STUDENT, PARENT AND STAFF PERCEPTIONS OF THE FOOD ENVIRONMENT

IN A NOVA SCOTIA PUBLIC ELEMENTARY SCHOOL

by

Erica Siba

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The undersigned hereby certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "STUDENT, PARENT AND STAFF PERCEPTIONS OF THE FOOD ENVIRONMENT IN A NOVA SCOTIA PUBLIC ELEMENTARY SCHOOL" by Erica Siba in partial fulfillment of the requirements for the degree of Master of Arts.

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Readers: _____

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Signature of Author

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Abstract

This study qualitatively explored how students, parents and school staff perceived the role that the school food environment played in student eating behaviour, how the Food and Nutrition Policy for Nova Scotia Public Schools impacted the food environment. This study looked at one public elementary school from Nova Scotia through a focus group with 6 grade five students, and individual interviews with 6 parents and 11 school staff members. Under the constructivist paradigm, the methodology chosen was social constructionism using constant comparative analysis.

Significant themes that emerged from the data included: schools have a role in children's eating habits; school culture is important for supporting a healthy food environment; and the food brought from home is the unhealthiest part of the school food environment. This research contributes to knowledge on the school's impact on student eating behaviour, effectiveness of the policy, and the development of future research.

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List of Abbreviations Used

CLASS II   Children's Lifestyle and School Performance Study II

ENHPS   European Network of Health Promoting Schools

HRSB   Halifax Regional School Board

IUHPE   International Union for Health Promotion and Education

NSDE   Nova Scotia Department of Education

NSDHPP   Nova Scotia Department of Health Promotion and Protection

SEM   Social Ecological Model

Chapter 1: Introduction

This study focused on the issue of childhood nutrition through the school setting within the Halifax Regional Municipality. Childhood obesity rates in Nova Scotia are at an all-time high, and poor nutrition is a major contributor to this problem because the current food environment does not support healthy eating behaviour. The school setting was chosen for this study because children spend a significant portion of their time at school and they are influenced by a number of factors in the school environment. Children are impacted by the education they receive, peers, staff, and the activities they are involved with at the school.

The Problem

Obesity. Obesity has become a substantial issue in developed countries around the world (World Health Organization, 2003; Bleich, Cutler, Murray & Adams, 2008). The rates of individuals in Canada who are overweight or obese are highest in the Atlantic Provinces (Katzmarzyk & Ardern, 2004), and this includes the rates of obesity for Canadian youth (Shields, 2005). In Nova Scotia, the rate of 2-17 year olds who were either overweight or obese was 32% in 2004, and this number was 6% higher than the Canadian average (Shields, 2005). This number has been steadily rising over the last 25 years (Shields) which means that health care costs have also been increasing because obesity puts these individuals at a very high risk for heart disease, hypertension, diabetes and cancer (Patrick & Nicklas, 2005). Furthermore, children who are overweight or obese, are more likely to become overweight or obese adults compared to normal weight children (Brown & Ogden, 2004).

Part of the reason the Atlantic Provinces have such high rates of childhood obesity is because they have the lowest average, after-tax income in Canada, indicating that these provinces have a greater proportion of low income households among the population (Statistics Canada, 2007). This does not mean that the Atlantic Provinces necessarily have a higher proportion of the population living under the poverty line than the rest of Canada, but that in general, income levels are lower. Income has been linked to obesity because it largely determines access to healthy food, sport and recreation facilities, and health care resources (Butland et al., 2007; Statistics Canada). In Nova Scotia, a lower household income is significantly related to being at risk for overweight or obesity in both children and adolescents (St. John et al., 2008).

Although there are many contributing factors to the issue of obesity, Bleich et al. (2008) found that the increase in dietary consumption over the last few decades is the real driver behind obesity. Results from the Canadian Community Health Survey (CCHS) found that children who consumed five or more fruits or vegetables per day were less likely to be obese compared to children who consumed less than five a day (Shields, 2005). However, the CCHS also found that 70% of Canadian children are not meeting the five serving recommendation (Garriguet, 2007). Specific to Nova Scotia, the Children's Lifestyle and School Performance Study (CLASS) found that 50% of grade five students were not consuming five servings of fruits and vegetables each day (Veugelers, Fitzgerland & Johnston, 2005). All of these results suggest that a high percentage of children are at risk of becoming overweight or obese.

The Current Food Environment. The food environment in Canada has changed drastically over the last few decades, and is now very conducive to unhealthy eating

behaviour. Improvements in technology have made food production more efficient, resulting in mass production and lower market prices (Bleich et al., 2008). Mass processing of food often increases the caloric value of food, while decreasing the nutrient value of the food (Bleich et al.; Drewnoski, 2004). Food has become very accessible and is now available to almost anyone, at any time, in any place (Sobal & Bisogni, 2009), since the number of food retailers per community has noticeably increased (Spence, Cutumisu, Edwards, Raine & Smoyer-Tomic, 2009). However, this does not mean that healthy food is overly accessible. Fast-food chains and convenience stores are quite prevalent, and living in an neighbourhood with a higher ratio of these food retailers compared to grocery stores and markets is associated with poor eating habits and greater risk of becoming overweight or obese (Spence et al., 2009).

Changes in urbanization and family lifestyles have contributed to an increase in unhealthy eating patterns, since people are closer to a large variety of mass produced food, and busier lifestyles constrain the time devoted to nutrition and food preparation (Hobbs, 2008). Parents now work longer hours, and the number of families with a parent who stays at home is steadily decreasing (Patrick & Nicklas, 2005). Thus, families are relying more on convenience foods, with restaurants and packaged foods replacing home cooked meals (Hobbs; Patrick & Nicklas). Over the last couple of decades, the proportion of a family's food budget spent on foods consumed outside of the home has increased (Patrick & Nicklas). This shift is problematic for nutrition because eating out is associated with a higher intake of dietary fat and energy compared to home-made food (Drewnowski, 2004). Additionally, as the frequency of eating at restaurants increases, consumption of fruit, vegetables, and dairy foods decreases (Drewnoski). Individuals are

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not only consuming a higher number of calories when they eat out, but the foods that make up those calories are not as nutrient rich as foods made at home.

Nutrition in Youth. Although children's nutrition is a predictor of overweight and obesity, evidence illustrates that youth tend to show little trepidation for any long-term repercussions of unhealthy eating (Bassett, Chapman & Beagan, 2008; Croll, Neumark-Sztainer & Story, 2001). Health Canada (2002) has found that the importance of nutrition when making food decisions increases with age, and the lack of value placed on nutrition at younger ages can have severe consequences on the eating patterns of children. Youth often consume excessive amounts of junk food, do not consume the recommended amounts of milk, fruit and vegetables, and have irregular eating schedules which include frequent snacking or skipping meals (Bassett et al., 2008; Brown & Ogden, 2004).

The majority of ten year olds now exceed dietary recommendations for total fat, saturated fat and cholesterol intake (Brown & Ogden, 2004). Grade five students in Nova Scotia were found to be consuming higher than recommended amounts of fat and sodium, and lower than recommended amounts of calcium and fibre (Veugelers, Fitzgerald & Johnston, 2005). Furthermore, children are more likely to increase their intake when presented with greater portion sizes (Patrick & Nicklas, 2005). However, the increase in consumption may not extend to all foods, as children prefer larger portion sizes for less healthy options such as French fries, meat and potato chips, and smaller portion sizes for vegetables (Colapinto, Fitzgerald, Taper & Veugelers, 2007). Although nutrition is not the sole contributor to overweight or obesity, these eating habits are particularly

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problematic because children are setting themselves up for a lifetime of this eating behaviour (Leviton, 2008).

Food and Nutrition Policy for Nova Scotia Public Schools

To target unhealthy eating among children, the province of Nova Scotia has implemented a mandatory food and nutrition policy in all public schools to ensure that only healthy food is sold on school grounds during regular school hours, and also during after school and weekend events (Nova Scotia Department of Education [NSDE] & Nova Scotia Department of Health Promotion and Protection [NSDHPP], 2006). The ultimate goal of this policy is to provide a supportive environment for the development of healthy eating habits. The food from the school was determined to be a major issue after a study in 2003 found that children in Nova Scotia who bought their lunch from the school were 47% more likely to be overweight compared to children who brought lunch from home (Veugelers & Fitzgerald, 2005). Additionally, children who attended schools where soft drinks were sold consumed a greater number of soft drinks per week and a higher amount of sugar per day compared to schools where soft drinks were not sold (Veugelers & Fitzgerald).

The Food and Nutrition Policy in Nova Scotia Public Schools targets food choices in children and attempts to make the healthy choice the easy choice by mandating twelve directives. These directives apply to: food and beverages sold in schools; pricing; special functions; clean drinking water; portion sizes; food and nutrition programming; fundraising; promotion and advertising; nutrition education; vulnerable students; using food as a reinforcer; and food safety (NSDE & NSDHPP, 2006). Food and beverages sold in public schools within Nova Scotia are now required to meet specific criteria based on

Canada's Food Guide to Healthy Eating and Canada's Nutrient Content Claims (NSDE & NSDHPP). These standards group food and beverages into three categories: those of Maximum Nutrition, which can be served daily; Moderate Nutrition, which can be served occasionally; and Minimum Nutrition, which may only be served once or twice a month as part of special events (NSDE & NSDHPP). The sale of soft drinks is no longer permitted in public schools.

The policy also works to foster community partnerships, provide nutritional education and eliminate barriers to healthy eating, such as the cost of food (NSDE & NSDHPP). The policy mandates that affordability be a priority for food sold at the school, because the focus should be on providing nourishment, not generating a profit (NSDE & NSDHPP, 2006). Fundraisers are required to meet the same standards for food, as the policy is working to eliminate the sale of junk food, such as chocolate bars or cookie dough to raise money (NSDE & NSDHPP). The policy aims to improve students' attitudes, values and preferences toward healthy food by decreasing exposure to unhealthy food and marketing, and increasing exposure to healthy food choices and nutrition education (NSDE & NSDHPP). In addition, the policy encourages school staff members to act as role models for healthy eating behaviour (NSDE & NSDHPP).

Purpose of the Research and Research Questions

The purpose of this study was to qualitatively explore how students, parents and school staff perceived the school food environment and key factors influencing that environment. The researcher attempted to gain an in-depth understanding of the role that the school food environment played in student eating behaviour, how the Food and Nutrition Policy impacted the food environment, as well as the ways in which different

physical and social environments supported or influenced student eating habits. Furthermore, the purpose of the study was to see whether any barriers and facilitators existed for the school to implement the Food and Nutrition Policy. Qualitative methods were used because of the complex nature of food decisions. In addition to personal health and nutrition beliefs, there are many mechanisms and factors that influence a food decision, such as culture, family values, peers, economics and availability (Sobal & Bisogni, 2009; Wetter et al., 2001). Therefore, qualitative methods were used to get a rich understanding of the way students, parents and school staff perceived the school food environment and the Food and Nutrition Policy interacting with these other influences.

The following questions were explored through a study of one elementary school from the Halifax Regional School Board.

1. How do students, parents and school staff perceive the food environment in their school?

2. How do students, parents and school staff perceive the school food environment as influencing student eating habits?

The final two questions were only explored with parents and school staff because they had to do with the Food and Nutrition Policy, and it was assumed that elementary school students might not know that the policy existed or understand what the policy means to the school environment because of their ages.

3. Are parents and school staff aware of the Food and Nutrition Policy for Nova Scotia Public Schools, and if so, to what extent?

4. Are parents and school staff supportive of the Food and Nutrition Policy for Nova Scotia Public Schools, and if so, how?

Researcher's Interest in the Topic

As a child, I was not very concerned about nutrition and was only interested in eating food that tasted good to me. While some of the foods I enjoyed were healthy, the majority were not. It was not until the end of high school that I really began to notice the impact that food was having on my health because I could really feel a difference in my body when I would eat healthy meals compared to unhealthy meals. Growing up I still ate fairly well because of my parents' influence, but my elementary school and high school environments were quite unhealthy and I recall eating a lot of junk food there. Furthermore, I do not remember learning much nutrition education from elementary school other than the recommendations from Canada's Food Guide.

Seeing the changes that have been made in schools I was interested in learning whether current elementary school students value their own nutrition, and how the school was believed to be able to impact student eating behaviour. I was keen on understanding effective methods for population health interventions and believed that the school was an important environment for promoting health to youth. Although this was a single study of one elementary school, I believed it would be important for identifying the role of the Food and Nutrition Policy within the school food environment and how the school setting was linked to the eating behaviour of the student population.

Significance

This study was necessary because it was unknown how well the Food and Nutrition Policy was being implemented across Nova Scotia and whether schools were facing any challenges to full-scale implementation. If all twelve directives of the policy were not being integrated into the school setting, it may not have been able to reach an

optimum desired effect among students (Gregson et al., 2001; Stokals, 1996). Furthermore, there are many mechanisms and factors that influence the school setting, such as staff members, relationships with parents and students, the community, and school policies (European Network of Health Promoting Schools, 2006; Wetter et al., 2001). It was important to consider how the school food environment was impacted by these other factors, including the Food and Nutrition Policy, because their impact would have affected student eating behaviour through the food that the school provided to students.

