Weizman, Apter, & Fainaru, 1998). With nutrition and food intake being one of the most modifiable aspects in the fight against childhood obesity, this creates the best opportunity for parents to get directly involved. The parents' food preferences, intake quantity, variety of foods in the home, eating behaviors, and physical activity patterns cohesively create a home environment in which healthy lifestyles may or may not be promoted (Golan et al., 1998). Parents should promote a range of foods, tastes, and textures in meals (Benton, 2004). Additionally, parents should encourage children to be aware of satiety cues and allow those indications to define how much is eaten in a sitting.

There is a positive effect seen when there is parental involvement in the prevention of childhood obesity versus when children are the only focus of intervention (Golan et al., 1998). In a study involving obese grade school children, the experimental group included the parent as the exclusive change agent for the child while the control group focused on the child alone. The experimental group, involving both the parent and child, had better adherence to the program and a significantly higher mean percentile weight reduction than the control group. Treatment of childhood obesity with parents directly involved is superior to interventions specifically focused on the child. Encouraging parents to accept responsibility for implementing changes into their child's diet and physical activity habits allows them to be deemed positive influences on their child's weight loss (Towns & D'Auria, 2009).

Examining parents' perceptions of their child's overweight status is key in determining whether a parent is ready to modify their child's lifestyle into one that promotes health and prevents obesity (Towns & D'Auria, 2009). Parent perceptions of their child's weight, dietary intake, and physical activity plays an important role in determining whether a family will develop and maintain healthy lifestyle practices (Jaballas et al., 2011).

A study has illustrated that parents are known to underestimate their child's weight status by more than 30% (Muhammad, Omar, Shah, Muthupalaniappen, & Arshad, 2008). In this study, parents completed self-administered questionnaires on their child's weight status (i.e. underweight, normal weight, overweight, or obese). Their children were then measured for height and weight and categorized into BMI categories. When comparing the parent responses of their child's weight status to the measurements

taken, parents underestimated their child's weight status. More than 38% of parents had an inaccurate perception of their child's weight. This variable seems to be key in determining whether the family is ready to modify the child's lifestyle and environment in order to prevent obesity (Towns & D'Auria, 2009). Parents who have good knowledge on the obesity issue are more likely to have a lower prevalence of overweight children (Muhammad et al., 2008). Therefore, it is vital for parents to recognize the issue that is at hand in order to ensure successful interventions for their children.

Whether or not a parent's child is obese, most parents expressed a concern about the problem of obesity in children (Jaballas et al., 2011). Parents may perceive the school's role in wellness and obesity prevention differently than how the school perceives their role, but none the less, the majority support the interventions that have arisen from school wellness policy implementation (Murnan et al., 2006).

The goal of school wellness policies is to first instill the practice of health and well-being into school life, and second to have those practices translate into home life. Parent involvement is necessary for this occur. With parent and family involvement in health promotion efforts there are significant gains seen in behavioral, psychological, and physical indicators (Manios et al., 2002).

Telephone Interviewing

When conducting a qualitative research study there are many possibilities as to how to gather information, including face-to-face interviews, online surveys, mail-in surveys, telephone interviews, etc. Finding the best method to address the study objectives plays a key part in the quality and accuracy of the information obtained.

Face-to-face interviews provide high-quality narrative data (Sturges & Hanrahan, 2004). The interviewer can see the participant's emotions and actions and is able to obtain personalized responses from each person interviewed. However, they are limited by their time requirements and inconvenience (Holt, 2010). For a large group, such as 500 or more parents, telephone interviews serve a greater purpose. Participants are able to voice their opinions, better conceal their personal identity, and remain at home for the interviewing process. As for the researchers, telephone interviewing is cost effective, grants access to hard-to-reach parents such as those working odd or long hours, and can be done in a more timely manner (Sturges & Hanrahan, 2004). Telephone interviewing is very effective for obtaining qualitative data.

Rural Communities

This study interviewed residents of rural areas in Oklahoma for data collection making general statistics about rural communities' obesity rates, diet intake, and health statuses relevant. Assessing rural community statistics from across the nation allowed for potential comparisons with the results of this individual study.

Around 20% of the United States population lives in a rural area (J.-H. Liu et al., 2012). Research statistics have shown rural community residents to have higher rates of overweight and obese than urban community residents, for both adults and children (J. Liu, Bennett, Harun, & Probst, 2008). NHANES results show the prevalence of obesity in children aged 2 to 18 to be 5% higher in rural children compared to urban children (J.-H. Liu et al., 2012). Explanations for this are not completely clear. Whether it is the lack of healthcare resources available, less accessibility to healthy foods, or general lifestyle, it is

hard to pinpoint the exact contributing factors (McMurray, Harrell, Bangdiwala, & Deng, 1999). Additionally, reports show that rural residents experience higher rates of serious health conditions, such as cardiovascular disease, and have lower self-reported health statuses.

In contrast, rural children have been found to be more physically active when compared with children living in an urban-setting (J. Liu et al., 2008). Although the association between physical activity and weight is complex, especially in childhood, adequate physical activity in coordination with childhood obesity could suggest inadequate nutrition and overconsumption. Rural residents' diets have been seen to be higher in fat and sugary foods and lower in fruit and vegetable consumption than urban residents (J. Liu et al., 2008). These dietary habits are provoked by lack of nutrition professionals and educational programs, such as school wellness policies, and the high occurrence of convenience stores versus supermarkets or grocery stores. Convenience stores are less likely to have healthy, low-fat foods regularly accessible and are more expensive when available (McMurray et al., 1999).

With rural areas having higher rates of serious health conditions, such as cardiovascular disease, the different risk factors should be evaluated individually to help decipher why rural areas are developing these conditions at a higher rate (McMurray et al., 1999). When accounting for gender, race, family income, and physical activity, research showed that the rural versus urban setting had minimal effect on cardiovascular disease risk factors other than obesity. Once again, obesity in rural areas has been attributed to quality of diet. Residents of rural areas were likely to consume too many

saturated fat sources via animal sources and not enough unsaturated fats, specifically polyunsaturated fatty acids (McMurray et al., 1999).

CHAPTER III

METHODS

The overarching purpose of this study was to gain insight on parents' knowledge, support, and opinions of school wellness policies throughout rural areas in the state of Oklahoma using computer assisted telephone interviewing. This research was approved by the Oklahoma State University Institutional Review Board and the University of Oklahoma Institutional Review Board for the Protection of Human Subjects (Appendix A).

Telephone Interview Questionnaire

The telephone interview questionnaire was developed by Oklahoma State University researchers with input from the director of the University of Oklahoma Public Opinion Learning Lab (OU POLL). The telephone interview questions were written based on relevant literature with three focus areas in mind; (1) parents' knowledge and familiarity of school wellness policies, (2) parents' support for schools playing a role in promoting the reduction of obesogenic behaviors, and (3) parents' opinions of school wellness policies and their feasibility in rural Oklahoma schools. Additionally, parents'

opinions about the prevalence of obesity in their child's school and in the state of Oklahoma were explored.

Furthermore, parts of the telephone interview questionnaire were written with guidance of the Wellness School Assessment Tool (WellSAT). WellSAT is an evaluation tool used to measure the quality of school wellness policies (Brissette et al., 2013). Specifically, WellSAT-1 was used for guidance which includes evaluation of a school's (1) nutrition education, (2) meal standards, (3) nutrition standards for competitive foods, (4) physical activity and PE, (5) wellness promotion, and (6) implementation and evaluation. The full telephone interview questionnaire can be found in Appendix B. Not all interview questions were used for data analysis.

Participants

OU POLL was contracted to provide 1,000 responses to the telephone interview. OU POLL purchased 21,820 records of households with zip codes in the rural areas of Oklahoma. Due to delays, calls were made from March 2016 until the end of June 2016. Complete interviews were obtained from 463 parents, meaning the participants were asked each interview question from start to finish, and 45 partial interview records were obtained; creating for a total of 508 participants. Because the statistical analyses used a listwise exclusion of subjects with missing data on the item of interest, all 508 who agreed to participate were included.

The participants of this study were parents and guardians of elementary school children throughout rural areas of Oklahoma. The participants were required to have at least one child enrolled in an elementary school in the selected rural area zip codes.

Data Collection

Telephone interviews were conducted from March of 2016 through June of 2016. The potential participants were told that this is a study regarding perceptions of school wellness policy programs in elementary schools. Interviewees were informed by the interviewer, OU POLL staff, that their responses are voluntary, responses would be kept confidential, and that participants could opt out of the study at any time. There were no incentives used to recruit potential participants. Interview questions included both close-ended and open-ended options. The response data gathered from interviews were recorded in a secure electronic database for analysis.

Data Analysis

Frequencies of the demographic characteristics of participants were tabulated and calculated as a percentage of the total with the exception of age and household income calculated as a mean amount. Each of the close-ended response items were condensed into categories and then tabulated and calculated as a percentage of the total. Chi square statistics were conducted to determine if there were differences between categorical variables. Student t-tests examined mean differences among continuous variables. All differences were considered statistically significant at $p \leq 0.05$.

Open-ended responses were examined for similarities and grouped into themes. The themes were then categorized into numbers and chi square analyses were conducted to determine differences between them and responses to related categorical variables.

CHAPTER IV

FINDINGS

The findings of this study reflect the data collected from telephone interview questionnaires (Appendix B) with parents of elementary school students throughout rural areas in the state of Oklahoma. The interview questions were used to gain insight into parents' knowledge, awareness, support, and opinion of local school wellness policies.

Participant Demographics

Of the parents agreeing to respond, 508 provided partial input with 463 providing complete responses to the interview questions. Information on age, gender, education, race and ethnicity, household income, and number of children in elementary school was collected and analyzed. The mean age of participants was approximately 42 years (42.07 ± 0.36) with a median age of 41 years. Of all surveyed participants, 67.3% were female and 32.7% were male. Participants' level of education ranged from less than high school to a doctorate degree with the highest percentage (36.4%) of participants identifying a bachelor's degree as their highest level of education.

Participants identified with various races and ethnicities including white/Caucasian, black/African-American, American Indian, Asian, and Hispanic/Latino. The highest percentage of participants (82.9%) identified their race as white/Caucasian. Mean household income of participants was measured at \$87,972.84 ± \$4,808.79. Participants' number of children currently in elementary school ranged from one to thirteen children with the majority (58.9%) identifying with one child currently enrolled in elementary school. Table 4.1 summarizes the demographics of the participants of this study.

Table 4.1. Participant Demographics

| | | |
|-------------------------------|--------------------|------|
| Age (mean ± SEM) | 42.07 ± 0.36 | |
| Gender | <i>n</i> | % |
| Female | 350 | 67.3 |
| Male | 170 | 32.7 |
| Education | <i>n</i> | % |
| Less than HS | 10 | 1.9 |
| HS Grad or GED | 66 | 12.8 |
| Assoc. Degree | 71 | 13.7 |
| Some College | 77 | 14.9 |
| Bachelor's Degree | 188 | 36.4 |
| Master's Degree | 87 | 16.8 |
| Doctorate, MD, JD | 18 | 3.5 |
| Race | <i>n</i> | % |
| White | 378 | 82.9 |
| Black | 21 | 4.6 |
| American Indian | 29 | 6.4 |
| Asian | 5 | 1.1 |
| Other | 23 | 5.0 |
| Hispanic Descent | <i>n</i> | % |
| Yes | 29 | 6.3 |
| No | 430 | 93.7 |
| Income (mean ± SEM) | 87972.84 ± 4808.79 | |
| Children in Elementary | <i>n</i> | % |
| 1 | 265 | 58.9 |
| 2 | 151 | 33.6 |
| 3 | 28 | 6.2 |
| 4+ | 6 | 1.3 |

Childhood Obesity

Parents were asked their opinion about whether or not childhood obesity was a problem in their child's elementary school. There were 488 participants who responded to this question using a scale ranging from one to five, where one is strongly disagree and five is strongly agree. The scale ranging from one to five was condensed to disagree (1-2), agree (4-5), or neutral (3). The numbers in parentheses indicate the response rankings grouped into each category. Out of the 488 respondents, 180 individuals (36.9%) disagreed with this statement, 185 individuals (37.9%) were neutral, and 123 individuals (25.2%) agreed with the statement. Table 4.2 summarizes the responses on parent opinion of childhood obesity in their child's elementary school.

Table 4.2. Parent Perception that Childhood Obesity is a Problem at Child's School.

| Response Option | Frequency (n) | Percent (%) |
|------------------------|----------------------|--------------------|
| Disagree | 180 | 36.9 |
| Neutral | 185 | 37.9 |
| Agree | 123 | 25.2 |
| Total | 488 | 100.0 |

Parents were additionally asked their opinion on whether or not childhood obesity was a problem in the state of Oklahoma. There were 486 respondents who participated in this question with answers ranging from one to five; one being strongly disagree and five being strongly agree. The scale ranging from one to five was again condensed to disagree (1-2), agree (4-5), or neutral (3). Out of the 486 respondents, 28 individuals (5.8%) disagreed, 106 individuals (21.8%) were neutral, and 352 individuals (72.4%) agreed

with the statement that childhood obesity is a problem in the state of Oklahoma. Table 4.3 summarizes the responses on parent opinion of childhood obesity in Oklahoma.

Table 4.3. Parent Perception that Childhood Obesity is a Problem in Oklahoma.

| Response Option | Frequency (n) | Percent (%) |
|------------------------|----------------------|--------------------|
| Disagree | 28 | 5.8 |
| Neutral | 106 | 21.8 |
| Agree | 352 | 72.4 |
| Total | 486 | 100.0 |

A chi-square analysis was used to compare participants’ response to “childhood obesity is a problem at your child’s school” with their response to “childhood obesity being a problem in Oklahoma”. There were 472 responses that were able to be cross tabulated. Out of the 170 individuals who disagreed with obesity being a problem at their child’s school, 90 of them (52.9%) agreed that childhood obesity is a problem in Oklahoma. Out of the 182 participants who were neutral in regards to their child’s school having an obesity problem, 146 of them (80.2%) believed that there is a childhood obesity problem in Oklahoma. Lastly, out of the 120 who did agree with obesity being a problem at their child’s school, 90% of them also agreed that childhood obesity is a problem throughout the state of Oklahoma, as well. This chi-square analysis was deemed statistically significant with a p-value less than 0.001. Table 4.4 fully summarizes the results of this chi-square analysis.

Additionally, Figure 4.1 presents a bar chart of the chi-square analysis of responses on the problem childhood obesity in the participants’ child’s school versus in Oklahoma.

Table 4.4. Chi Square Comparison of Parent Responses to Childhood Obesity is a Problem at Your Child’s School with Childhood Obesity is a Problem in Oklahoma.

| | | | Obesity is a Problem in Oklahoma | | | Total |
|--|--|--|----------------------------------|--------------------|------------------|--------|
| | | | Disagree | Neutral | Agree | |
| Obesity is a Problem at Your Child’s School | Disagree | Count | 21 _a | 59 _a | 90 _b | 170 |
| | | % within Obesity is a Problem at Your Child’s School | 12.4% | 34.7% | 52.9% | 100.0% |
| | | % within Obesity is a Problem in Oklahoma | 77.8% | 58.4% | 26.2% | 36.0% |
| | | % of Total | 4.4% | 12.5% | 19.1% | 36.0% |
| | Neutral | Count | 5 _a | 31 _{a, b} | 146 _b | 182 |
| | | % within Obesity is a Problem at Your Child’s School | 2.7% | 17.0% | 80.2% | 100.0% |
| | | % within Obesity is a Problem in Oklahoma | 18.5% | 30.7% | 42.4% | 38.6% |
| | | % of Total | 1.1% | 6.6% | 30.9% | 38.6% |
| | Agree | Count | 1 _a | 11 _a | 108 _b | 120 |
| | | % within Obesity is a Problem at Your Child’s School | 0.8% | 9.2% | 90.0% | 100.0% |
| | | % within Obesity is a Problem in Oklahoma | 3.7% | 10.9% | 31.4% | 25.4% |
| | | % of Total | 0.2% | 2.3% | 22.9% | 25.4% |
| Total | Count | 27 | 101 | 344 | 472 | |
| | % within Obesity is a Problem at Your Child’s School | 5.7% | 21.4% | 72.9% | 100.0% | |
| | % within Obesity is a Problem in Oklahoma | 100.0% | 100.0% | 100.0% | 100.0% | |
| | % of Total | 5.7% | 21.4% | 72.9% | 100.0% | |

Each subscript letter denotes a subset of Obesity is a Problem in Oklahoma categories whose column proportions do not differ significantly from each other at the .05 level. P-value <0.001.

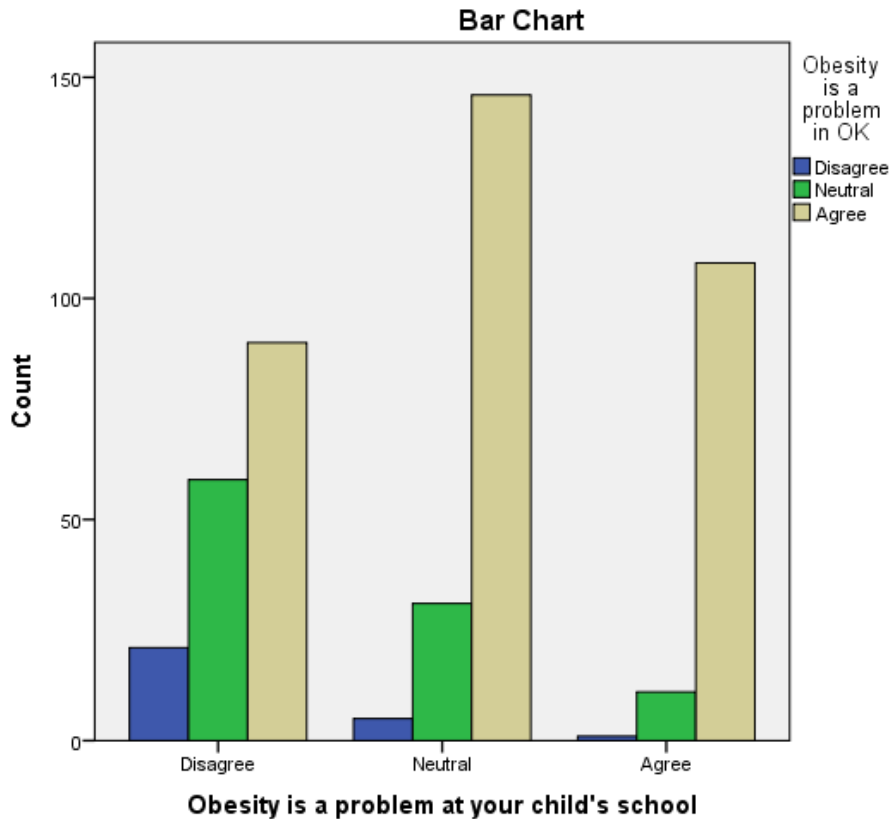


Figure 4.1. Chi Square Comparison of Childhood Obesity is a Problem at Your Child’s School with Childhood Obesity is a Problem in Oklahoma.