This study identified several challenges and facilitators for this school to implement the Food and Nutrition Policy. The barriers have illustrated some areas that need additional support for the school to fully implement the policy. Additionally, this study identified the ways in which the school can influence student eating behaviour. This information helped to illustrate where the school was best suited to influence student knowledge, attitudes and behaviour, and maximize the support for nutrition. Although this was a single study of one elementary school in the Halifax Regional School Board and was not meant to be generalizable, this study still may help other elementary schools recognize where efforts toward healthy eating should be focused and where there is room to do more for student nutrition.

Chapter Summary

Childhood obesity has become very prevalent in Nova Scotia, and a lack of appropriate nutrition is contributing significantly to this issue. Within the current food environment, unhealthy food is much more accessible than healthy food, and youth are consuming diets that are high in fat and sodium. The Food and Nutrition Policy for Nova

Scotia Public Schools was recently implemented to improve children's attitudes, values and preferences toward healthy food by decreasing exposure to unhealthy food and marketing, and increasing exposure to healthy food choices and nutrition education.

The purpose of the study was to understand how students, parents and school staff perceived the role that the school food environment played in student eating behaviour, how the Food and Nutrition Policy impacted the food environment, as well as the ways in which different physical and social environments supported or influenced eating habits. The purpose of the study was also to assess how well the policy was integrated into the school food environment. Growing up, my school food environment was very unhealthy and I was interested in seeing whether or not the changes to elementary schools were believed to benefit student nutrition. This study may help elementary schools recognize where efforts toward healthy eating should be focused and areas that may need additional support for schools to fully implement the policy.

Chapter 2: Literature Review

This chapter describes the importance of developing healthy habits early in life. The chapter then presents an overview of some of the many influences facing children's food decisions within the context of the Social Ecological Model (SEM), such as parents, peers, accessibility and marketing. As this study took place in a school, the ability of schools to influence children's eating habits will be described in more detail. Finally, past initiatives targeting nutrition in youth through the school setting will be examined across the levels of the SEM to see which approaches were found to be most effective.

Establishing Healthy Behaviour in Children

Childhood is viewed as a critical period for establishing health trajectories that continue throughout adulthood (Leviton, 2008) mainly due to the fact that habits are much easier to change in children when they are beginning to form, as opposed to adults who have been practising the same behaviours for much of their lives (Salmon, 2010). It is now well known that childhood obesity is a strong predictor of obesity in adulthood (Brown & Ogden, 2004; Hanley et al., 2000), and a Canadian study found that once adults are overweight, very few return to the normal weight range, with additional weight gain being more likely (Shields, 2005). Ultimately, behaviour change is a lot more challenging in adults, and this difficulty transpires because human beings develop habitual decision making mechanisms that begin to occur almost automatically (Rothman & Sheeran, 2009). These automatic processes become so routine that they are often done with little thought, making it quite arduous to modify these behaviours after they have become ingrained into an individual's lifestyle (Rothman & Sheeran). Therefore, it is

incredibly important to target the decision making patterns of children related to food and nutrition, so that healthy behaviour can continue into adulthood.

Food Decisions

Eating behaviour collectively refers to the way that individuals get food, prepare food, store food, serve food, eat food, give food away, and clean up (Sobal & Bisogni, 2009). The large variety and availability of food in the environment means that there are many decisions to be made about eating. Individuals now need to decide what, where, when, with whom, how long, how, and how much to eat (Rothman & Sheeran, 2009). While food decisions are made by individuals, they are much more than a simple personal choice because they are frequent, multifaceted, situational and dynamic (Sobal & Bisogni). Most people do believe that healthy eating is important, yet their food choices do not always match this opinion (Ristovski-Slijepcevic, Chapman & Beagan, 2008). In addition to personal health and nutrition beliefs, there are many mechanisms and factors that influence a food decision, such as culture, family values, peers, economics and availability (Ristovski-Slijepcevic et al., 2008; Sobal & Bisogni; Wetter et al., 2001). Furthermore, the factors that influence a food decision are continuously changing for each individual. The way food is chosen can change for each individual in different life stages, in different settings, with different people and even for different meals of the day (Sobal & Bisogni; Wethington & Johnson-Askew, 2009). Overall, food decisions are incredibly complex and can differ for countless reasons.

Social Ecological Model

The Social-Ecological Model (SEM) conceptualizes the social world into five main levels of influence (Gregson et al., 2001), which can help to organize the

complexity of influential elements on food decisions. As seen in Figure 1: Social-

Ecological Model, the levels of influence are: individual; interpersonal; organizational;

community; and public policy (Gregson et al.). The model recognizes that multiple social

environments will interact with one another to affect individuals (Stokols, 1996). Each of

the five levels plays a vital role in food choices and thus in order to target obesity and

achieve optimum behaviour change in a given population, all of the levels need to be

supportive of healthy eating.

Figure 1. Social Ecological Model.

Individual Level. The individual level of the SEM affects the social world and

individual behaviour through psychological and cognitive factors such as knowledge,

attitude, values, preferences, beliefs, personality traits, action cues, and perceived barriers

and benefits. (Gregson et al., 2001; Larson & Story, 2009). Each attribute impacts the

way that people choose what to eat by defining the food that individuals like to eat,

knowledge about the food available to them, and the meaning attached to that knowledge

(Gregson et al.; Larson & Story). Furthermore, individual biological and demographic

factors influence eating behaviour by determining what individuals are physically able to eat, what their bodies are accustomed to eating, and the food options that they are regularly exposed to based on geographic location (Gregson et al.; Stokols, 1996).

Preferences. Children will not eat food they do not like, so preferences are a critical factor for food decisions within the individual level. In a study done with youth by Contento et al. (2006), taste was identified as the top reason for selecting main dishes, side dishes and beverages, while health was rated as a much lower priority. However, health was given more consideration from these youth when choosing a side dish and a beverage compared to a main dish (Contento et al.).

Food acceptance patterns develop early in individuals, and strongly reflect the food choices that they will make later in life, but that does not mean that new preferences cannot develop. It has been demonstrated that exposure to food is key to creating preferences and that repeated exposure can even overcome dislike of foods, because children tend to choose foods with which they are the most familiar (Contento et al., 2006; Patrick & Nicklas, 2005). Youth also report that one of the most influential factors in their food choices is availability, because it determines the level of familiarity with different foods (Patrick & Nicklas). Thus, the foods to which children are routinely exposed and are readily accessible help to construct their preferences and consumption patterns.

Interpersonal Level. The interpersonal level involves processes and interactions with other people such as family, friends, peers and community members that provide social identity, norms and role definitions (Gregson et al., 2001; Larson & Story, 2009). This level influences food decisions through social support, social norms, and role

modelling, which are all affected by the knowledge, attitudes and beliefs from the individual levels of the SEM of these other people (Larson & Story; Sobal & Bisogni, 2009). Additionally, interactions with others can affect exposure to foods if individuals receive food from these other people, even if this only occurs one time (Larson & Story).

Parents. Several studies have shown that the largest influence on children's food choices at the interpersonal level is through parents/guardians and family members (Gillespie & Johnson-Askew, 2009; Golan, Fainaru & Weizman, 1998; Larson & Story; Yuasa et al., 2008). Children's food related knowledge, preferences, and consumption are highly related to parents' preferences, beliefs, and attitudes toward food (Patrick & Nicklas, 2005). Parents and guardians provide the framework for establishing dietary habits in children. They determine what foods are available at home, how food is prepared and are role models for eating behaviour (Larson & Story, 2009). Parents and guardians are typically responsible for denying or allowing access to foods, and they create familiarity with food and beverages (Yuasa et al., 2008). They shape nutritional attitudes, the structure of meals and their child's ability to regulate consumption (Larson & Story). Patrick and Nicklas (2005) found that children's intake of fruit and vegetables is positively linked to parents' intake of fruit and vegetables, and also that children are more likely to try unfamiliar food if they see a parent or guardian trying it. Furthermore, the frequency of eating meals together as a family is associated with the consumption of healthier, nutrient rich food, a lower likelihood of skipping breakfast, and a decreased risk of becoming overweight or obese (Patrick & Nicklas; Veugelers & Fitzgerald, 2005). Evidently, parents and the structure of family meals exert a powerful influence on the developing eating patterns of children.

Peers. Although parents may wield the strongest influence on the eating behaviour of children at this level, peers are another group that can have a large impact. One study found that when children observed their peers eating vegetables that the children did not like, both preferences for and intake of those vegetables increased among the observing children (Patrick & Nicklas, 2005). This behaviour results because youth tend to abide by peer norms as a way of gaining social acceptance (Croll, Neumark-Sztainer & Story, 2001). Contento et al. (2006) found youth who initially stated a food choice that was the same as peers was based on taste, later admitted that the decision was made because they wanted to fit in with peers after their motives were questioned. Overall, peer pressure is a strong predictor of eating behaviour for children.

Organizational Level. The organizational level impacts food choices through rules, policies, structures and regulations of specific institutions such as workplaces, schools, businesses and religious organizations (Gregson et al., 2001). Eating behaviour is influenced by the availability of food in the organization and surrounding neighborhood, the policies within the institution, and the existence of any health programs in the organization (Larson & Story, 2009). Additionally, this level is impacted by the interpersonal level through social norms and social support between the individuals involved in that organization (Larson & Story).

Schools. The institutions that affect children the most are schools. Time spent at school can total as much as six to eight hours a day, for nine to ten months of the year (Leviton, 2008), and children can receive between 19-50% of their daily energy intake there (Larson & Story, 2009). Ultimately, the types of food available in schools and the structure in which it is provided frame the food decisions that students make, which are

usually affected by both individual preferences and interpersonal influences like family and peer values (Sobal & Bisogni, 2009).

      Community Level. The community level shapes food consumption patterns through social norms, networks, systems and standards, and the way that these elements affect the individual, interpersonal and organizational levels of the SEM (Gregson et al., 2001). The community level shapes eating behaviour through the organizational level by determining the food that is available for organizations to provide, as well as the food that is in close proximity to the organization (Gillespie & Johnson-Askew, 2009). The interpersonal level is influenced by cultural norms of the community and acceptable consumption patterns (Gillespie & Johnson-Askew). Cultural norms can determine appropriate meal composition, such as a main dish with two side dishes, and can also decide what foods are considered edible, such as insects (Sobal & Bisogni, 2009). Individual preferences, values and attitudes toward food are largely created by what is available for intake, and different properties of those food options like cost, marketing, location and accessibility (Gillespie & Johnson-Askew; Sobal & Bisogni).

      Cost. Children may not be responsible for purchasing the food that they regularly eat, but cost may be a major determinant for the food that is brought into their household. Canadians from high-income households are significantly less likely to become obese compared to Canadians from low income households (Le Petit & Berthelot, 2004). This disparity is due in part to the fact that unhealthy choices, such as foods that are high in fat and sugar, have become very inexpensive to make through mass production and processing (Le Petit & Berthelot; Drewnoski, 2004). Adding sugar, oils, shortening, and refined grains provide dietary energy at a much lower cost than meat, fish and fresh fruit

and vegetables (Drewnoski). Also, foods with added sugar or fat are much easier to produce, process, transport and store compared to fresh produce, dairy products and meat products, which also keeps their cost down (Drewnoski). Although it is recommended to increase fruit and vegetable intake and decrease intake of added fats and sugars, this type of diet is much more expensive.

Additionally, low income neighbourhoods tend to have a higher ratio of fast-food restaurants to grocery stores compared to high income neighbourhoods (Veugelers, Sithole, Zhang & Muhajarine, 2008), and the cost of fresh produce at grocery stores is sometimes higher in low income neighbourhoods (Le Petit & Berthelot, 2004). The differences in availability between neighbourhoods can mean that access to healthy food is reduced for individuals with limited financial resources because they may not have the ability to travel to areas where prices are lower (Le Petit & Berthelot). Veugelers et al. (2008) found that children who live in neighbourhoods with limited access to grocery stores containing reasonably priced produce eat fewer fruit and vegetables, have more fat in their diet, and are more likely to be overweight or obese. The cost of food in the community often determines the amount of healthy food that individuals can afford to buy.

Marketing. Children are spending several hours each day on computers, watching television and playing video games which provides many opportunities for companies to advertise their products to children (Elliot, 2008). Batada, Seitz, Wootan and Story (2008) found that 91% of food advertisements during Saturday morning children's programming were for foods or beverages high in fat, sodium, or added sugars, or were low in nutrients. The high quantity of unhealthy advertisements is problematic because marketing has a

clear effect on the food decisions of children. When choosing between an apple or a cookie, one study found that children were significantly more likely to choose an apple when it had a sticker of Elmo on it (Wansink, Just & Payne, 2012). The associations of popular children's characters with food is very important because from 2006 to 2008, food companies increased the use of cartoon and other children's characters to market to youth (Harris, Schwartz & Brownell, 2009). Moreover, most of the foods marketed with these characters failed to meet the United States' standards of snack foods that are suitable for young children (Harris et al., 2009). Although this study was conducted in the United States, the advertising concerns are still very relevant to Canadian children as many of the television stations they watch are American networks, and the video games or computer games they buy come from American companies (Vipond, 2000).