Parent Knowledge of School Wellness Policies

There were 508 responses to the question, “To the best of your knowledge, do the schools your children attend have school wellness policies?”. Participants were to answer this question with “yes”, “no”, or “don’t know”. The responses “no” and “don’t know” were grouped together for more comparable results. Out of the 508 individuals asked this question, 315 participants (62.0%) said “yes”, and 193 participants (38.0%) said “no” or “don’t know”. Table 4.5 summarizes the responses seen in regards to parent awareness of school wellness policies.

Table 4.5. “To the best of your knowledge, does the school your child attends have school wellness policies?”

| Response Option | Frequency (n) | Percent (%) |
|------------------------|----------------------|--------------------|
| No/ Don’t Know | 193 | 38.0 |
| Yes | 315 | 62.0 |
| Total | 508 | 100.0 |

To further understand parent knowledge and awareness of school wellness policies, participants were asked “Using a scale ranging from zero to ten, where zero means not at all familiar and ten means completely familiar, how familiar are you with the school wellness policies in your child’s school?”. Response categories were further grouped together as “not familiar” (0-1), “somewhat familiar” (2-4), “familiar” (5-7), and “very familiar” (8-10) to provide more concise categories for analysis. The numbers in parentheses indicate the response rankings grouped into each category. There were 492 respondents for this particular interview question. The highest percentage of respondents (35.4%) considered themselves “not familiar” with the school wellness policies at their child’s school. The lowest percentage of participants (11.8%) reported that they were “very familiar” with the school wellness policies at their child’s school. Table 4.6 summarizes the responses recorded for parent familiarity of the school wellness policies in their child’s school.

Table 4.6. “How familiar are you with the school wellness policies in your child’s school?”

| Response Option | Frequency (n) | Percent (%) |
|--------------------------|----------------------|--------------------|
| Not Familiar | 174 | 35.4 |
| Somewhat Familiar | 142 | 28.9 |
| Familiar | 118 | 24.0 |
| Very Familiar | 58 | 11.8 |
| Total | 492 | 100.0 |

A chi-square analysis was run to compare parent knowledge of school wellness policies with their respective level of familiarity. Generally, it was acknowledged that participants who responded with “no” or “don’t know” in regards to their knowledge of whether their child’s school had school wellness policies were “not familiar” (67.8%) with the school wellness policies, while parents who responded “yes” to whether their child’s school had school wellness policies showed higher results in the “somewhat familiar” category (34.0%) and “familiar” category (32.7%). This chi-square analysis was deemed statistically significant with a p-value less than 0.001. Table 4.7 summarizes the results of the chi-square comparing knowledge of school wellness policies with level of familiarity with school wellness policies.

Additionally, Figure 4.2 illustrates a bar chart depicting the same information. The “no” and “don’t know” category indicates little to no parent familiarity of the school wellness policies while the “yes” category indicates increasing familiarity but not strong familiarity.

Table 4.7. Chi Square Comparison of “Does Your Child’s School Have SWPs?” with Level of Familiarity with SWPs.

| | | Level of Familiarity with SWP | | | | Total |
|-------------------------|--|-------------------------------|-------------------|--------------------|-----------------|--------|
| | | Not Familiar | Somewhat Familiar | Familiar | Very Familiar | |
| Does school have a SWP? | Count | 124 _a | 37 _b | 17 _{b,c} | 5 _c | 183 |
| | % within Does school have a SWP? | 67.8% | 20.2% | 9.3% | 2.7% | 100.0% |
| | % within Level of Familiarity with SWP | 71.3% | 26.1% | 14.4% | 8.6% | 37.2% |
| | % of Total | 25.2% | 7.5% | 3.5% | 1.0% | 37.2% |
| Yes | Count | 50 _a | 105 _b | 101 _{b,c} | 53 _c | 309 |
| | % within Does school have a SWP? | 16.2% | 34.0% | 32.7% | 17.2% | 100.0% |
| | % within Level of Familiarity with SWP | 28.7% | 73.9% | 85.6% | 91.4% | 62.8% |
| | % of Total | 10.2% | 21.3% | 20.5% | 10.8% | 62.8% |
| Total | Count | 174 | 142 | 118 | 58 | 492 |
| | % within Does school have a SWP? | 35.4% | 28.9% | 24.0% | 11.8% | 100.0% |
| | % within Level of Familiarity with SWP | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 35.4% | 28.9% | 24.0% | 11.8% | 100.0% |

Each subscript letter denotes a subset of Level of Familiarity with SWP categories whose column proportions do not differ significantly from each other at the .05 level. P-value <0.001.

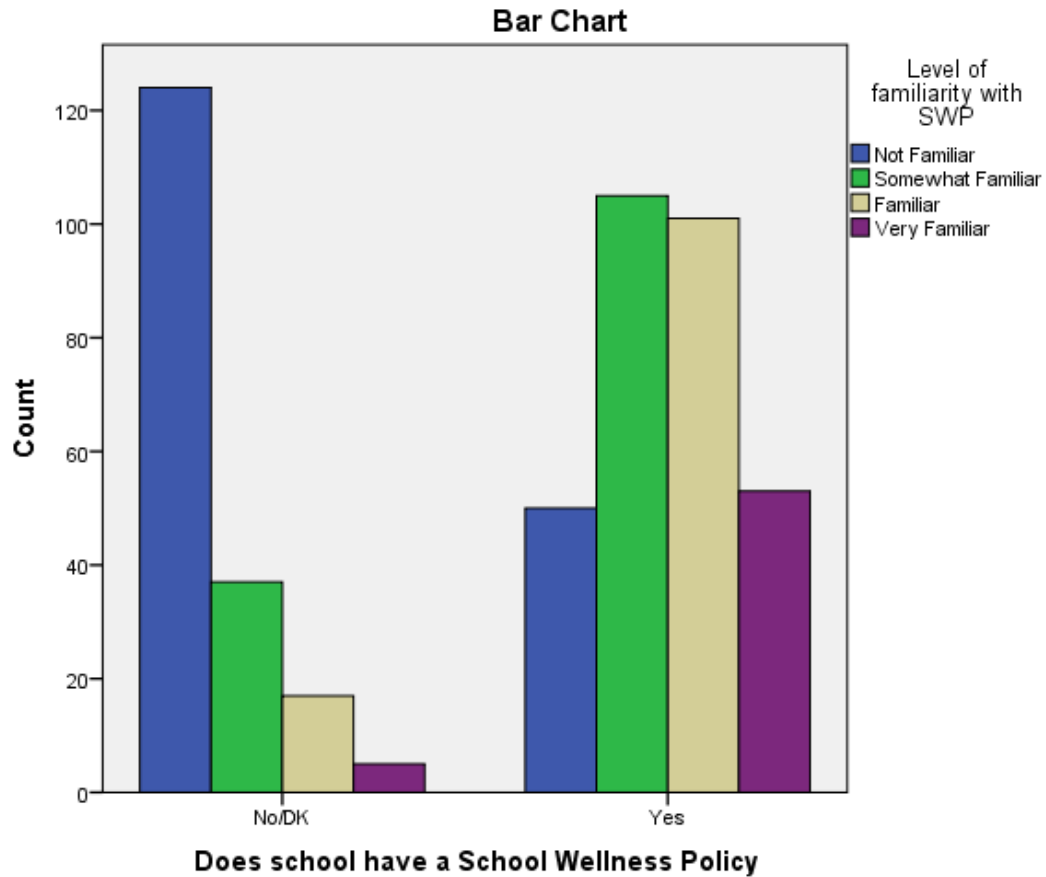


Figure 4.2. Chi Square Comparison of “Does Your Child’s School Have SWPs?” with Level of Familiarity with SWP.

Parent Support of the School’s Role in Obesity Prevention

To assess what responsibility, if any, parents believed schools should have in reducing obesity among elementary aged children, various statements on healthy eating and physical activity were included in the telephone questionnaire. Participants were to respond to each statement using a scale ranging from zero to ten; zero meaning no responsibility at all and ten meaning completely responsible.