Public Policy Level. The fifth and final level of the SEM is the social structure, policy and systems level. This macro-level of influence is formed through local, provincial and/or federal policies or laws that regulate or support healthy action (Gregson et al.). The systems level ultimately determines the structure in which the other four levels exist in because the food that is allowed into the community and the manner in which it is presented to the entire population is derived from this level (Gregson et al.; Sobal & Bisogni, 2009). Consequently, this macro-level exerts an overarching influence on the four lower levels of the SEM.

Canadian Code of Advertising Standards. An example of some current federal health regulations are the guidelines for advertising food products to children, which apply to all Canadian media sources. The Canadian Code of Advertising Standards require that snack products are presented as snacks and not meals, the amount of food

being consumed in an advertisement does not exceed a single serving size, and that food products do not discourage healthy lifestyle choices or the consumption of foods that are recommended for increased consumption by Canada's Food Guide, such as fruits and vegetables (Advertising Standards Canada, 2012). While these regulations help to make ads healthier, they do not encourage the promotion of healthy food products through advertisements, nor do they discourage the promotion of foods that are not recommended by Canada's Food Guide (Advertising Standards Canada).

Overview. Each level of the SEM interacts with all of the other levels concurrently, so that if one is altered, it can subsequently modify the other four (Gregson et al., 2001). This dynamic nature needs to be taken into consideration when determining how to generate large scale behaviour change. The most effective way to produce change would be to focus on all five levels simultaneously, as initiatives that target a greater number of levels tend to be more successful (Gregson et al.). An environmental intervention does not involve individuals choosing to participate, but instead alters the environment within which individuals interact, requiring involuntary participation (French & Stables, 2003). These interventions are typically more successful because they automatically involve a higher proportion of the target population (Stokols, 1996). Therefore, if the level of impact is higher within the SEM, it is more likely to achieve behaviour change because it will include a larger number of critical environmental elements (Stokols).

School Food Environment

The school environment is a key constituent within the organizational level of the SEM that has the ability to reach the large majority of children based on the amount of

time students spend there (Leviton, 2008). Schools are also often able to reach the parents of the students by extension, and can therefore affect a considerable proportion of the community surrounding each school (Stewart-Brown, 2006). Additionally, the school environment contains several significant influential factors on food choices. Many students eat at least one meal a day with their peers at school, who have already been identified as very significant to the way children choose their food. Another interpersonal level of influence involves teachers and other school staff acting as role models for eating behaviour because children often look up to authority figures to model their behaviour after (International Union for Health Promotion and Education, 2008). Moreover, students learn a great deal of their nutrition and health education in the classroom, which affects their level of knowledge and in turn their attitudes and values, within the individual level of SEM. Overall, schools are recognized as important organizations to encourage healthy lifestyle behaviours in children.

Not only do schools have the ability to make a difference in children's eating behaviour, but there are many important reasons for schools to do so. Targeting nutrition in schools presents the opportunity to influence eating behaviour either before or during puberty, a critical growth period for children (Rogol, Clark & Roemmich, 2000). Eating healthily during this period helps children to develop physically and mentally (Rogol et al., 2000), and also fosters positive lifelong habits and attitudes toward healthy eating (Stewart-Brown, 2006). Linked to the fact that healthy eating helps cognitive development, nutrition is positively correlated with intellectual capacity and academic performance (Glewwe, Jacoby & King, 2001; Kleinman et al., 2002; Taras, 2005). One study found that grade five students with the best diet quality were 30% less likely to fail

their Provincial Elementary Literacy Assessment compared to students with poor diet quality (Florence, Asbridge & Veugelers, 2008). Therefore, there are several social, developmental and academic reasons for nutrition and healthy eating behaviour to be promoted within the school environment.

School Nutrition Initiatives

There is now a massive global effort using schools to reduce the prevalence of childhood obesity, however the health promotion initiatives vary widely, with countless different approaches and structures, and varying levels of implementation. School-based nutrition interventions that have been attempted in the past fall within different levels of the SEM, and their evaluations have found some approaches to be more successful than others.

Individual Level. Initiatives within the individual level of the SEM focused on educating students about nutrition and why it is important. Although there is some evidence to suggest that education-only programs can improve healthy eating behaviour in children (Holcomb et al., 1998; Pearson, Lambert & Barker, 2002), several studies suggest that these interventions are not effective at sustaining healthy behaviour change over the long-term. Three program evaluations found that knowledge regarding nutrition had increased after the program, but actual eating behaviour had not improved (Ellis & Ellis, 2005; Harrel et al., 1998; Moore et al., 2009). The Nutrition Education at Primary Schools (NEAPS) ten week program found that the food intake of 8-10 year old students was significantly healthier at the end of the program, but the results were much less considerable for children in disadvantaged areas (Friel, Kelleher, Campbell & Nolan, 1999). Planet Health implemented a new health curriculum in grades six and seven for

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two years (Gortmaker et al., 1999). The program saw positive results, but fat intake and obesity prevalence only decreased in female participants (Gortmaker et al.). Overall, these outcomes indicate that knowledge does not necessarily translate into action and also that using the same message or approach will not be successful for everyone. Therefore, interventions that are strictly educational and provide the same information to all students in the same way do not have a high likelihood of success.

Interpersonal Level. Initiatives within the interpersonal level of the SEM included some sort of personal interaction component to help motivate behaviour change through modelling or participation, rather than focusing just on education. These interventions typically incorporated parents or peers, while still providing nutrition education to students at the individual level as well. Results from studies of these programs generally showed success at increasing healthy eating behaviour (Baranowski et al., 2000; Bisset, Potvin, Daniel & Paquette, 2008; DeVault et al., 2009; Horne et al., 2004; Spiegel & Foulk, 2006; Stock et al., 2007; Vandongen et al., 1995).

The method that several of these effective programs used for students across grades four to six, involved health and nutrition homework assignments that required participation of parents (Baranowski et al., 2000; DeVault et al., 2009; Spiegel & Foulk, 2006; Vandongen et al., 1995). This approach engaged parents in what their children were learning about so that they could help to facilitate education by keeping nutrition messages similar within both the home and school environments. Another program that encouraged parents to work together with their children was the Little Cooks Parental Networks Program. This program held cooking workshops for both parents and grade five students and the workshops also included nutrition education (Bisset et al., 2008). The

workshops were found to be quite effective at increasing healthy eating behaviour, and enhancing self-efficacy which suggests that participants will be able to continue healthy eating behaviour (Bisset et al.).

The Healthy Buddies program had students from grades four to seven act as peer mentors to students from grade primary to three for 21 weeks (Stock et al., 2007). Both groups of students showed an improvement in their knowledge, attitudes and consumption patterns, indicating that this approach is highly successful among youth (Stock et al.). One program used both peers and parents in the interpersonal level and also used a more interactive educational strategy to impact the students at the individual level (Horne et al., 2004). This program involved students between the ages of 5-11 and the evaluation found a significant increase in healthy food intake both at school and at home, which was sustained to the four month follow-up (Horne et al.). This is a very important finding since behaviour change must transfer over to different environments if it is to truly change for the long-term (Larson & Story, 2009). Evidently, multicomponent and multilevel interventions seem to have a more prominent success rate.

Organizational Level. Organizational initiatives involve some form of modification to the school structure regarding the way that food and beverages are made available to students. Most include supplementary nutrition education for students at the individual level, and some programs encompass the interpersonal level as well either through school staff, parents or peers. The majority of school-based nutrition initiatives within this level were found to be effective at inducing behaviour change among students.

Six studies found that students were eating healthier because of the lower caloric and fat content in the food sold on school grounds (Harris et al., 1997; Hoelscher et al.,

2004; Mendoza, Watson & Cullen, 2010; Osganian et al., 1996; Perry et al., 2004; Williamson et al., 2007). Three of these interventions were particularly effective because they used school staff and food service staff to encourage students across grades three to eight to make healthy food choices throughout the school day (Hoelscher et al.; Mendoza et al.; Perry et al.). A similar program, Smart Bodies, also altered the school environment and used school staff to encourage healthier food intake among grade four and five students, but was found to be ineffective at generating behaviour change (Tuuri et al., 2009). However, the Smart Bodies program lasted a mere three months, while the other six successful programs lasted at least one full school year.

The Northern Fruit and Vegetable Program was implemented for 21 weeks and saw an increase in both healthy eating knowledge and behaviour among students in grades five to eight (He et al., 2009). However, this behaviour change occurred only at school and not at home (He et al., 2009). This reinforces the importance of including parents within the interpersonal domain, and four of the programs that did this were found to be successful since the observed dietary changes included higher intake of fruit and vegetables, and lower fat intake (Anderson et al., 2004; Caballero et al., 2003; Liquori, Koch, Contento & Castle, 1998; Reynolds et al., 2000).

The HIGH 5 program measured the food intake of grade four students and their parents, but only students maintained the improvements at the one year follow up (Reynolds et al., 2000). Similarly, Dollahite et al. (1998) evaluated a program by assessing the nutrition knowledge and food choice behaviour in parents, as well as students from grades two to five. The six month program made the school menu healthier and encouraged parents to come to the school to eat lunch with their children (Dollahite et

al., 1998). The evaluation observed improved knowledge, intent and eating habits in students, and slight improvements in parent eating behaviour, but not enough to be considered statistically significant (Dollahite et al.).

The findings from Dollahite et al. (1998) and Reynolds et al. (2000) suggest that behaviour change in adults is more difficult than in children. However, the Cookshop Program (Liquori et al., 1998) and PATHWAYS (Cabellero et al., 2003) insinuate that hands on approaches where parents work together with their children, such as cooking classes, may be quite effective in changing the eating behaviour of adults. Cooking self-efficacy was enhanced with these two programs, meaning that the participants were more likely to continue healthy eating behaviour because they had the ability to cook healthy food on their own even after the program came to an end (Cabellero et al.; Liquori et al.).

The TEENS program, which lasted two years, had peer leaders from grade seven compliment the healthy changes in the school environment instead of parents, and the results of this study found improvements among the students from the entire elementary school (Birnbaum, Lytle, Story, Perry & Murray, 2009). However, not all of the students participated in the peer leader component, and the evaluation illustrated that students with peer leaders had the largest improvements in healthy eating compared to students who were only affected by the school environment (Birnbaum et al., 2002).

Overview. Interventions were generally more successful if they were higher up within the SEM, addressed more levels of the SEM, and if they were of longer duration. The results of short-term programs, defined as four months or less, repeatedly found that knowledge about healthy eating had improved, yet eating patterns remained the same (Harrell et al., 1998; Moore et al., 2009; Tuuri et al., 2009). Healthy eating initiatives

need to recognize that behaviour change is a time-consuming endeavour. Knowledge did not translate into action after these three programs took place, suggesting that interventions using only educational methods are less likely to establish healthy behaviour. Furthermore, strategies and messages should be tailored to different populations in order for interventions to achieve success among all participants (Friel et al., 1999; Gortmaker et al., 1999).

When the level of impact is higher within the SEM, or incorporates a higher number of levels of the SEM, it is more likely to achieve behaviour change because it will include a greater environmental scope, and therefore a wider range of behavioural influences (Stokols, 1996). Policies require involuntary participation from individuals by altering the environment in which individuals interact (French & Stables, 2003), which is why a policy can be a useful tool for implementing health promotion strategies (Gregson et al., 2001). In the school setting this involves directly integrating the policy into the social and physical environments (Hobbs, 2008; IUHPE, 2010). Most of the organizational level interventions were found to improve healthy eating among students simply by using policy to create access to healthy food while minimizing access to unhealthy items. These initiatives were even more effective when food service staff encouraged students to eat healthier, or when school staff rewarded students for making healthy choices (Hoelscher et al., 2004; Mendoza et al., 2010; Perry et al., 1998). Evidently when the interpersonal level of the SEM is complementary to the organizational level, programs have a higher likelihood of success. However, if the policy is not incorporated into all elements of the school environment, or implemented fully across the levels of the SEM, then its overall impact may be restricted.

Few of the studies separated food intake at school and at home, but of those that did, only one found that behaviour change occurred in both places (Horne et al., 2004). These evaluations typically found that students were eating healthier at school through the nutrition intervention, yet their eating habits at home were mostly unaffected (He et al., 2009; Perry et al., 1998). Clearly external influences on food choices and eating habits can differ between surroundings for the same individual, and that is why it is crucial to include other environments and social groups in healthy eating initiatives, such as parents or family members. It is also essential to have all levels of the SEM supporting one another within a school based initiative, which includes individual education, interpersonal interactions with peers, parents and staff, and a healthy school food environment.