In regards to healthy eating, one statement read, “Schools should provide specific types of foods while limiting others to promote health and reduce obesity”. There were 493 participants who answered this question with their respective ranking. Rankings were further categorized into “not responsible” (0-1), “somewhat responsible” (2-4), “responsible” (5-7), and “very responsible” (8-10) for more comparable numbers. The numbers in parentheses indicate the response rankings grouped into each category. Findings illustrate that 87% of participants hold schools to some amount of responsibility when it comes to providing specific types of foods while limiting others. Only 64 individuals (13.0%) deemed the school not responsible for this task. Table 4.8 summarizes the responses regarding parent support for schools providing specific types of food while limiting others to promote health and reduce obesity.

Table 4.8. Schools Should Provide Specific Types of Foods while Limiting Others to Promote Health and Reduce Obesity.

| Response Option | Frequency (n) | Percent (%) |
|-----------------------------|----------------------|--------------------|
| Not Responsible | 64 | 13.0 |
| Somewhat Responsible | 160 | 32.5 |
| Responsible | 179 | 36.3 |
| Very Responsible | 90 | 18.3 |
| Total | 493 | 100.0 |

A chi-square was run to compare participants’ responses from the above statement, “schools should provide specific types of foods while limiting others to promote health and reduce obesity”, with their respective response on whether obesity is a problem at their child’s school. Figure 4.3 illustrates the trends seen in this comparison. The highest number of respondents saying “not responsible” were in the “disagree”

category for obesity as a problem at their child’s school. Participants responding with “not responsible” was the lowest trend in each category (disagree, neutral, and agree) for “obesity is a problem at your child’s school”. This chi-square analysis was deemed statistically significant at $p=0.01$.

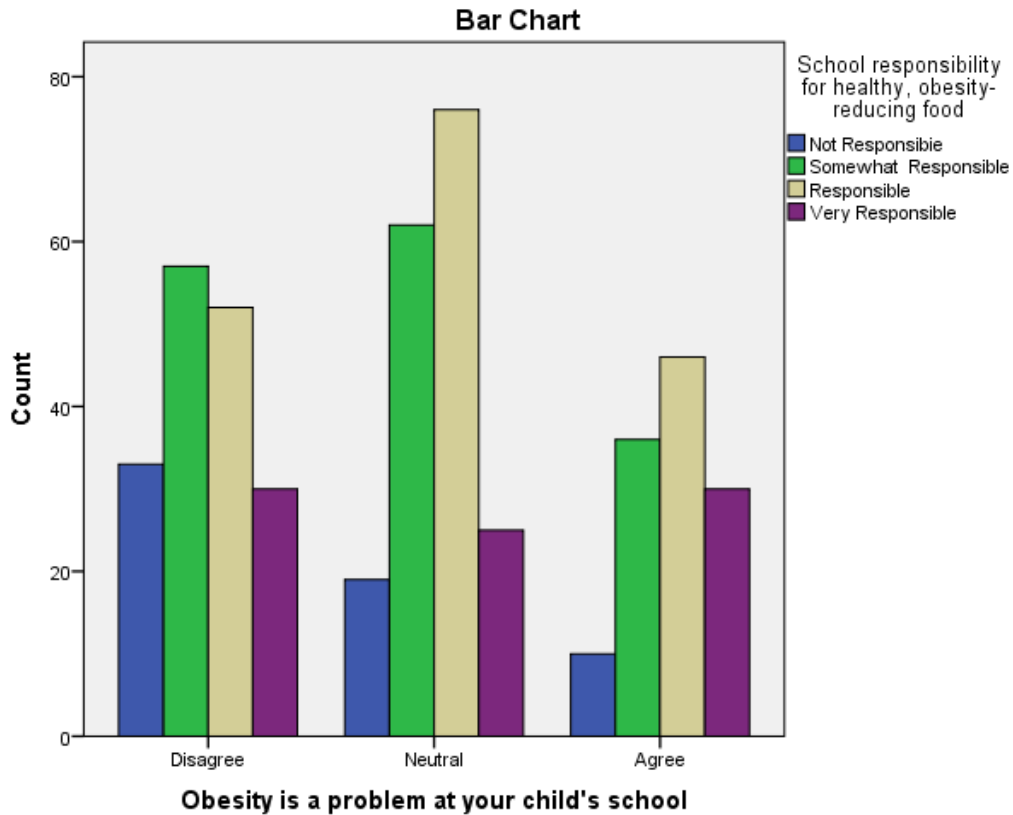


Figure 4.3. Chi Square Comparison of “Obesity is a Problem at Your Child’s School” with School Responsibility for Healthy, Obesity-Reducing Food.

Telephone interview questionnaires also assessed parent support for the school’s role in promotion of physical activity. The specific item was, “Schools should require all students to participate in physical activity for obesity prevention”. The scale again ranged from zero to ten with zero meaning no responsibility at all and ten meaning complete responsibility. Response categories were then condensed to “not responsible” (0-1),

“somewhat responsible” (2-4), “responsible” (5-7), and “very responsible” (8-10) to provide more comparable results in analysis. The numbers in parentheses indicate the response rankings grouped into each category.

There were 495 parents who responded to this statement. Out of those parents, 227 of them (45.9%) categorized the school as “very responsible” for requiring students to participate in physical activity. Only 30 respondents (6.1%) deemed the school “not responsible” for this task indicating that 93.9% of respondents believe the school is at some level of responsibility for requiring physical activity. Table 4.9 summarizes the results recorded for parent support of schools requiring all students to participate in physical activity for obesity prevention.

Table 4.9. Schools Should Require all Students to Participate in Physical Activity for Obesity Prevention.

| Response Option | Frequency (n) | Percent (%) |
|-----------------------------|----------------------|--------------------|
| Not Responsible | 30 | 6.1 |
| Somewhat Responsible | 92 | 18.6 |
| Responsible | 146 | 29.5 |
| Very Responsible | 227 | 45.9 |
| Total | 495 | 100.0 |

A chi-square analysis was run to compare parent responses on whether schools should require all students to participate in physical activity with their response on childhood obesity being a problem at their child’s school. Results showed that in all categories for “obesity is a problem at your child’s school”, the school being “very responsible” for requiring all students to participate in physical activity was the most common response. Figure 4.4 summarizes in a bar chart the results of the chi-square

comparing parent responses on school responsibility for requiring all students to participate in physical activity for obesity prevention with their responses on obesity being a problem at their child’s school. This chi-square analysis was deemed statistically significant at $p=0.011$.

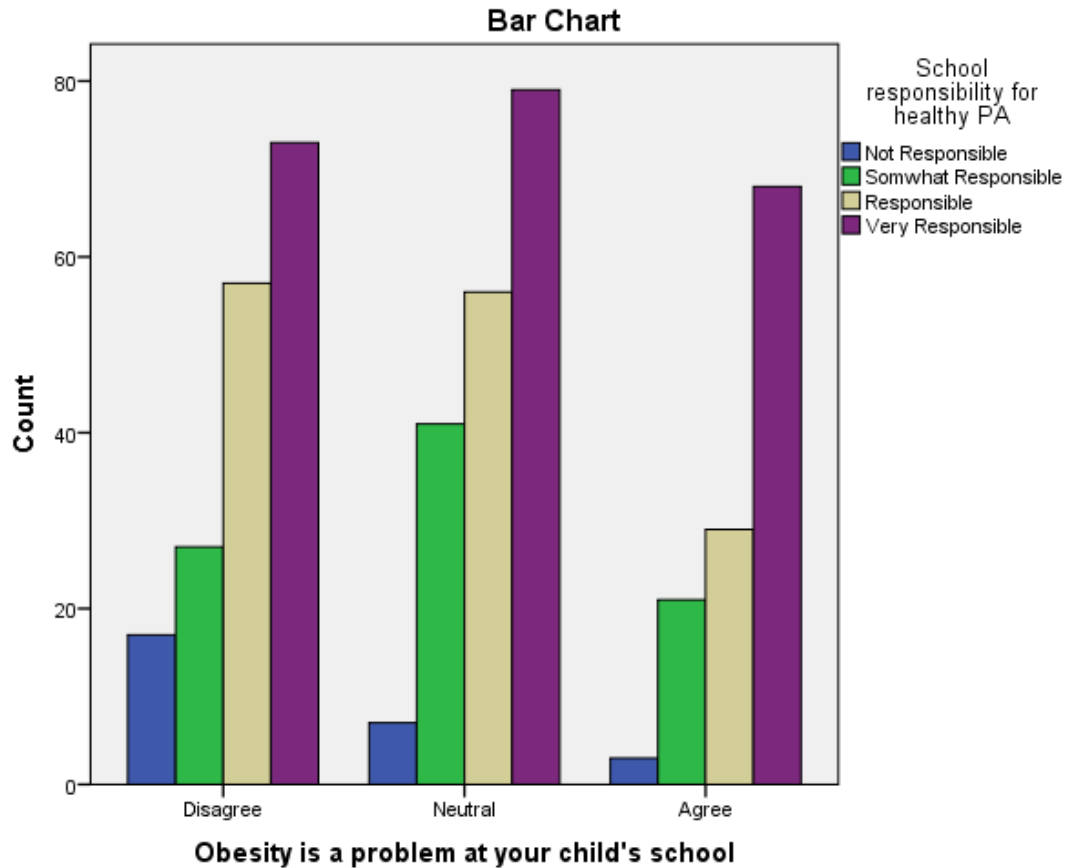


Figure 4.4. Chi Square Comparison of “Obesity is a Problem at Your Child's School” with School Responsibility for Requiring Physical Activity.

Parent responses on the level of school responsibility to provide specific types of healthy foods and limit others to promote health and reduce obesity was compared to the school’s responsibility to require all students to participate in physical activity for obesity prevention using a paired t-test. Results found that participants indicated a significantly

higher responsibility for promoting physical activity than for providing healthy foods and limiting obesogenic foods to promote health and reduce obesity ($p=0.006$). Table 4.10 summarizes the results of the paired t-test comparing school responsibility with healthy eating versus required physical activity.

Table 4.10. Paired Samples T-Test: Comparison of School Responsibility for Providing Healthy Foods vs. Requiring Physical Activity for Obesity Prevention.

| | Mean | N | Std. Deviation | P-value |
|---|------|-----|----------------|---------|
| Schools should provide healthy foods & limit obesogenic foods. | 6.78 | 498 | 9.30 | 0.006 |
| Schools should require all students to participate in physical activity for obesity prevention. | 8.02 | 498 | 6.27 | |

When asked to rank their agreement with the statement, “Schools should require nutrition information for school meals (e.g., calories, saturated fat, sodium, sugar) to be available to parents”, 484 parents contributed a response. Among the responses, 414 individuals (85.5%) agreed with this statement. In contrast, 38 individuals (7.9%) were neutral and 32 individuals (6.6%) disagreed. Table 4.11 summarizes the responses for whether schools should provide nutrition information to all parents with children in school.

Table 4.11. Require Nutrition Information for School Meals to be Available to Parents.

| Response Option | Frequency (n) | Percent (%) |
|-----------------|---------------|--------------|
| Disagree | 32 | 6.6 |
| Neutral | 38 | 7.9 |
| Agree | 414 | 85.5 |
| Total | 484 | 100.0 |

Parent Opinion of School Wellness Policies and Their Feasibility

An open-ended telephone interview question stated, “In your opinion, what policies, if any, should schools use to promote healthy eating?”. Respondents were encouraged to elaborate on their responses. There were 385 respondents for this open-ended interview question. Responses were individually analyzed for themes and trends seen throughout and then categorized into their respective theme. The themes created for this question include, “Increased amount of nutrition and health education”, “Healthier and higher quality food at school”, “Improved recess, PE, and physical activity requirements”, “It is not the school’s responsibility”, and “Other” for responses that did not categorize well into themes seen throughout all responses. Table 4.12 summarizes the results of parent opinions on what policies, if any, schools should be using to promote healthy eating.

Table 4.12. “In your opinion, what policies, if any, should schools use to promote healthy eating?”

| Response Themes | Frequency (n) | Percent (%) |
|---|----------------------|--------------------|
| Increase nutrition and health education. | 74 | 19.2 |
| Provide healthier and higher quality food. | 209 | 54.3 |
| It is not the school's responsibility. | 48 | 12.5 |
| Improved recess, PE, and physical activity requirements. | 15 | 3.9 |
| Other | 39 | 10.1 |
| Total | 385 | 100.0 |

In regards to parent opinions on policies for healthy eating, the majority of responses (54.3%) indicated that parents would like their child's school to provide healthier and higher quality food at school. In addition, a moderate number of parents (19.2%) recommended more nutrition and health education. Out of the 385 individuals who responded, 48 of them (12.5%) made the comment that promoting healthy eating or something of this nature was not the school's responsibility but rather the parents.

In another open-ended interview question, the participants were asked, "Very briefly, if there was one comment that you could make to policy makers about school wellness policies, what would you tell them?" There were 375 respondents for this interview question. Respondents were able to provide open-ended responses and elaborate to the extent they desired to. Responses were individually analyzed and then compiled into themes and trends seen throughout. Themes included, "Make wellness efforts more realistic and effective", "Be educative and informative", "Promote healthy eating and physical activity", "Wellness is a parent role more so than the school's", and "Other" for responses that were non-applicable or did not identify with the major themes established. Table 4.13 summarizes the parent comments towards policy makers about school wellness policies.

Table 4.13. “If there was one comment that you could make to policy makers about school wellness policies, what would you tell them?”

| Response Themes | Frequency (n) | Percent (%) |
|---|----------------------|--------------------|
| Wellness is a parent role more so than the school's. | 42 | 11.2 |
| Be realistic and effective. | 57 | 15.2 |
| Be educative and informative. | 29 | 7.7 |
| Promote healthy eating and physical activity. | 167 | 44.5 |
| Other | 80 | 21.3 |
| Total | 375 | 100.0 |

The most common trend seen throughout was the promotion of healthy eating and physical activity with 44.5% of parent respondents answering in this category. There were 42 individuals (11.2%) who indicated that wellness and the reduction of obesogenic behaviors is a parent role more so than the school's. There were 80 individuals (21.3%) whose responses were grouped into the “Other” category due to being non-applicable or not clearly identifying with one of the established themes.

To assess parent opinion on the feasibility of promotion of certain school wellness policies, interviewers asked participants to rank statements regarding both healthy eating and physical activity. The first statement read, “Changing the foods served to meet nutrition guidelines for health promotion and obesity prevention”. Using a scale ranging from zero to ten, where zero is not at all feasible and ten means completely feasible, 454 parents provided a valid response. Response categories were then condensed to “not feasible”, “somewhat feasible”, “feasible”, and “very feasible” to provide comparable results.

Only 43 individuals (9.5%) thought this task was not feasible at their child’s school. The highest number of responses was seen in the “feasible” category with 31.7% of respondents identifying with this category. Table 4.14 summarizes the results on parent opinion of the feasibility of changing the foods served to meet nutrition guidelines for health promotion and obesity prevention.

Table 4.14. Parent Opinion on the Feasibility of Changing the Foods Served to meet Nutrition Guidelines for Health Promotion and Obesity Prevention.

| Response Option | Frequency (n) | Percent (%) |
|--------------------------|----------------------|--------------------|
| Not Feasible | 43 | 9.5 |
| Somewhat Feasible | 130 | 28.6 |
| Feasible | 144 | 31.7 |
| Very Feasible | 137 | 30.2 |
| Total | 454 | 100.0 |

Parents’ opinions on feasibility of changing the foods served to meet nutrition guidelines for health promotion and obesity prevention (Table 4.14) were compared to their respective response regarding the school’s responsibility of providing healthy foods and limiting obesogenic foods (Table 4.8) using a paired t-test. Results found that participants, on average, thought it was feasible for the schools to change the foods served to meet nutrition guidelines for health promotion and obesity prevention but were less likely to think the school should be held responsible for providing healthy foods and limiting obesogenic. This finding was statistically significant at a p-value of <0.001. Table 4.15 summarizes the results of this paired t-test.

Table 4.15. Paired Samples T-Test: Comparison of Changing Foods Served Feasibility vs. School Responsibility for Providing Healthy Foods.

| | Mean | N | Std. Error Mean | P-value |
|--|------|-----|-----------------|---------|
| Feasibility of changing the foods served to meet nutrition guidelines for health promotion and obesity prevention. | 9.30 | 469 | .69 | p<0.001 |
| Schools should provide healthy foods & limit obesogenic foods | 6.66 | 469 | .41 | |

Furthermore, parent opinions on the statement “Increasing physical activity for all students” was also ranked for feasibility using the same scale, zero meaning not at all feasible and ten meaning completely feasible. Responses were later categorized into “not feasible”, “somewhat feasible”, “feasible”, and “very feasible”. There were 465 valid responses for this interview question. Only 19 participants (3.7%) did not believe it was feasible to increase physical activity for all students at their child’s elementary school. The largest number of responses was seen in the “very feasible” category with 191 participants (41.1%) identifying with this category. Table 4.16 summarizes the results of parent opinion on the feasibility of increasing physical activity for all students at their child’s school.

Table 4.16. Parent Opinion on the Feasibility of Increasing Physical Activity for all Students.

| Response Option | Frequency (n) | Percent (%) |
|-------------------|---------------|--------------|
| Not Feasible | 19 | 4.1 |
| Somewhat Feasible | 75 | 16.1 |
| Feasible | 180 | 38.7 |
| Very Feasible | 191 | 41.1 |
| Total | 465 | 100.0 |

CHAPTER V

DISCUSSION

This chapter presents the discussion, strength, limitations, and concluding statements for the study conducted looking at parents' knowledge, support, and opinion of school wellness policies in rural areas of Oklahoma. Each research objective will be addressed and discussed.

Participant Demographics

The participants of this study on average were around 42 years of age with a median age of 41 years old. The youngest participant was 19 years old while the oldest participant was 79 years old. The older ages were interesting and may be reflective of the increasing trend of grandparents raising children (Bailey, Haynes, & Letiecq, 2013).