Chapter Summary

Food decisions are made by individuals, but they are more complex than a personal choice because they are frequent, multifaceted, situational and dynamic. Food decisions can change with age, location, new people and different meals of the day. There are a variety of factors that have the ability to influence the eating behaviour of children. The literature identifies some of the major influences to be: parents, because of their typical role in controlling the food at home; preferences, because children tend to choose food primarily based on taste; and schools, because children spend a great deal of time there and learn most of their nutrition education there. However, there are many other factors that influence children such as marketing of food products and peer pressure.

Establishing healthy behaviours early in life means that the behaviour is likely to continue into adulthood, and healthy eating in children helps foster growth, development,

and academic success. Schools are frequently targeted for health promotion initiatives, including healthy eating initiatives, because of their ability to reach a large number of children at once. The most successful school-based nutrition initiatives done in the past included a greater number of levels from the SEM, all of which supported the same healthy eating messages. Programs that were effective included individual education, interpersonal interactions with peers, parents and staff, and a healthy school food environment. Therefore, it is important to assess whether the Food and Nutrition Policy for Nova Scotia Public Schools utilizes the other levels of the SEM to promote healthy eating behaviour, and whether the levels of the SEM collectively support the overall intent of the policy.

Chapter 3: Methods

This study explored student, parent and school staff perceptions of the school food environment and the Nova Scotia School Food and Nutrition Policy. More specifically this study sought to understand how these three groups valued healthy eating within the school environment as well as beyond the school, with the goal of understanding the level of awareness and acceptance for the Food and Nutrition Policy. In addition, the researcher examined the roles and influences that other factors such as beliefs, family members, peers and the community environment might have had on student eating behaviour within the school setting. This section describes the methodology that was used for the research study and includes the paradigmatic approach, study design, study components, data collection, data analysis, ethical concerns and quality of the study.

Paradigmatic Approach

A paradigm is a basic worldview or belief that guides the research process (Guba & Lincoln, 1994). The paradigm sets the framework for research and determines the methods through ontology, epistemology and methodology, because the paradigm will define what is within the limits of legitimate inquiry (Guba & Lincoln). The paradigmatic strategy provides direction for decision making and action of the researcher (Patton, 2002). However, the justification for the methods used also stems from the nature of the research question itself, and the purpose of the research (Crotty, 1998). The strategy by which each method is applied will produce different products and results (Richards & Morse, 2007). This means that similar methods can be used for diverse research questions as long as the methods are justified by the paradigm of inquiry and overall objectives of the question.

Constructivism. The paradigm that this study was based on was social constructivism. The position of constructivism is that reality is dependent on mental activity (Jonassen, 1991). This paradigm states that all individuals construct their own realities through interpretations of external experiences, and perceptions are never in fact an absolute reflection of the external environment (Jonassen; Willig, 2001). These interpretations vary for each individual based on the social and historical experiences that they have encountered during their lifetime (Willig). According to constructivism, truth is not absolute, but it is comprehended as the consensus on the most informed and sophisticated truth that a group of people collectively construct at any given moment (Labonte & Robertson, 1996). Therefore, meaning is not discovered, but created by individuals, and can change for each person (Levy, 2006).

Constructivism allows the researcher to explore the views and perceptions of different participants within the same context, while recognizing that they will likely experience the same situation in different ways (Levy, 2006). Under this paradigm, the researcher seeks a complexity in viewpoints, rather than looking for one narrow idea (Creswell, 2007). The goal is to understand how thoughts, meanings and values are influenced by the interactions of individuals, within their own social and historical context (Willig, 2001). Constructivist researchers are also interested in the co-construction of knowledge between the researcher and the object being studied (Crotty, 1998). This co-construction is based on the particular worldviews, beliefs and experiences of both the researcher and participant, and develops through the process of investigation, discussion and analysis, in a cyclic and continual process (Labonte & Robertson, 1996). For example, in this study some of the participants did not fully understand what the

researcher meant when she asked if they had any barriers to eating healthily, so the researcher gave some examples that applied to herself. Using that information from the researcher, the participants were then able to state the barriers that they experienced within their own lives.

Ontology. Ontology asks about the nature of reality and its characteristics (Creswell, 2007). Constructivism takes a relativist approach to this question (Guba & Lincoln, 1994) and comprehends the main characteristics of reality to be subjective and multiple (Creswell). There are many realities which are formed through numerous mental constructions (Guba & Lincoln). These constructions are based on social experiences that are both local and specific, and historical and cultural in nature (Guba & Lincoln; Patton, 2002). In this perspective, reality is not governed by universal laws because it is not absolute (Labonte & Robertson, 1996). According to relativism, differing constructions of truth are not considered to be more or less true, but are instead more or less developed, sophisticated and informed (Guba & Lincoln; Labonte & Robertson). Knowledge is closely linked to the time and place in which it is developed, and truth is the result of shared social constructions of the same phenomena (Annells, 1996). For example, the participants in this study believed nutrition and health were very important because obesity is now a major problem in Nova Scotia. The participants stated that a few decades ago nutrition was not as big of a concern as it is now because the population was not facing the same health issues that it faces today. Therefore, the time and place in which this study was conducted have affected the results.

This study involved three participant groups, who likely shared some of the same social, cultural and environmental experiences because they were from the same

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community. Although the participants may have encountered similar socio-ecological influences and be comparable in many ways, relativism recognizes that individuals interpret phenomena in their own way due to unique and specific lived experiences (Levy, 2006). For example, one adult participant grew up with access to healthy food at any time because his/her parents owned a grocery store, while another adult participant grew up with very limited access to food because he/she grew up in a convent with his/her mother. Perceptions on the ease of eating healthily were very different for these two participants, and their backgrounds may have played a role in their varying opinions.

  Epistemology. Epistemology involves the relationship between the researcher and research interest, and frames what can be known about the world (Guba & Lincoln, 1994). It is concerned with the nature, scope and basis of knowledge and provides the foundation for deciding whether the knowledge generated from data collection is both adequate and legitimate (Crotty, 1998). Under the constructivism paradigm, knowledge is considered to be both transactional and subjectivist (Guba & Lincoln). Knowledge is transactional in the sense that it is created through the interaction between the researcher and participants, not just from one of those parties (Guba & Lincoln). Knowledge is subjectivist in the sense that the findings are not merely a collection of external, pre-existing facts, but result from the interactive nature of the inquiry process, as well as the interpretations of the inquiry process (Guba & Lincoln; Labonte & Robertson, 1996).

  In this study, knowledge was co-constructed through qualitative interactions between the researcher and participants. This co-construction of knowledge involved the participants expressing their perceptions of the school food environment, the way that the school can influence student eating behaviour, and the Food and Nutrition Policy. Using

the five levels of the SEM as a lens, the study examined the way these perceptions were believed to influence children's eating habits and the food provided within the school setting. The researcher then analyzed and interpreted the responses in an effort to understand the constructions in a comprehensive manner. The goal of this co-construction was to make sense of the participants' varying realities of the school food environment and the policy according to their own social-ecological environments.

Methodology. Methodology is concerned with the way that the researcher discerns what he or she believes to be known (Guba & Lincoln, 1994). It determines how the researcher operates as a research instrument (Labonte & Robertson, 1996), and the way in which the researcher approaches data analysis (Guba & Lincoln). The methodology chosen for this study, based on the objectives of the research, the selected paradigm, and the ontological and epistemological beliefs, was social constructionism using constant comparative analysis. Social constructionism states that knowledge cannot be obtained by simple observations, but that the nature of reality depends on varying accounts of a phenomenon that are grounded in historical and cultural experiences (Burr, 2003). Constant comparative analysis works with social constructionism by breaking down codes and themes to assess where the differences in the accounts of a phenomenon arise (Dye, Schatz, Rosenberg & Coleman, 2000; Hewitt-Taylor, 2001).

Additionally, social constructionism states that perceptions result from social interactions with different people in many environments (Burr, 2003), and is therefore suited to the SEM, because the SEM looks at the way individuals are affected by the people in their lives and the environments in which they live (Gregson et al., 2001). Furthermore, this methodology seeks to understand the meanings that result from the

process of social interactions, which is important because these meanings ultimately shape the actions, such as food decisions, that individuals take within specific environments (Annells, 1996; Burr). The goal of this study is to understand how the overall school food environment and Food and Nutrition Policy are perceived to be embedded within larger positions, networks and relationships of the SEM according to the participants. This theoretical mind-set recognizes that self and the environment exist in a reciprocal relationship and that interpretive processes modify knowledge and meanings that are constructed when individuals are in different situations and contexts (Annells, 1996; Burr, 2003).

Methods. This study was conducted on one elementary school through a focus group with grade five students, and face-to-face, semi-structured interviews with parents of students at the school and school staff members. The students, parents and school staff members represented three different school stakeholder groups, and were included because literature has shown that for policies to be effective and for behaviour change to occur, there needs to be support from multiple stakeholders (Stokols, 1996). Grade five students were sampled because at this age some of the curriculum outcomes include: knowing how nutrients affect the body; being able to make healthy balanced food choices; and understanding how additives impact the nutritional value of food (Nova Scotia Department of Education, 2003). Grade five students are expected to have a basic understanding of nutrition and know how to apply that knowledge when choosing food to eat. However, the SEM states that there are numerous influences outside of knowledge level that impact behaviour (Stokols, 1996), so other social influences within the school

environment need to be examined to determine how successful this policy can be at supporting healthy eating behaviour in students.

It is also known that children's eating habits at the elementary school level are still influenced heavily by their parents and guardians, mainly through deciding which foods the children have access to (Yuasa, et al., 2008). Although parents and guardians have less control over the school food environment, some can still exert a large influence through the food they send with their children to school, and their input on school activities and initiatives. Parents and school staff were also included because without their acceptance of the policy, and belief that schools need to provide healthy food, a fully supportive environment for making healthy eating choices cannot exist (Stokols, 1996). This study sought to understand whether the Food and Nutrition Policy is supported by these groups, and how much of a role they see the school as having in impacting the developing eating habits of children.

Study Design

School Selection. Purposeful sampling permits the researcher to select information-rich cases centered on the issue being studied (Patton, 2002; Russell & Gregory, 2003). The school for this study was purposively selected from the Halifax Regional School Board (HRSB) based on the following criteria. Firstly, the school needed to have both a breakfast program and a lunch program, so that the participants could discuss food that the school provides to students on a regular basis. Secondly, the neighbourhood in which the school came from was preferred to be relatively diverse in terms of socio-economic status and cultural backgrounds, if possible. The reason that this

type of neighbourhood was preferred, was to hopefully get participants from a wide variety of backgrounds and experiences that might produce very diverse perspectives.

Possible schools were determined through a meeting with an employee of the HRSB, who shared his/her knowledge of the breakfast and lunch programs implemented across the school board at the time. Eight elementary schools were identified during the meeting. From the possible schools, the school was chosen as one with a lower level of implementation of the Food and Nutrition Policy for Nova Scotia Public Schools. The level of implementation was determined by the data collected from Children's Lifestyle and School Performance Study (CLASS II), which the researcher was a part of. CLASS II studied elementary schools across Nova Scotia, and a portion of the research project evaluated the extent to which each school had various policies and programs in place (Applied Research Collaborations for Health, 2012). Through the data collected from CLASS II, an overall score was given to each of the eight schools based on how many of the twelve directives from the Food and Nutrition Policy the schools reported to be applying.

The aim of the study was to discover some of the barriers and challenges to full-scale implementation of the policy, but also to see what factors have led to successful implementation of these directives, so a lower level was desired as opposed to the lowest level of implementation. Three schools at the low to middle range of the score spectrum were ultimately chosen as top candidates for this study, and the rest of the schools were ranked behind those three. More than one school was selected because the school itself had to voluntarily agree to participate in the study and it was unknown how many schools would be contacted before one agreed to participate. Although data from CLASS II were

used, and the grade five students of CLASS II were in grade six at the time of this study, the focus was on the overall school environment and the age group of grade five students in general, not the specific students who participated in CLASS II.

Recruitment. The researcher sent a formal request to the school principal via email to ask for the school's participation and followed up by phone several days later. The email contained a copy of ethics board approvals granted from Dalhousie University and the HRSB, and an outline of what was being asked of the school and how the school might benefit (Appendix A). The phone conversation between the researcher and school principal allowed for further clarification of what the school would be required to do if it took part, and resulted in the principal giving consent for the school to participate in the study.

Working with the school principal, a day was selected for the researcher to come into the school to recruit participants. The researcher spoke to each grade 5 class in the school for approximately 15 minutes to explain what the study was and what they were being asked to do (Appendix B). Consent forms (Appendix C) were handed out to each grade 5 student containing the same information that was just presented by the researcher, but in more detail. In addition, a second consent form (Appendix D) was provided for each student to take home to their parents or guardians, in attempt to recruit parent participants. Also, the principal organized a brief staff meeting at the end of the school day for the researcher to present and explain the study to all the school staff (Appendix E). A consent form (Appendix F) was given to all staff who were able to attend, and a few were left for the staff members who could not stay for the meeting or were absent that day. All of the staff and students were informed that the researcher would return after a

two week period to collect the completed consent forms and then begin contacting the participants to start the interviews.

After collecting the consent forms, the researcher was satisfied with the number of signed consent forms from the grade 5 students and school staff. However, there were only 2 signed consent forms returned from the parents of grade 5 students, so the principal was asked for further assistance and was given permission to give out the researcher's email address and phone number to potential parent participants. The principal went ahead and emailed several parents who were involved in various school groups or activities and suggested they contact the researcher about this study. Parents began to contact the researcher by email and by phone, and from there snowball sampling occurred as parents passed along the study information to one another. The desired number of parent participants was initially set at six to hopefully allow for a variety of perspectives, and this number was eventually reached through this process. The school principal was instrumental in the overall recruitment process and this study would not have been successful without the principal's patience and assistance.

School and Community Demographics. The Halifax Regional School Board includes Halifax, Dartmouth, Bedford and Halifax County (Halifax Regional School Board, 2012). It is the largest school board in Atlantic Canada and has 137 schools that serve approximately 51,000 students (Halifax Regional School Board). This study looked specifically at an elementary school in the city of Halifax, and there were 91 schools with grade five classes to choose from (Halifax Regional School Board). The population of Halifax was 372,679 in 2006, and this was spread over a region of 5,490.18 km^2 (Statistics Canada).

As already noted, the school was preferred to be located in a diverse neighbourhood, and census data from 2006 confirms that the area is relatively diverse in terms of cultural backgrounds, family types and socio-economic status. Relative to the provincial average for Nova Scotia, the population of the selected community has nearly double the proportion of immigrant residents, and a lower proportion of Canadian citizens (Government of Nova Scotia, 2006). While the percentage of married couples is decreasing and the percentage of lone-parent families is increasing across Nova Scotia, these changes are occurring at a greater rate within the school's neighbourhood leading to a higher variance in family types. From 2001 to 2006 the number of lone-parent families in Nova Scotia increased by 14% while the number of lone-parent families in the neighbourhood of the selected school increased by 33% (Government of Nova Scotia). Also, in 2006 the percent of married families in the school region was 66%, but the Nova Scotia average was higher at 70% (Government of Nova Scotia).

The average income of individuals in the school neighbourhood is slightly higher than that of the entire province, $37,000 compared to $32,000, yet the selected community has a higher proportion of families with low income status than that of Nova Scotia, 10.8%, compared to 10.3% (Government of Nova Scotia). This difference indicates that socio-economic status varies widely within this community because there would need to be a significant number of households with a higher income status in order to bring the average income above the provincial average.

Participant Demographics. This study recruited 23 participants from the elementary school in total. There were 6 students (5 male and 1 female), 6 parents (1 male and 5 female), and 11 school staff members (2 male and 9 female) who took part. The

study did not require that participants disclose any specific demographic information, but many spoke about some of their demographics during their interviews anyway. Several participants from all three groups spoke about having a particular cultural background when they discussed their own families, so it was evident that there was some cultural diversity among participants. Overall, the family dynamics that participants described were very diverse as well. Participants mentioned their current family situation to be: married; separated; re-married with step-children; children, parents and grandparents in the same household; single child families; and multiple child families. Again it was not required to reveal any information about socio-economic status, but many of the parent and staff participants alluded to their current status. Some spoke about either the difficulty or ease in purchasing the food that they wanted based on price. Also, several participants mentioned their occupation, or their spouse/significant other's occupation, and these ranged from being unemployed to working as a lawyer. Ultimately, the participants seemed to be quite diverse in terms of their demographic information.

Study Components

A focus group that lasted just over 60 minutes was conducted with the six student participants, and one-on-one semi-structured interviews of 30-75 minutes in length were conducted with the six parents and eleven school staff participants. Despite being asked the same number of questions, the interview times varied because some participants spoke a great deal more for some of the questions. As a thank you for participation, students were given a ten dollar gift certificate to Sport Chek, and parents and school staff were each given twenty dollars in cash. The gift certificates and money were given out prior to beginning the focus group or interview so that it did not affect participants'

willingness to respond in case they were not completely comfortable answering any of the questions.

Question Guide. A semi-structured question guide consisting of several open-ended questions with probes was predetermined for both the focus groups and interviews (Appendices G, H & I). The guide was developed based on the information desired from this study, a review of the literature, and through consultations with more experienced researchers. Each question focused on a different topic or idea, and was open-ended to elicit a broad range of responses unique to each individual and their experiences. There were several probes for each question to elicit more in-depth responses and further understand the participants' constructions. This design allowed for the participants to share as much or as little as they wanted for the specific question or topic, while still addressing the research questions (Rabiee, 2004). Although there was a specific order to the questions in the guide, flexibility was possible, so the research often followed the direction in which the participants wanted to take the conversation and probed spontaneously depending on the responses given (Wuest, 2007). Some of the topics for the questions overlapped, so sometimes questions were asked in a different order when participants brought up different points and ideas, but all of the same questions were eventually asked to each participant.

The use of language was critically evaluated in the development of the guide because it is recognized that certain wordings may limit the possible findings of the research (Willig, 2001). People often attach different meanings to the same words, and this can result in participants having different interpretations of the questions that they are being asked (Willig). The use of specific terms is essential to the meaning that is created

during the interaction between the researcher and participant (Fontana & Frey, 1994), and

so the interview script was chosen very carefully, recognizing that language choice and

the interaction with each participant will ultimately frame the responses given (Willig).

The script was even modified as the researcher conducted the interviews because it

became evident that participants were interpreting certain words differently than intended.

For example, the researcher used the word 'support' with the purpose of asking whether

or not participants believed in an idea because they saw it as beneficial, but many

participants thought the question asked whether they supported that idea with their own

actions. After a couple of interviews, the question was reworded to remove the word

'support.' Also, there were three separate question guides because there were three

distinct groupings of participants. The questions covered the same broad topics, but

differed with respect to the positions that the three groups held with the school, as well as

the level of language used. The language was at a grade five reading level for the grade

five students, and was at a grade eight level for both the parents and school staff.

Although the questions were all open-ended in nature to elicit a broad range of

responses, specific information was collected through the focus groups and interviews.

The researcher sought to find out what each participant understood about food and

nutrition and whether or not this topic is important to them. The questions tried to

recognize many of the factors that influence how the participants choose the food they

eat, or provide for others to eat. Each group was asked about what they thought of the

school food environment and whether there is anything they would like to be changed

within it. The parents and school staff were asked about their awareness on the Food and

Nutrition Policy and if they did know about it, they were asked if they would make any

changes to it. Lastly, the researcher asked participants if they had any suggestions or recommendations for further strategies to improve nutrition in children.

Data Collection

The focus group held with the grade five students took place in the elementary school breakfast room, which was a completely private and very quiet room. Data collection with the students occurred at the very beginning of the school day as requested by the school staff. The researcher offered to hold the focus group either at lunch time or after school so as not to take the students out of class, but the principal and grade five teachers agreed that meeting with the students during the school day was appropriate and easier than trying to arrange a date for all of the students to meet after school.

All of the interviews done with school staff were held at the elementary school in a private room. The rooms used were classrooms, offices, the resource room, and other rooms that were not in use at the time of the scheduled interview. Almost all of the interviews were held at the end of the school day, but one was held during the school day when that particular participant had some time available. The elementary school kindly allowed the researcher to hold some of the parent interviews at the school as long as they were done during the hours that staff were in the building. Four of the parent interviews were done at the school, either in the breakfast room or in other private rooms. One parent interview was done in a private office at Dalhousie University, and another parent interview was held in a conference room at the participant's place of employment.

All of the interviews were audio-recorded with the participants' consent using an audio-recorder. Consent for taping the interviews was indicated on the consent form by each participant, and the researcher verbally confirmed this with every participant prior to

the interviews and focus group as well. The researcher took field notes before and after the focus group and interviews, as well as throughout the data analysis process to record all opinions, thoughts, feelings and biases toward past and prospective responses. These field notes were taken so that the researcher could remain reflexive and be aware of her own influence on the data that was collected since the data was co-constructed (Patton, 2002; Seale, 1999). Field notes were taken again during data collection and during transcription of the interviews to document nonverbal cues from participants such as posture, looks, gestures, and certain audio cues such as tone, silences and hesitations. All of these cues significantly contribute to the meaning behind responses given by the participants (Fontana & Frey, 1994). These cues helped to show points that participants really emphasized during the interview, and also revealed the true meaning behind comments that could be misconstrued when reading transcripts. For example, an eye roll helped to illustrate a sarcastic remark that was to be taken negatively, not positively.

Member Checks. Member checking occurs when data, interpretations and conclusions are tested with members of the groups from whom the data originally came from (Lincoln & Guba, 1985). This technique was used both during the focus group and interviews, and during data analysis. During the focus group and interviews, interpreting questions were asked in order to clarify the meaning behind some of the more ambiguous responses given by participants (Russell & Gregory, 2003). For example, one participant stated that his/her eating habits were affected by how prepared he/she was in terms of the food available in the house. The researcher presented to the participants how responses were understood directly after the response was made, so that the participants could confirm whether or not the interpretation was accurate. The participants were able to

clarify the meaning behind the response and explain themselves in more detail so as to eliminate any confusion in what they were trying to convey (Patton, 2002). This participant clarified that being prepared meant having food available in the house, taking food out of the freezer ahead of time for meals, and having food to pack for lunches.

During data analysis, member checking occurred again to ensure that the researcher's interpretations accurately reflect the deeper meaning of participants' viewpoints and constructions (Patton, 2002; Russell & Gregory, 2003). The parents and school staff participants had the option of being contacted for member checking with the preliminary results. Those who consented to this were provided with a summary of the key points taken from their own interviews, and had the chance to give feedback regarding the accuracy of the summary. The researcher heard back from most of the participants, and a few corrections were given from two of the participants.

Data Management

The audio recordings were transcribed verbatim in an ongoing process as the focus groups and interviews were carried out, and all identifying information that may be linked to the participants was removed. All of the transcripts were input into NVivo, a qualitative data analysis software program, to help with organization and management of the large amount of data during analysis. Everything stored on the computer was password protected and all of the consent forms, print copies of the data, and digital recordings were kept locked in a Dalhousie office. The print copies used by the researcher during data analysis were versions that have been cleaned of all identifiers, and were only used in a private location so that other people would not have access to them.

Data Analysis

Analysis of the data occurred in an inductive manner, which involved coding the data, generating organized themes and constant comparative analysis within and between the participant groups (Burr, 2003; Dye et al., 2000). Coding and analysis began once the focus group was complete, since it served as the foundation for further data analysis (Miles & Huberman, 1994). Analysis was continual throughout the data collection process, and involved a number of revisions to the interpretations made and themes generated as more data was collected and added (Dye et al.; Miles & Huberman). The subjective constructions of nutrition, the school food environment, influences on student eating habits, and the policy were constantly redefined as analysis was carried out.

Analysis was an iterative and cyclic process, with the aim of generating some sort of consensus regarding the way in which the food environment was socially constructed (Annells, 1996). All of the transcripts were read and re-read several times to gain familiarity with the data and its range and diversity (Ritchie & Spencer, 2002). Open coding was done on the transcriptions to discern all possible meanings of the data (Burr, 2003). This process involved the researcher selecting the words that expressed what she believed to be indicated by the data. Subsequently, selective and hierarchical coding was done to arrange the original codes in a more structured and thematic way (Ritchie & Spencer). Open codes discussing similar ideas were grouped together into categories, such as the cost of food, and then the categories were arranged within larger hierarchical codes, such as barriers to healthy eating. Comparative analysis was then carried out to examine the themes within and between each of the three participant groups (Labonte & Robertson, 1996). The researcher looked at each category and hierarchy to assess where

participant perspectives were similar or different. This process helped the researcher develop a deeper understanding of the data, while linking some of the codes, categories and themes together across the dataset. Triangulation also took place, to check for consensus of generated themes and interpretations (Russell & Gregory, 2003). The thesis supervisor performed open coding with a couple of transcripts to see whether the same codes and themes were observed. Additionally, the thesis committee looked at the researcher's codes and themes as they developed to ensure the links between concepts made sense as the researcher defined them.

Ethics

An ethics application was submitted to the Dalhousie Research Ethics Board prior to recruitment and approval was granted in October 2011. A second ethics application was submitted to the Halifax Regional School Board and approval was granted in September 2011.

Free and Informed Consent. The researcher went to the school to present and explain the proposed research to school staff and grade five students face-to-face, so that any immediate questions or concerns could be addressed right away. Consent forms were given to all of the potential participants by the researcher during this time, and additional consent forms were given to the grade five students to bring home to their parents or guardians. Due to their age, grade five students are not considered to have legal competence, which is why consent was needed from a parent or legal guardian before they could give their own assent for participation (Paulson, 2006). Two weeks were allotted before consent needed to be given so that each individual could review the purpose of the study and truly consider whether or not they wanted to participate, while

also giving the children time to get any forms signed. Furthermore, the researcher's contact information was included on the information forms so any questions or concerns that individuals had before giving their consent could be addressed directly by the researcher.