Participant gender was two thirds female and one third male with education levels being higher than expected with more than half of participants having a bachelor's degree or higher. The United States Census Bureau reports only 24.1% of Oklahoma residents age 25 and higher have a Bachelor's degree or higher revealing that this study's participants

were more educated than the state of Oklahoma as a whole (USDC, 2015).

The majority of the participants were white (82.9%) with an average household income of almost \$88,000 and a median household income of \$80,000. The most recent United States Census Bureau statistics report that 74.8% of Oklahoma residents are white, indicating that majority of this study's participants' races were similar with the state as a whole (USDC, 2015). The median household income for the state of Oklahoma is \$46,879 indicating that the study population had a much higher median household income than the state of Oklahoma as a whole (USDC, 2015). With an initial goal of 1,000 participants, the response rate of over 50% was considered successful.

Childhood Obesity

In addition to assessing the research objectives, gathering information on parent opinion of childhood obesity was of interest for this study. While results showed obesity being a problem at the participants' child's school being relatively evenly distributed between disagree (36.9%), neutral (37.9%), and agree (25.2%), it was clear that parents believed that childhood obesity is a problem in Oklahoma (72.4% agreement). Chi-square results verified that the difference in perspective between obesity among children at their child's school with Oklahoma as a whole is indicative that the Oklahoma epidemic of child obesity was not affecting their area at the same level.

Assessing parent perception of their child being overweight in studies is helpful in determining whether a parent is ready to accept changes in school that would modify their child's lifestyle for promoting health and preventing obesity (Towns & D'Auria,

2009). Parent perception of their child's weight along with dietary intake and physical activity plays a role in determining whether a family will develop and maintain healthy lifestyle practices (Jaballas et al., 2011). It also possibly affects their support of implementing school wellness policies that prevent childhood obesity.

In addition, these findings are supportive of research findings that parents have a tendency to underestimate their child's weight status (Muhammad et al., 2008). The perception that their children and local children are not affected by childhood obesity while children across Oklahoma are is interesting and needs further study. If these parents are convinced that overweight and obese children are at a healthy body weight, they may not be supportive of school wellness policies designed to prevent childhood obesity. None the less, regardless of whether a parent's child is obese or not, most still indicate concern for the childhood obesity issue (Jaballas et al., 2011).

Parent Knowledge and Familiarity of School Wellness Policies

Gaining insight into parent knowledge and familiarity of school wellness policies through telephone interviews was the first research objective for this study. Almost two thirds of parents (62.0%) responded that they were aware that their child's school had school wellness policies in place. In contrast, more than one third of parents (38.0%) didn't know or did not believe their child's school had wellness policies in place. Although no recent research has addressed something comparable to this, a study published in 2006 reported that 83 percent of parents were unaware of the Child Nutrition and WIC Reauthorization Act of 2004 that established the requirement of schools

participating in the National School Lunch Program to establish local school wellness policies (Murnan et al., 2006). As noted earlier, this act was further strengthened in 2010 by the Healthy, Hunger-Free Kids Act (USDA, 2016).

The results from this study show an increase in awareness of school wellness policies compared to the 2006 study (Murnan et al., 2006). Ten years later, one would expect this to be the case. With the passing of the Child Nutrition and WIC Reauthorization Act of 2004 and further strengthened by Healthy, Hunger-Free Kids Act of 2010, it is federally mandated by law that schools participating in the National School Lunch Program are to have school wellness policies (USDA, 2016). Therefore, all schools that children of the interviewees attend would have school wellness policies in place. School wellness policies have developed and strengthened since the passing of these initial laws, hence, creating more awareness especially for those with children of grade school age (Gaines et al., 2011). The percentage of parents still unaware of school wellness policies could be explained by a multitude of things; lack of communication between schools and the parents, schools not heavily utilizing their wellness policies, parents not being aware of the changes made, etc.

Nearly two thirds (64.3%) of the parents said they were not familiar or only somewhat familiar with school wellness policies in their child's school. This suggests that the communication about school wellness policy content by the schools is lacking or ineffective. Even among parents who reported knowing that their child's school had a school wellness policy, half (50.2%) said that they were not familiar or were only somewhat familiar with the policy itself. Due to mandated school wellness policies requiring the schools to communicate the requirements and progress in implementing the

policies to the parents and community (USDA, 2016), these findings again support the suggestion that schools are either not communicating the policies to parents or are doing so ineffectively.

Parent Support of the School's Role in Obesity Prevention

Determining the amount of parent support for schools playing a role in the promotion of reducing obesogenic behaviors in rural elementary Oklahoma schools was the second research objective set for this thesis. Schools implementing wellness policies entails that they be involved in promotion of healthy lifestyles for their respective students. This encompasses schools playing a large role in their students' physical activity and eating habits. Parent support of the school playing this role and holding responsibility to do so is important to the success of wellness policy implementation.

Parental support was examined in this thesis using a series of interview questions to examine the level of responsibility, if any, parents believed schools should have in reducing obesity among elementary age children. Over 50% (54.6%) of parents reported believing the school has a responsibility to provide more healthy foods while restricting unhealthy options. Of interest, a higher percentage of parents (75.4%) agreed that the schools were responsible to require daily activity for obesity prevention. This supports a study conducted in 2009 which also supported the requirement of daily recess at school to allow students to participate in physical activity each day (Schetzina et al., 2009).

Results of the paired t-test comparing the mean level of agreement that the school is responsible for providing healthy eating options versus the responsibility for requiring

regular physical activity found that belief in requiring physical activity for obesity prevention was significantly higher than the responsibility for promoting healthy eating ($p=0.006$). This could be due to parents believing that requiring regular physical activity is a more feasible task for schools to achieve.

These findings agree with the results seen in a study conducted in 2006 that found parents were more likely to oppose schools as a place for obesity treatment, but support them as a place for obesity prevention (Murnan et al., 2006). Healthy eating and regular physical activity are the most modifiable aspects of obesity prevention (Jaballas et al., 2011). It is important that parents are supportive of the school playing a role in these respective areas for the success of school wellness policies.

Parent Opinion of School Wellness Policies and their Feasibility

Gaining insight on parents' opinions of school wellness policies and their feasibility in rural Oklahoma elementary schools was the third research objective set for this thesis. Open-ended questions in this telephone interview allowed parents the chance to elaborate on their responses. Each open-ended, qualitative interview question showed clearly identifiable themes and trends, although there were responses that suggested a limited understanding of the question being asked. These responses were put into the "Other" category.

With respect to the promotion of healthy eating at school, parents stated that the schools should provide healthier and higher quality food for the children while at school. The majority of responses (54.3%) were focused on wanting school lunch to use high

quality ingredients that will ensure healthy meals for children. Examples of specific comments in this response theme include:

- “I think they should offer healthier foods and better products; smaller burgers and less fries and that kind of stuff, but unfortunately that's what children like to eat.”
- “I think they should have food from local farmers, schools should have a program where they learn to grow their own food and use it in the cafeteria and they should have little to no processed food.”
- “I believe they should have a balanced diet for lunch, but all restrictions and drastic changes, kids won't eat it, then you're just starving your kids. They should offer more small healthy options, salad bars, and fruit.”
- “I think that if the government wants to stop obesity, they need to make food healthier. They need to start making food more nutritious. That would go a long way.”

Almost 20% (19.2%) of responses advocated for an increased amount of nutrition and health education so that children would be able to understand the importance of being active and leading a healthy lifestyle. Nutrition education has the ability to help individuals understand the importance of dietary intake and its effect on the body and be able to apply that knowledge to achieve a behavior change, such as choosing healthy foods (Forgac, 1999). Examples of comments in this response theme include:

- “I think it’s good to have a part of the curriculum to explain what healthy eating is like such as the food pyramid and how sugars affect the body. Students should be taught to eat breakfast with protein.”
- “Education on making sure you eat a well-balanced diet from the major food groups and limiting sweets and fats, as well as exercise.”
- “Educating the students and the parents is the best bet.”
- “There should be policies to educate about the health benefits of certain foods.”
- “They should probably emphasize healthy eating regularly in all classes. It should be something they discuss once or twice a week.”

When asked if parents had one comment for policy makers in regards to school wellness policies, nearly half of responses (44.5%) were categorized into the theme “promote physical activity and healthy eating”. This supports the results seen for the second research objective; parents see the school’s main role in reduction of obesogenic behaviors as providing healthy foods and requiring physical activity. Examples of comments in this response theme include:

- “The kids need to be more active. Less processed foods, more home-cooked foods. They can still have pizza, such as homemade pizza vs. frozen pizza. Fresh foods and less canned foods.”
- “Whatever they decide to do needs to be a comprehensive policy that encompasses healthy eating and physical exercise.”

- “Kids definitely need more play time in the classroom and recess time, and they need better food sources so that they eat. I have seen too many children not eat lunch because they do not like what is served.”
- “Keep improving the activity and the calories the kids take in all day.”
- “Continue physical education and continue healthy meals for kids. Don't let budget cuts remove those items.”