Written consent was obtained from each participant in advance of the interviews and focus group, but before commencing any of the interviews the researcher went over some of the key points that were in the consent form again: participants would remain as anonymous as possible to anyone reading the results if any quotations were used from the interview; and that they did not have to answer any question that made them feel uncomfortable for any reason. Consent for participation was re-confirmed verbally with each participant, including consent for the session to be audio-recorded. In addition, participants were asked if they had any final questions or concerns before starting the interview, and were encouraged to ask questions during the interview if any came up. Once these steps were completed, the focus group and interviews began.

Power Imbalance. A power imbalance that can exist between the researcher and participants was an ethical consideration for this study, more specifically for the student group. This imbalance exists due to differences in age, education level, and the fact that the researcher came from outside the school's community. There were also differences in gender and ethnicity, which may have added to the disparity as well. It was emphasized to the students that choosing to participate or not participate had no bearing on their grades or any other school related activity. All three groups were reminded that they are the only true experts of their own opinions and experiences, and that there are absolutely no right or wrong answers. This upholds the constructivist paradigm, and helps to reduce any

power imbalance that may have existed. Furthermore, the language level for the question sets differed depending on the group. The questions for the grade five students were at a grade five reading level, while the questions for the parents and teachers were at a grade eight reading level.

      Privacy and Confidentiality. Privacy is a fundamental human value and thus the access, control and dissemination of personal information are key considerations for ethical research (Canadian Institutes of Health Research [CIHR], Natural Sciences and Engineering Research Council of Canada [NSERC] & Social Sciences and Humanities Research Council of Canada [SSHRC], 2010). Permission to audio record the interviews and focus groups was confirmed twice; written and verbally. All of the interviews took place in a private location so that no other individuals could see or hear the interviews as they occurred. Phone calls occurred in the middle of two of the interviews, but the audio-recorder was turned off during the calls to maintain the privacy of the participants as the calls were not related to the study. Furthermore, any names, locations or other personal information that might compromise anonymity were removed from the data as much as possible during transcription. All of the participants were assigned a number, which was the only means of identifying them in the transcriptions, data analysis and quotations. The participant names that were linked to those numbers were only on the consent forms, which are stored in a locked office at Dalhousie University. The original audio files were also stored in the locked office, but separately from the consent forms. The thesis supervisor had access to selected transcripts for triangulation purposes, but restricted their use to private locations only, to ensure privacy and confidentiality of the data.

One key issue surrounding privacy and confidentiality involved the student focus groups. Many students participated at the same time and heard the other group members' responses. Additionally, the students all came from the same school and knew each other. Therefore, there was no anonymity between the focus group participants. It was requested that the students not share the responses of other focus group members after they had left the focus group out of respect for one another's right to privacy and confidentiality. Furthermore, the staff interviews took place at the school and many of the staff likely knew which members took part. This might have impacted the extent to which the staff members were willing to be critical during the interviews. The same is true for the parent participants when interviews took place at the elementary school because some of the staff members saw those parents with the researcher. However, it was made explicit to both the parents and staff that their confidentiality would be protected as much as possible in terms of the interview content.

Quality

Quality in qualitative research is concerned with evaluating the results put forward to determine whether or not they have any merit to them, and whether the claims are useful for the problem they are related to (Marshall & Rossman, 2010). The quality of a study is evaluated by the trustworthiness of the research design and data analysis process (Seale, 1999). The four components of trustworthiness are credibility, transferability, dependability and confirmability (Patton, 2002).

Credibility. Credibility deals with establishing confidence in the value of truth for any given research study (Lincoln & Guba, 1985). Self-awareness of the researcher is essential and will enhance credibility through rich descriptions of steps taken during the

research and data analysis processes (Koch, 2006). These field notes and memos helped to expose any biases held about what the results may potentially be, and made the researcher aware of how these beliefs may have affected the research process (Patton, 2002). Reflexivity is the awareness of the researcher's contribution to the construction of meaning through her interactions with participants, and an acknowledgement of the impossibility of remaining outside of the subject matter while conducting research (Willig, 2001). Reflexivity was important because it made the researcher remember that her beliefs may have been brought into the interviews, and made her work to avoid basing interpretations on those beliefs during data analysis, as much as possible. Additionally, the question guides were worded as neutrally as possible, and word choice was critically assessed prior to data collection. However, the researcher tried to note the language used and how it may have affected the responses, while always remembering that the interactive nature of data collection means the researcher will inevitably contribute to the results.

One of the most important techniques for enhancing credibility and truth value of qualitative research is member checking (Lincoln & Guba, 1985; Seale, 1999). Member checks were done during the focus groups and interviews as well as afterward, so that the researcher could check to see if social constructions and responses were interpreted correctly. Additionally, negative case analysis was carried out, meaning that the researcher looked for elements in the data that seemed to contradict other participant constructions, and looked for differences in perspectives across the three participant groups (Mays & Pope, 2000). This process occurs naturally within constant comparative analysis and helped to refine the analysis to really understand participant perspectives and

connections between concepts (Annells, 1996; Burr, 2003). Lastly, triangulation was used

to enhance credibility (Patton, 2002). Data from some of the interviews was read and

analyzed independently by another person, to verify that another reader interpreted the

responses in a similar way, thus giving the interpretations and overall results greater truth

value (Patton).

Transferability. Transferability is concerned with the extent to which the

findings can apply to other contexts or other subjects (Lincoln & Guba, 1985). However,

qualitative research is not looking to generalize the results to the greater population, but

instead aims to provide a thick and detailed description of the participants, context and

overall research process, so that others can decide whether or not the findings apply to

their own context or situation (Koch, 2006; Lincoln & Guba). Everything done during the

entire research process was described and explained in detail by the researcher, so that the

rationale for every step was transparent. Also, descriptions of the participant and

community demographics were provided, including gender, family type, and the

environment surrounding the selected school. The aim was to illustrate the context of the

study in vivid detail so that outsiders can get a better sense of when these results could

apply to other situations.

Dependability. Dependability is different from consistency in replication because

consistency assumes contexts are unchanging and that study designs do not induce

changes in the phenomena of study (Lincoln & Guba, 1985). Qualitative research

recognizes the importance of context within research and realizes that when research is

done at a different time or location, even if the exact same steps are taken, the resulting

data could be different from the original results because of the change in context (Koch,

2006). The best way to establish data that are dependable is to have findings that are auditable (Koch; Lincoln & Guba; Seale, 1999). Data analysis is auditable when another investigator can clearly follow all of the decisions made by the researcher in the study, or when another researcher could arrive at very similar conclusions given the researcher's data, perspective and situation (Seale). Auditable findings have been achieved through extensive memos documenting the researcher's thoughts and feelings throughout data collection and data analysis. These memos recorded all of the decisions and interpretations made, and the reasoning behind each decision and interpretation.

Confirmability. Confirmability is concerned with how much of the results include biases, motivations or perspectives of the researcher (Lincoln & Guba, 1985). By operating within the constructivist paradigm, the researcher was aware of her role in creating the research findings, but still worked to be aware of how her own thoughts and ideas were impacting the research process and data analysis (Crotty, 1998). Reflexivity was continuously practised by the researcher, and the memos and field notes used for dependability were used for confirmability as well. These memos allowed the researcher to always remain conscious of biases during data analysis, to avoid making interpretations based on them as much as possible. In addition, direct quotations from the participants were used to support the interpretations made by the researcher. Lastly, analyst triangulation was used for confirmability as well. If multiple readers analyze the data and generate very similar themes to the ones found by the researcher, it shows that the researcher's biases are likely not included in the findings (Patton, 2002).

Chapter Summary

This study was a qualitative study of one elementary school, with grade five students, parents of students at the school, and school staff members. Under the constructivist paradigm, the methodology chosen was social constructionism using constant comparative analysis. The school was chosen because it had both a breakfast and a lunch program, it was located in a relatively diverse neighbourhood, and it self-identified as not fully implementing the Food and Nutrition Policy. Participants were recruited via convenience sampling within the school.

Data collection involved a focus group with 6 students, and one-on-one interviews with 6 parents and 11 staff members. All of the qualitative data was audio-recorded and transcribed verbatim. With the data in NVivo, analysis included coding, generating organized themes, and constant comparative analysis within and between the participant groups. Ethical considerations for the study were free and informed consent, power imbalance, and privacy and confidentiality. To maintain the quality of the study, the researcher practised reflexivity, documented field notes and memos, and used triangulation.

Chapter 4: Results

This chapter describes the results from the focus group with students and one-on-one interviews with parents and school staff members. The results begin with three participant descriptions from the individual, organizational and public policy levels of the Social Ecological Model (SEM), as they relate to this study. These include participant descriptions of healthy eating behaviour, the school food environment and the Food and Nutrition Policy for Nova Scotia Public Schools. Following that, this chapter describes the major themes that emerged from the data, and associated subthemes. The major themes presented are: schools have a role in children's eating habits; school culture is important for supporting a healthy food environment; and the food brought from home is the unhealthiest part of the school food environment.

Multiple Perspectives According to the SEM

The first section of the results chapter outlines participant perspectives of the individual, organizational and public policy levels of the SEM in relation to this study. At the individual level are participant definitions of healthy eating behaviour. At the organization level are participant descriptions of the school food environment. Finally, at the public policy level are descriptions of what the Food and Nutrition Policy for Nova Scotia Public Schools entails. This section is used to illustrate how the participants groups understood these three topics and provide some background for the themes. Although all five levels of the SEM interact and impact one another, the descriptions from the three levels are provided without discussing factors that influence them, because these influences are expressed within the themes that follow this section.

Healthy Eating Behaviour. At the beginning of the focus group and interviews, each participant was asked what 'healthy eating' means to them. The purpose of this question was to get a better sense of how the participants describe healthy eating and provide some background for their perceptions on how healthy the school food environment is.

When the students were asked what healthy eating meant to them during the focus group, the responses were overwhelmingly positive. For example, one student said *"It's awesome to me. I love fruit!"* (Student 3), and another responded with, *"It's good for you and it doesn't make your teeth rot out like candy"* (Student 5). This particular student immediately identified that there are consequences from eating unhealthily. In addition to viewing healthy eating positively, two students identified healthy eating as being related to fitness. Student 2 said, *"It means like getting healthy and making sure your body stays fit, and making sure you're not feeding it a bunch of junk and stuff like that."*

Students went on to further describe a few different criteria that classify a food product as either healthy or unhealthy. These criteria included having vitamins and minerals, sugar content, method for producing a food, and toppings added to a food. Student 6 commented that one way to determine if a product is healthy is, *"Vitamins and minerals […] because they make you more healthy."* Another student classified options based on sugar content, *"Candy's non-healthy cause it has sugar in it. Lots and lots and lots"* (Student 1). According to Student 2, foods are classified as healthy or unhealthy depending on how they are produced or grown, *"Um it depends on how, what kind of chemicals are in it to keep it fresh. […] so it depends on if it's organic or not, or fresh picked."* Lastly, some of the students noted that adding less healthy toppings to nutritious

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foods can decrease the health value of the original food. *"If you add sugar on strawberries, then that's unhealthy a little bit"* (Student 3). *"Put ranch sauce on your salads […] Ranch, or any sort of sauce on is unhealthy"* (Student 4).

Parent and school staff participants are grouped together in this section because their responses were quite similar. One of the most frequent responses given by the adult participants was around following Canada's Food Guide, *"Just choosing healthier options, you know less processed, […] Following Canada's Food Guide I guess maybe, trying to at least"* (Parent 5). *"For me it means following the Canada's Food Guide"* (Staff 5). Another recurring description from participants was that healthy eating is a balance of food groups, which again relates to the Food Guide. For example, Parent 6 stated healthy eating means, *"I guess getting a well-balanced diet every day, foods from all the different food groups,"* and Staff 9 said, *"A good balance of vegetables, fruits, and food groups that consist of healthy choices."* The third concept that came out quite frequently was moderation. Almost all of the adult participants expressed that unhealthy foods can and should be included in one's diet, but these foods must be eaten in moderation to keep the overall diet healthy. *"We're not a house that doesn't have you know sugar, or treats or that kind of thing, but in moderation"* (Parent 3). *"Just covering all the food bases and, you know, moderation in everything"* (Staff 7).

While the most frequent responses about healthy eating were fairly broad and vague in prescription, many of the participants did go on to provide more specific ideas of how healthy eating should be practised. Processed food and foods with additives were viewed as very unhealthy, so working to limit the intake of those products was seen as a good, healthy practise:

So just being mindful um, what's good for your body and, and uh, yeah. Mindful of the additives and things that are coloured and all that, and stuff you know. […] yeah healthy eating would be not eating as much packaged, processed foods" (Staff 10).

Additionally, whole grain products were viewed as a healthier alternative to white flour grain by a couple of the participants. For example, Parent 2 stated that, *"When it comes to groups like grains, the whole wheats and, um ones like that, that keeps your carbs under control, doesn't spike your sugars too quickly or anything like that."* Three school staff members emphasized that the amount of food being consumed is important for healthy eating. Staff 4 mentioned that healthy eating means, *"making good healthy choices, and portion control and things like that."* Related to that point, almost any food can be classified as unhealthy if it is being consumed in too high of an amount since food and beverages are unhealthy based on, *"the uh high salt, the high fat, um and then the amount"* (Staff 1). Lastly, some of the participants believed that local and organic foods fit into the definition of healthy eating, which matched one of the students. One participant wanted to avoid consuming different chemicals, *"I'm also trying to eat more organic things as well, so if there's chemicals… And we don't eat any processed food"* (Staff 3). For Parent 4, consuming organic food was very important for meat consumption because he/she felt strongly about animal rights:

We made a commitment about maybe 12 years ago, that we would only buy um, if we were going to buy meat, it would only be local, organic and free range. So we have to know the supplier and we have to know that the animals had you know, a happy life.

Another value that parent and staff participants incorporated into the description was the overall importance of healthy eating, which affects one's mindset toward eating behaviour. For Parent 6, it was important to have a positive attitude and be open minded

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about food: *"Having a good attitude about food. Being willing to try new foods."* Healthy eating was believed to be very important, so it was seen as something that should be practised every single day. *"Also that um, you know, it's consistent, it's daily type of diet"* (Parent 4). The importance of healthy eating was really exemplified by Staff 6 in particular because he/she recognizes food consumption as having a clear impact on all other areas of life:

> *Like I just find when I don't eat well, I don't feel good. […] Like I find when I eat healthy, you know, I can get more done and then life just runs smoother. […] If you're not eating healthy I find I'm sluggish. […] I don't feel good you know? And even my body, like I find and then you don't feel good in the clothes you wear, everything. It's a domino effect.*

Overall, these broad terms, specific recommendations and values were the ones most commonly expressed by the participants when they described healthy eating.

The School Food Environment. The school food environment was presented to illustrate how the school provides food to the students and how the students, parents and staff perceive this food in general. Within the interviews and focus group, the food environment at the school was broken down into four main categories: the breakfast program; the lunch program; the milk program; and food provided during special events at the school.

Breakfast Program. None of the six students that participated in the focus group has ever been to the breakfast program *"I haven't uh been to breakfast program"* (Student 2), but they still knew some of the food that was provided through the program *"It's bagels!"* (Student 4) *"at breakfast club sometimes they have apples and oranges"* (Student 1). However, because the students did not utilize the breakfast program, they were unable to provide their opinions on it.

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Only one of the six parents had a child who had used the breakfast program. For this parent, having the breakfast program available was convenient and the program was perceived positively because it provided similar food as to what would be given at home:

> *Um, we send our daughter to it sometimes when again, when we don't have much time in the mornings, when we got to get out somewhere. Um, I mean she's fine with it. I don't think it, there's a regular difference between that and what we'd have at home.* (Parent 2)

Although the other parents did not use the program, they all knew that it was at least an option. *"I know that they have the breakfast program, but the [kids] eat before they go to school"* (Parent 1). Additionally, two of the parents spoke very highly of the breakfast program based on what they had heard about it. For example, Parent 3 said:

> *But I do know they have things, or they've called for like donations of like bagels and juice. So I think that the breakfast program is geared toward healthier choices for food, and giving kids who aren't eating breakfast or for whatever reason, aren't eating breakfast before school um, they have a decent breakfast before they start their day.*

The parent participants seemed happy that the breakfast program was focused on providing healthy options to the students, and believed that it is important for students to consume a healthy breakfast in the morning. Also, since the school asks for healthy donations to the program, other parents of the school were likely to know that the breakfast program served nutritious food.

All of the staff who participated in the interviews were aware of the breakfast program and many even helped to run the program at the school one day per week, so they were able to provide the most specific description of the food provided. Each day the school provided bagels, yogurt, and juice to students who attend, and there seemed to be fruit available whenever the breakfast program could offer it.

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So there's the bagels, and they're always whole wheat bagels. Um, yogurt is always offered, um juice is always offered. Um, and then sometimes they spice it up with like you know, um, they put like fruit in, whatever's in season. (Staff 1)

The school was able to serve fruit when they got donations from parents as Staff 4 mentioned, *"Our families are donating and sometimes we have some really nice fresh fruit for them."* Also, the school tried to give students more of a variety with the menu every once in a while:

Um, when we do special things, which might be once a week, [...] uh we might do pancakes, but we have light syrup. Um, we try to do fresh fruit. We do smoothies. We'll do grilled cheese sandwiches, um... French toast, cereal. (Staff 7)

The staff members seemed very content with the breakfast program and expressed that it served approximately 30 – 60 students each day. Furthermore, the staff were very supportive of the breakfast program because it provided nutritious food for free to students in the morning who likely would not have anything to eat for breakfast otherwise. When asked whether the kids were happy with the program, Staff 6 responded, *"Love it! And they do, mind you, I mean, some of them are just really happy to have breakfast, sadly."* The only negative comment toward the breakfast program came from Staff 1 who felt that sometimes there were, *"kids who I feel probably shouldn't use it, because the parents are just shipping them off as babysitting service."* The breakfast program was in place to provide food at no cost to students who were not likely to have access to breakfast at home. The belief was that some parents, who were able to provide their children with breakfast, might be taking advantage of the program if they needed to be out of the house in the mornings simply because the option was available. However, on the whole the breakfast program was perceived very positively.

Lunch Program. The students in the focus group were much more familiar with the food provided in the lunch program because many of them ordered food from it fairly regularly. Unlike the breakfast program, students had to pay for the lunch program, but it was still available as an option every day. Student 4 explained, *"There's hot lunch orders. There's salad, pizza, subs,"* and students revealed the rest of the choices when stating what they like to order for lunches. *"Usually I eat like crazy bread with pizza"* (Student 2). *"I eat the wraps, the subs"* (Student 1). Also, when the students were asked whether they liked the food that the school had during lunch time, Student 2 said, *"Yup, because um it can be healthy and non-healthy, it depends what comes with it,"* and Student 6 seconded that idea by adding *"It's healthy junk."* Evidently, the students recognized that there were both healthy and unhealthy choices in the school lunch program, and seemed to be happy that both options were provided so they could decide whether they wanted something healthy or unhealthy.

The adult participants went into greater detail regarding the lunch options compared to the students. For example, Parent 6 explained the toppings that came with the subs and wraps. *"They do just put cheddar, and mayo and lettuce in the wraps, or and in the subs. […] Oh and the meat, yeah. They get to choose from I think it's ham, turkey or roast beef."* Parent 5 elaborated on the pizza selection by saying, *"the pizza is whole wheat, and the toppings I think are either veggie, ham, or just plain cheese,"* and Staff 4 added that for salads there were, *"Two salads, uh, chicken caesar, and the garden salad."*

In terms of what students were eating from the school lunch orders, the parent participants stated that their children usually ordered the pizza and/or crazy bread. *"They'll usually do pizza on Fridays, yeah. Pretty much every Friday they have pizza"*

(Parent 1). *"Right now, every Monday and every Friday [he/she] gets pizza cause [he/she]'s very excited about it"* (Parent 6). Some parents did order the other options for their children though. *"[he/she]'ll get a sub one day, [he/she]'ll get a wrap one day and [he/she]'ll get crazy bread another day and pizza another day"* (Parent 5). The staff members recognized that food orders were highest for pizza and crazy bread. *"It's sad to say, but true that the most orders we get are for pizza and crazy bread"* (Staff 4). However, a couple of the other staff members did believe that some of the healthier options were being ordered very frequently and one thought the salads were ordered most often. *"I think our, one of our most popular days is our salad day"* (Staff 8). Additionally, Staff 6 recognized that the school suggested to parents that the lunch orders be supplemented with other healthy food from home as well:

> *I noticed most of the kids, then like one of the kids that ordered, got a pizza today. Um, I mean, she actually had like a veggie dip with it. So at least, hopefully it balances out, it's not the ONLY thing and they do promote that. […] it shouldn't be their whole lunch.*

The perception from most of the adult participants was that the salads, subs and wraps were healthy choices, while the pizza and crazy bread were not. "*The subs and the salad and the wraps, I think are fabulous […] I think the pizza stretches it […] pizza with a whole wheat crust, like it's kind of weak for an argument"* (Staff 8). Staff 2 expressed similar sentiments about the crazy bread, *"they have 'crazy bread,' and that is just nothing but a sodium, fat punch."* Although most of the adult participants were happy with the subs, salads and wraps, one parent was quite unhappy with them. *"The lunch orders that they've sent home, are garbage. They're garbage. And the wraps that they have, they're covered in mayo which takes away the nutritional value"* (Parent 1). The wraps may have been a healthier choice than the pizza, but this parent did not think that

they were very healthy because they had mayonnaise on them. Another parent seconded the view that the school food was not that healthy but did not believe it was overly unhealthy either. *"I don't think there's anything really healthy, but I don't think it's as far off into the junk food area either. It's kind of in that nebulous processed area that's good enough these days"* (Parent 2). This comment made it seem as though society has become more tolerant of unhealthy food than it used to be, and that this lenience had transferred to the school food environment.

Milk Program. The elementary school offered the option of purchasing milk either at recess or lunch time, and students could get either white or chocolate milk. Student 2 said that the school offered, *"chocolate milk and milk,"* and this was confirmed by school staff, *"We offer milk too. White milk and chocolate milk"* (Staff 9). One of the parents utilized the milk program fairly frequently, *"I mean they have milk that we can buy, which we do pretty regular"* (Parent 1), and overall the milk program was perceived as a healthy option for the students. *"It's a nice option. I know if I was a parent it would be, it's a nice way of knowing your kids are getting some milk"* (Staff 6).

School Events. School events refer to any classroom celebration or party, and any school-wide event where food and/or beverages were provided to students. School-wide events included events just for students such as Sports Day, or events that students and parents could attend at the school such as the Christmas concert or Spring Fling.

Classroom Parties. A couple of the parents mentioned what they knew about the food that was served during class parties. Parent 5 believed that the school was making an effort to make their classroom events healthier and said, *"When they have parties in the classroom and stuff like that, for whatever reason like Christmas, they try to, they ask the*

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parents to send in snacks that are always healthy." Another parent remarked on the food

that a teacher provided in one particular classroom, *"For Valentine's Day, [teacher]*

decided they could make a fruit salad, or a sweetheart salad. So, they got strawberries

which were like the hearts, and they got yogurt" (Parent 3).

The staff members confirmed that the school did ask for healthy snacks to be sent

in for parties, but noted that it was highly dependent on what the parents would provide:

> *You send home a letter that says you know, can you please send in cheese and*
> *crackers or a veggie tray or a fruit tray. And you get some of that stuff, but then 1*
> *mom always says 'Oh I'm making cupcakes for everybody!'* (Staff 4)

Ultimately, the adult participants believed that the school was attempting to make class

celebrations healthy, but the food was often dependent on what parents would send in.

School-Wide Events. Almost all of the parents mentioned extracurricular events

that served food when they were asked about food that came from the school. According

to their descriptions, events such as the Christmas concert, Spring Fling, or bingo night

seemed to be when unhealthy foods would be offered to the students and parents. Parent 1

was very displeased about this fact, as noted when he/she said that at the Christmas

concert, *"The only thing available was pizza and cupcakes, and soda. […] That's pretty*

much every fundraiser. And there's never any fruit, veggies. So typically we won't even

buy." Other parents confirmed that these were the types of food items for sale at these

events. *"family bingo night, and what you'll be able to buy is […] a juice box, a piece of*

pizza, a bag of chips and maybe um, an ice cream" (Parent 4). Although Parent 1 was not

happy with what was offered during these events, the other parents felt like they were

acceptable options, mainly because these events only occurred once a year. *"but again*

like for once a year Halloween dance, and it's a fundraiser so cupcakes aren't the worst thing in the world" (Parent 3).

Only two of the eleven staff members discussed some of the evening events that parents are invited to, and both confirmed that unhealthy choices were offered. Staff 9 also commented on the school's Sports Day, *"I think it's Sports Day, where they do sports all day, and then we give them hot dogs and ice cream. That part I don't get."* This was seen as a negative practise to this participant because the event is promoting physical activity all day, but then the students were fed unhealthy food. Overall, the food at school-wide events was viewed as unhealthy, but most of the adult participants were comfortable with this.

The Food and Nutrition Policy for Nova Scotia Public Schools. Students were not asked whether they were aware of the food and nutrition policy in the school because they were not expected to know about it or understand what it would mean for the school. Their comments about the food at school did however show that they knew the school was offering healthy food, even though they may not grasp why the school was trying to do so. For example, Student 1 said: *"Well they do put healthy stuff,"* indicating that the school did put healthy choices in the food it provided to students.