Additionally, parents suggested that the school wellness policy efforts be more realistic and effective and for policy makers to be more focused on education and information provision for both students and parents. This could indicate parents believed school wellness policies were too complex and not carried out effectively. Also, it potentially suggests schools were not educating and informing involved parties (i.e. students and parents) about school wellness policies adequately enough. This relates to the findings of low knowledge and familiarity with the policies.

In response to the item asking parents for one comment they would provide to policy makers about school wellness policies, there were a number of responses about overall school needs (i.e. greater school funding) who were grouped into the “Other” category. Among those whose responses focused on school wellness policies, 11.2% stated that “it is not the school’s role, it is the parent’s”. In addition, 12.5% of parents said the same thing when asked their opinion on what policies schools should use to promote healthy eating. It is important to note that there were a number of parents who did not believe schools carried any responsibility in the reduction of obesogenic behavior in elementary school children. Rather, many parents believed childhood obesity is often

equated with individual failings by both the parent and the child (Wolfson et al., 2015). This may be part of the reason why so many of the parents said they did not know about school wellness policies. They may possibly be ignoring them.

Other comments for policy makers indicated that parents believed schools played a role in child obesity prevention because they served meals, held recess, and provided physical education. However, there was still an indication that they felt parents needed to be the most influential people in the reduction of child obesogenic behavior.

Responses for open-ended questions were lower in participation numbers compared to the close-ended, quantitative questions. This is most likely due to time constraints. Also, it could be attributed to lack of knowledge about school wellness policies creating a lack of opinions related to them.

When parent opinion of feasibility of changing school's foods and increasing physical activity was assessed, parents deemed both of these tasks feasible to some extent. Only 9.5% of parents thought schools changing their foods to reduce obesity and promote health was not feasible while only 4.1% of parents thought increasing physical activity at school was not feasible. This suggests that parents do believe schools can make an impact in wellness promotion.

Strengths and Limitations

This is the first known study that conducted a telephone interview to gather information on parent knowledge, support, and opinions of school wellness policies.

Although the response rate was lower than anticipated, the sample size of 508 was sufficient in providing important information.

A strength of this study was that interview questions offered both close-ended and open-ended responses. This allowed respondents to provide concise results but also elaborate on certain aspects. Another strength was that this study was conducted in a professional polling center, the University of Oklahoma Public Opinion Learning Lab (OU POLL). Having a telephone interview as the method of data collection, and it being carried out by professionals, created for uniform interviews, the ability to reach a large sample size, and unbiased individuals conducting the interview.

The main limitation of this study is the time of data collection. Telephone interviews were conducted March through June of 2016. With 2016 being a presidential election year, the numbers of telephone campaign polls may have reduced people's interest in responding. Additionally, OU POLL noted that they had difficulty finding individuals in the sample of numbers they had received that had children enrolled in elementary school. If future studies of this type are conducted, working with the state's Department of Education to obtain a call list would likely provide a larger number of qualified respondents.

It could be seen as a limitation that there were no recent articles found to compare the findings of this study to. Comparable articles were published anywhere from 5 to 10 or more years ago, before the Child Nutrition and WIC Reauthorization Act and Healthy, Hunger-Free Kids Act had been well implemented. Therefore, the results of this study should be considered pilot findings for future study.

Conclusions

When addressing parent knowledge and familiarity of school wellness policies in rural areas of Oklahoma, it appears that many parents were aware of the existence of school wellness policies. However, their familiarity with local school wellness policy content was low. A low understanding of what the school's wellness policies were attempting to accomplish suggested the need for a vigorous information drive on the part of the school to ensure the success of such policies.

Parents in this study were generally in support of the school playing a role in promoting the reduction of obesogenic behaviors with the most support seen for wellness policies that promoted healthy eating and increased regular physical activity. Many parents stated these are the two areas schools have a large role in and have a responsibility to control. Again, providing the parents with more information about school wellness policies would help garner support and possibly assistance from the parents to ensure successful implementation.

Parents' opinions on school wellness policies indicate that the school's role in the reduction of obesogenic behavior is through providing healthy foods while at school, requiring physical activity, and providing health and nutrition education in order for children to understand the importance of healthy eating and physical activity. It was noted that beyond these efforts, parents did not see the school's role in the reduction of obesogenic behaviors expanding. Some parents felt there should still be a larger amount of responsibility for the parents in this area.

In conclusion, school wellness policies are mandates for promoting the health of students and addressing the growing problem of childhood obesity. The goal is to first instill the practice of health and well-being into school life, and second to have those practices translate into home life. Parent involvement is necessary for this to occur. In this study, the parents tended to say they were aware of the policies yet not very familiar with the content. Parents were in support of the school playing a role in promotion of healthy lifestyles and obesity prevention through providing healthy foods and requiring physical activity. Parents identified various needs that school wellness policies should address such as increased education and better communication between the schools and the parents. Strong school wellness policies that are well communicated and involve the parents are recommended as a means to address the growing child obesity epidemic in the state of Oklahoma.

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APPENDICES

Appendix A

| OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD | | HS-15-15 |
|--|--|--|
| APPROVED PROTOCOL MODIFICATION REQUEST FORM | | IRB Number |
| Title of Project: Pilot Study of School Wellness Policy Implementation: Promoters and Barriers in Rural Oklahoma Elementary Schools | | |
| Deana Hildebrand Name of Primary PI (typed) | <i>Deana Hildebrand</i> Signature of PI | <i>Feb. 5, 2016</i> Date |
| Nutritional Sciences Department | Human Sciences College | |
| 301 Human Sciences PI's Address | 405-744-5059 Phone | Deana.hildebrand@okstate.edu E-Mail |
| Required IRB Training Complete: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Training must be completed before application can be reviewed) | | |
| Nancy Betts Name of Co-PI (typed) | <i>Nancy Betts</i> Signature of Co-PI | <i>2/5/16</i> Date |
| Nutritional Sciences Department | Human Sciences College | |
| 301 Human Sciences Co-PI's Address | 405-744-5039 Phone | Nancy.betts@okstate.edu E-Mail |
| Required IRB Training Complete: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Training must be completed before application can be reviewed) | | |
| Gail Gates Name of Co-PI (typed) | <i>Gail Gates</i> Signature of Co-PI | <i>2/5/16</i> Date |
| Nutritional Sciences Department | Human Sciences College | |
| 301 Human Sciences Co-PI's Address | 405-744-3845 Phone | Gail.gates@okstate.edu E-Mail |
| Required IRB Training Complete: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Training must be completed before application can be reviewed) | | |
| Kevin Fink Name of Co-PI (typed) | <i>K</i> Signature of Co-PI | <i>2/5/16</i> Date |
| Nutritional Sciences Department | Human Sciences College | |
| 301 Human Sciences Co-PI's Address | 405-744-3841 Phone | Kevin.fink@okstate.edu E-Mail |
| Required IRB Training Complete: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Training must be completed before application can be reviewed) | | |

4. Do these requested changes pose additional risks to subjects? Yes No

If Yes, please describe the risks and any procedures proposed to address them:

We are requesting a waiver of written documentation of informed consent for this portion of the study. We believe the following criteria for waiver of written documentation have been met:

- The principal risks are those associated with a breach of confidentiality concerning the subject's participation in the research, and the consent document would be the only record linking the subject with the research.
- The research presents no more than minimal risk and involves procedures that do not require written consent when performed outside the research setting.

5. Submit all materials that are being revised with changes highlighted.

Number of copies to be submitted:

One (1), single sided paper copy of the modification form and associated attachments, signed by the primary PI and advisor (if appropriate). Scanned/faxed signatures are acceptable.

Submission Address:

IRB/University Research Compliance
Oklahoma State University
223 Scott Hall
Stillwater, OK 74078-2016

For assistance, please contact the IRB staff in the Office of University Research Compliance at 405-744-3377 or email irb@okstate.edu.

To: Layne, Faustina <flayne@ou.edu>

Subject: Authorization Agreement?

Good morning, Faustina!

I things are going well in your neck of the woods.

I have a PI here, Deana Hildebrand, that is on an application at OU. Your approval for a mod that was approved on Feb 2nd is attached. My understanding from visiting with Deana is that the only thing that will happen on our campus is data analysis. I'm wondering if you would be willing to enter into an Authorization Agreement with your IRB having oversight? I have also attached the beginnings of the AA, just in case.

Thanks!

Dawnett

Dawnett Watkins, CIP

IRB Manager

University Research Compliance

223 Scott Hall

405-744-5700

dawnett.watkins@okstate.edu

<http://compliance.okstate.edu>

IM: [Lync Chat](#)

Note: All applications need to be submitted on the most current form. [IRB Application Form](#)

From: [Watkins, Dawnett](#)
To: [Hildebrand, Deana](#)
Subject: FW: Authorization Agreement?
Date: Wednesday, February 24, 2016 3:12:41 PM
Attachments: [image002.jpg](#)
[image003.jpg](#)

No Authorization Agreement necessary. You should be good to go on this study. The analysis of de-identified data is not considered human subjects research per the regulations.

Dawnett

From: Layne, Faustina [mailto:flayne@ou.edu]
Sent: Wednesday, February 24, 2016 2:58 PM
To: Watkins, Dawnett <dawnett.watkins@okstate.edu>
Subject: RE: Authorization Agreement?

Dawnett,
Sorry for the delay. I was out of the office yesterday due to illness.

I contacted the researcher to get more information regarding the collaboration. The PI has advised that Deana Hildebrand's role/responsibility is to analyze de-identified data. Therefore, we do not consider her role as human subjects research. No agreement would be necessary at this point.

We have documented the emails just to note this in the file for future reference.

Let me know if you need anything further. Thank you for checking.

Faustina Layne

Director
Office of Human Research Participant Protection - IRB
University of Oklahoma
OFFICE: (405) 325-8110
Anonymous Hot Line
405-271-2223
866-836-3150



Institutional Review Board for the Protection of Human Subjects
Approval of Initial Submission – Exempt from IRB Review – AP01

Date: February 03, 2016

IRB#: 6455

Principal Investigator: Amy Sue Goodin, PhD

Approval Date: 02/02/2016

Exempt Category: 2

Study Title: Oklahoma State University-Nutrition Program School Wellness Program Assessment Study

On behalf of the Institutional Review Board (IRB), I have reviewed the above-referenced research study and determined that it meets the criteria for exemption from IRB review. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Request approval from the IRB prior to implementing any/all modifications as changes could affect the exempt status determination.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor.
- Notify the IRB at the completion of the project.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,

Aimee Franklin, Ph.D.
Chair, Institutional Review Board

Appendix B

School Wellness Policies Telephone Interview Questions

Introduction

(Name and Identification). *We are calling parents or guardians with children in elementary school to ask about their opinions of school wellness programs.*

- If yes, ask: *If this is a good time let's begin.*
- a. How many children do you have in elementary school?
 - In what grades? (check all that apply)
- b. Do you have any other children that attend middle or high school?
 - How many in these grades?
 - In what grades? (check all that apply)
- c. In which school district are your children registered?
- d. What is the zip code at your primary residence?
 - If they don't know zip code ask "In what city or town do you live?"

Focus area 1 (school's role in child health promotion/obesity prevention):

2. To the best of your knowledge, do the schools your children attend have school wellness policies?
3. School Wellness Policies are mandates for promoting the health of students and addressing the growing problem of childhood obesity.
 - a. Using a scale ranging from one to five, where one is strongly disagree and five is strongly agree, how would you evaluate the following statement: Childhood obesity is a problem in my child's elementary school? (Skip next if NOT 1/2 or 3/5)
 - i. Very briefly, why do you feel this way? <<open ended>>
 - b. Using the same scale ranging from one to five, where one is strongly disagree and five is strongly agree, how would you evaluate the following statement: Childhood obesity is a problem in Oklahoma?
4. To understand what responsibility, if any, you believe schools should have in reducing obesity among elementary age children, please respond to each of the following using a scale ranging from zero to ten, where zero means no responsibility at all and ten means complete responsibility.
 - a. Schools should provide specific types of foods while limiting others to promote health and reduce obesity
 - b. Schools should require that all school-sponsored events provide only healthy food items.
 - c. Schools should require all students to participate in physical activity for obesity prevention

- d. Teachers should model eating healthy foods
- e. Teachers should exercise with the children to model healthy behavior.

Focus area 2 (knowledge of SWP)

1. Using a scale ranging from zero to ten, where zero means not at all familiar and ten means completely familiar, how familiar are you with the SWP in your child's school? (≥ 1 GO TO NEXT)
 - a. From whom did you learn about the SWP? (do not read--check all that apply)
 - i. Parent Teacher Association/PTA
 - ii. Student Handbook
 - iii. School Registration Information
 - iv. School Letter
 - v. Children
 - vi. Other (specify)

2. To the best of your knowledge, have there been any recent changes in the food served at your child's school for breakfast and/or lunch?
 - a. [yes] To the best of your recollection, what changes were made?
 - i. More fruits & Vegetables
 - ii. Fewer/No desserts offered
 - iii. Fewer/No chips offered
 - iv. Fewer/No fried foods offered
 - v. Smaller portion sizes offered
 - vi. Other <<open ended>>
 - b. [no/don't know/not sure] Do you recall ever hearing from your child that:
 - i. the foods are different?
 - ii. the amounts of food available have changed?

3. To the best of your knowledge, what types of items are sold in school fund-raisers and school-sponsored events? [check all that apply; do not read list]
 - a. Fruit
 - b. Juice
 - c. Sugared sodas or Tea
 - d. Gatorade or Powerade
 - e. Water
 - f. Artificially sweetened low-calorie drinks
 - g. Cookies, Cakes, Brownies
 - h. Chips
 - i. Popcorn
 - j. Milk
 - k. Pens & Pencils
 - l. Books
 - m. Posters
 - n. Clothing
 - o. Other <<open ended>>

4. What types, of physical activity, if any, are available for your child at school?
 - a. Recess
 - b. Physical Education / PE
 - i. [if Physical Education / PE] To the best of your knowledge, do all children participate in Physical Education or PE?
 - ii. [if Physical Education / PE] To the best of your knowledge, how many days per week do the children participate in Physical Education / PE?

5. In your opinion, what policies, if any, **should** schools use to promote healthy eating?

→[check list; will not be read]

 - a. Nutrition education is provided
 - b. Standards for USDA school breakfast/lunch
 - i. Provide universal free school breakfasts.
 - ii. Provide universal free school lunches.
 - iii. Require school meals to meet standards that are more stringent than those required by the USDA.
 - iv. Require strategies to increase participation in school meal programs (e.g., breakfast in the classroom.)
 - v. Prevent students from leaving school during lunch periods.
 - vi. Ensure adequate time to eat.
 - vii. Ensure training for food and nutrition services staff
 - viii. Provide a clean and pleasant school meal environment
 - ix. Require nutrition information for school meals (e.g., calories, saturated fat, sodium, sugar) to be available to students and parents.
 - x. Require recess to be scheduled before lunch in elementary schools.
 - xi. Require free drinking water to be available during meals
 - c. Nutrition standards for competitive and other foods and beverages (foods that are not part of a USDA school breakfast/lunch)
 - i. Require compliance with USDA minimum nutrition standards for all foods and beverages sold to students during the SCHOOL DAY (commonly referred to as Smart Snacks)
 - ii. Nutrition standards for all foods and beverages sold to students during the EXTENDED school day (includes regular school day plus after school programming and clubs)
 - iii. Nutrition standards for all foods and beverages served to students while attending BEFORE/AFTERCARE on school grounds.
 - iv. Regulate food served during CLASSROOM PARTIES AND CELEBRATIONS in elementary schools.
 - v. Regulate foods and beverages containing NON-NUTRITIVE (ARTIFICIAL) SWEETENERS
 - vi. Regulate foods and beverages containing CAFFEINE
 - vii. Require availability of free drinking WATER throughout the school day.
 - viii. Regulate food sold for fundraising at all times (not only during the school day).
 - ix. Other <<enter answer>>

6. In your opinion, what policies, if any, **should** schools use to promote physical activity?
→ [check list; will not be read]
- a. Regulate amount of time per week of physical education instruction
 - b. Regulate teacher-student ratio for physical education classes
 - c. Regulate physical education teachers to be certified
 - d. Provide physical education training for physical education teachers.
 - e. Regulate physical education waiver, substitution or exception requirements
 - f. Provide active transport (e.g., walking school buses)
 - g. Provide before and after school physical activity
 - h. Provide/regulate recess
 - i. Provide classroom physical activity breaks
 - j. Regulate staff involvement in physical activity opportunities
 - k. Provide family and community engagement in physical activity opportunities
 - l. Provide physical activity training for all teachers (e.g., active learning classrooms).
 - m. Provide joint or shared-use agreements for physical activity participation (e.g., use of schools for physical education activities by members of the community).
 - n. Other <<enter answer>>

Focus Area 3 (barriers to implementation):

1. Using a scale ranging from zero to ten, where zero is not at all feasible and ten means completely feasible, how do you rate each of the following options for promoting SWP in your child's school?
 - a. Changing the foods served to meet nutrition guidelines for health promotion and obesity prevention.
 - b. Increasing physical activity for all students.
2. Very briefly, if there was one comment that you could make to policy makers about SWPs, what would you tell them? <<Open ended>>

Background Info

Now I have just a few follow-up questions for statistical purposes.

1. First, how old are you?
2. Are you male or female?
3. What is the highest level of education that you have completed?
 - a. Less than HS
 - b. High School Graduate or GED
 - c. Assoc. Degree or Vocational-Technical School
 - d. Some College
 - e. Bachelor's degree
 - f. Master's degree
 - g. Doctorate, MD, JD or some other post-graduate degree
 - h. Other <<enter answer>>

4. What is a general estimate of your yearly household income?
5. Are you Hispanic or Latino?
6. Which of the following best describes your race?
 - a. American Indian/Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Native Hawaiian/Pacific Islander
 - e. White
 - f. Other: What would that be? <<open-ended>>

VITA

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Candidate for the Degree of

Master of Science in Nutritional Sciences

Thesis: PARENTS' KNOWLEDGE, SUPPORT, AND OPINIONS OF SCHOOL
WELLNESS POLICIES IN RURAL ELEMENTARY OKLAHOMA
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