Parents were asked whether they knew that there was a food and nutrition policy, and four out of six of them knew that it existed. All the parents knew that there was a nut-free policy in the school, but only some knew there were nutrition guidelines. One parent even brought up the policy before the interviewer asked about it when describing the school food. *"and they have to follow guidelines, or it has to be, I don't know what exactly they are, but they have to be somewhat healthy I think"* (Parent 5). Another parent

thought the school choices would be healthier because there were guidelines in place. *"I don't know for sure what they're required to do. I was kind of surprised when I saw the lunch menu just because I thought there would be more, more well-balanced I guess"* (Parent 6). None of the parents really knew any details of the Food and Nutrition Policy, which may be related to the fact that unhealthy foods were served most often at school-wide events, as many of the events were planned by parents. *"a lot of the functions are […] fundraisers for the PTA"* (Parent 4).

All of the staff members were aware of the Food and Nutrition Policy, yet very few of them knew many details about the twelve directives that were mandated by the policy. Most staff members could explain that the policy regulated the food that the school provided *"I just know, you know that the policy really just sort of supports sort of food that is delivered through the school's name"* (Staff 1), the school was not supposed to have vending machines *"I just know that they wanted to like take pop out of the schools and try to have healthier diets for the kids"* (Staff 10), and that class parties were supposed to serve healthy choices *"if you're going to have a class party, make sure it's still a party with healthy food!"* (Staff 6). The school staff also understood that the policy was mandatory within all schools. *"It's in every school, it has to be"* (Staff 1).

Additionally, six of the staff members mentioned the policy before the researcher asked them about it, demonstrating that staff associated the policy directly with the food that the school provided. *"I think they are trying to sort of be healthy. They've tried some different things, um that were put in the policy that, of healthy schools"* (Staff 10). While many of the staff members mentioned that the food the school provided was restricted to healthy options, no one seemed to know the criteria within the policy that determined

which foods and beverages were acceptable to provide. The policy grouped food and

beverages into groups of maximum, moderate and minimum nutrition, and dictated how

often the school could offer those three groups (NSDE & NSDHPP, 2006). Products were

grouped based on their nutrient content per serving, including nutrients such as fat, fibre,

sodium and added sugar (NSDE & NSDHPP). However, staff members did not seem

aware that these criteria existed, as Staff 2 said, *"but when I see stuff like the crazy bread*

laughs Then I go, is there a certain rating that it has to fall in?" Even with limited

knowledge on the policy, staff members believed that the addition of the policy to the

school setting was a positive one. *"I don't know a lot about the policy other than we're*

not allowed to bring junk food in for the kids, […] and I don't have a problem with us

wanting to feed our kids better" (Staff 3).

From the school staff, there were really only two negative comments about the

policy and both were related to the fundraising regulations. One staff member believed

that the policy's ban on using bake sales to raise money was unreasonable because it is

not harmful to have baked goods once in a while. *"I mean like if you're having a bake*

sale once a month, I have no problems with you know, baked goods" (Staff 1). The

school's inability to sell chocolate bars was also viewed negatively by another staff

member. This participant agreed with the rationale behind the policy's rules, but saw it as

a negative experience because it was difficult to find other means of raising the same

amount of money for the same amount of work:

> *Schools used to make a lot of money off selling chocolate bars. […] It is harder to*
> *come up with new ideas and ways of doing things. Do I disagree with that? No. I*
> *mean it's a challenge to us to try to figure out how to um, get what we used to*
> *have using different means. But, I mean it's a good challenge for us.* (Staff 4)

Fundraising was really the only issue that school staff seemed to have with the Food and Nutrition Policy.

Theme 1: Schools Have a Role in Children's Eating Habits

When asked whether the school should focus on promoting healthy eating almost all the participants said yes. The students believed that it was important for the school to do *"Because we eat too much junk sometimes, like eat donuts and ice cream, ice cream cake"* (Student 6). Schools were identified by all three participant groups as having a significant role in developing student eating habits in several ways. One of the biggest reasons participants felt as though the school has an influence is because children spend a large portion of their waking hours at school. In addition to the amount of time spent at school, students also eat a significant proportion of their daily food intake at school, which can include breakfast, lunch, and a snack. Staff 1 stated, *"you know we have them here for 5 hours of the day and they eat 2 of their meals here, most of them."* While most of the participants thought that the school should focus on nutrition education, Parent 2 believed the school should take a more indirect route to promote healthy eating:

> *I also feel that it should take a, a larger role in addressing kind of social issues as well. [...] if there was a better level of social justice there would be a more equitable level of financial distribution which would give people more options, and I think more people would eat better.*

This parent thought that equity should be emphasized to children starting at a very young age so that eventually there might be more of an equal opportunity for people to overcome the barrier of cost, and consume healthy options.

Perceived Impact of School Food. All participants were asked whether or not they believed that the food from the school has any sort of impact on student eating habits outside of the school environment. Participants stated that the only direct impact from the

food at the school was from exposing students to new food or beverages that they may enjoy. There were several other influences within the school setting that participants believed influence student eating behaviour outside of the food that the school provides. These influences included the eating environment, staff modelling, health education, and peers.

When parents were asked whether the food from the school influences student eating behaviour, the consensus was that the food does not have an impact. *"not really. I mean, it's one meal a day"* (Parent 6). Staff members felt the same way because they believed that parents have full control over what students eat outside the school environment. *"At this age it's really what mom and dad put in front of them, what mom and dad buy. If mom and dad are always going to McDonalds, then that's what they're eating"* (Staff 9). However, when asked the same question Student 2 responded, *"Yeah it can affect you. Like sometimes you can get a craving after having it once, and start craving it and eating it more,"* indicating that exposure to new foods at school can make students want to eat those items elsewhere. Similarly to the students, the adult participants saw the school as being very successful at exposing children to new, healthy foods for students to sample. *"And I think that if you make it available to students, they will try things. Absolutely, they'll be willing to try things"* (Staff 11). The goal of doing taste tests at the school was to get children to request those healthy foods outside of the school environment. Staff 4 explained that if a parent knew the child liked a healthy item, the parent might be more inclined to purchase it:

> *Say you had kiwi for the first time at school and you liked it and you go home to your parents and say ' I tried kiwi today and I liked it' I think a mom and dad who*

are on, even a limited budget, would be much more likely to buy a kiwi for a child when they already know that the child will eat it. So it's not a risk for them.

This idea was validated by one of the parents because this very situation happened with his/her son:

> *But he did come home on Valentines and he said 'We had dragon fruit today!' And I said 'You did? Ok' 'Can we get dragon fruit?' 'Yes we can.' So I bought the over expensive, 3 dollar dragon fruit when I got to the grocery store.* (Parent 3)

Although the participants did not think the school food that was regularly offered affected the students, they did believe exposure to new food at schools could influence student eating habits.

Students are Influenced by the School's Eating Environment. Many students ate breakfast, lunch and at least one snack at school each day, so the environment in which they were eating was very important. Even though the meals that students were eating did not always come from the school, the amount of time that students had to eat and the space students were eating in may have impacted their eating behaviour. Based on the amount of time that children had to eat during lunch, time was mentioned as a barrier to what students could consume at school:

> *I wish [he/she] had more time to eat. […] In the beginning I sent a sandwich and vegetables […] the vegetables weren't even getting touched, and [he/she] was, you know just barely making it through the sandwich.* (Parent 6)

This parent did note that going outside and being active is very important, but the limited amount of time for eating can be problematic for slow eaters. The same was true for Parent 3, whose child gets distracted easily, *"he's a high energy kid so can be distracted in a millisecond you know with playing or talking and carrying on, and then lunch time is done and he's kind of missed out."* Even with access to healthy food at lunch time, time can be a barrier to actually consuming nutritious food.

The type of space available for eating can limit the extent to which healthy snacks were sent for recess since the students were often not sitting down to eat. Staff 1 summarized this barrier:

> *They go outside for recess and they have to eat outside on the run, so it's much more difficult to pack snacks that are healthy […] we pack the granola bars, nutrigrain bars […] we do make conscious choices, but the reality is, we need them to eat […] If they are sitting down though, they have more choices because you can send them with a yogurt.*

A parent confirmed that needing to send child-friendly options can make snacks a lot less healthy, because in the summer time, *"There doesn't have to be 'friendly' foods. So they have no excuse to be like packing Joe Louis or junk in their lunch bag"* (Parent 1). However, school staff could assist with this issue. Staff 9 said that in his/her classroom, *"they get to eat sitting at a table. They have their snack and then they get their 15 minutes of exercise. […] they get a proper snack time, so you have the time to eat a nice orange."* Participants believed that even with access to healthy food or snacks, the school's eating environment affected the ability to consume nutritious food.

Students are Influenced by School Staff through Modeling and Education. Even though the school staff believed that parents have the most control, they expressed that they were still role models for healthy eating behaviour. *"You can't control everything. So I guess you just can be a really good role model and offer healthy food here, and hope that some kids make the right choices and want to eat healthy"* (Staff 10). This belief stemmed from the fact that anyone involved in a child's life can have an impact on that child, so school staff need to recognize this responsibility:

> *Like it or not, curriculum or not, we need to have a role. […] You can be the hockey coach, the skating coach or whatever. You HAVE a role in that child's life […] I think we have a part to play in terms of supporting, you know, a healthy lifestyle.* (Staff 8)

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Also, since schools are a place of education, it was agreed that the school should be educating students about nutrition. *"Absolutely. I think the more anybody knows about what's healthy for them to eat, I mean the more information for them the better it is"* (Parent 6). One of the staff members added that the school should be educating students on health because they may not get that information anywhere else:

> *We have to be realistic and a lot of these kids are not getting this at home so they have to get it here. You know, the school is responsible for that whether we want to think that we are or not. You know, so teaching them about healthy nutrition, and activity is, is part of our job.* (Staff 4)

According to Staff 8, it was important for staff to model healthy eating behaviour for students after teaching them in the classroom what healthy eating should look like. *"Teachers generally, and support staff, walk the walk. You know, they, they practice what they preach."* Similarly, it was even seen as damaging to provide unhealthy choices to students at school because of the classroom education they were receiving about nutrition:

> *So, if we don't you know keep promoting healthy foods, or giving them unhealthy options, then we're kind of doing them a disservice right? Because then we're not really sending the right messages. 'You sold it to me, must be healthy!'* (Staff 2).

The amount of time that students spent at school during the day provided a large period for the school to influence children with healthy eating messages and modelling from school staff.

Students are Influenced by their Peers. The adult participants believed that peers have both a negative and positive influence toward healthy eating. It was expressed that peers assisted in getting other students to try new foods, but peers also pressured students to eat more unhealthily during lunch and recess because unhealthy choices were more popular. Parents and school staff identified the school as a great environment for children to try new foods because they are surrounded by their peers. *"Introducing kids to new*

foods is really hard. […] if the school does it, they may have better success because there,

eventually, some kid is going to try it, and it'll have a trickle-down effect" (Parent 1).

Children can be reluctant to try new foods, especially when parents try to force their

children as mentioned by Parent 5 who spoke about a fussy eater in the household, *"You*

*know you try to get a child, you say 'Just try it.' 'No I don't like it!' *laughing* 'But just*

try it.' 'No! I know I don't like it!'" It can be beneficial for students to see their peers

trying something new in an environment without pressure to eat it. Staff participants did

confirm that peers had a positive impact when introducing children to new foods in the

school setting. *"They have smoothies once in a while too. Um, and they uh, we had beets*

one day, cooked beets one day on tooth picks. And it, if one kid tastes it then the others

want to" (Staff 10).

Parent and staff participants also recognized that peers had a negative influence on

children's eating habits through peer pressure and teaching classmates about unhealthy

products. A couple of parents stated that their children will no longer eat certain foods at

school because other kids have teased them. *"But pickles, which my [kids] love, easy to*

pack, mostly nutritious. Kids tease them, for having pickles, can't do that anymore"

(Parent 1). *"The other children in school will influence what he eats as well. Cause he*

used to eat vegetarian pizza on the hot lunch day, and now he won't. They made fun of

him" (Parent 6). Peers were also seen as a negative influence because unhealthy snacks

were typically more popular than healthy choices for children, so the students tended to

teach each other about unhealthy options:

> *With some kids it's, it's cool to have such and such of a snack. […] If someone's*
> *eating grapes, the next day the kids aren't gonna go 'Ooh, grapes, I wish I had*

*grapes.' *laugh* It's usually the opposite. It's like 'Oh, fruit roll-up! Can I have some?'* (Staff 9)

Although peers can influence children negatively, students can use personal values to overcome the effects. For example, Parent 1 noted that peer pressure affected one of his/her children but did not affect another, *"but [Child] will still take pickles, and tell [his/her] friends too bad."* Within the school environment, peers were seen as both a positive and negative influence on other children.

Suggested Changes to School Food. Participants from all three groups expressed some changes that they would like to see in the food that the school offered. Changes were requested to make the lunch program, milk program and school events healthier. Students mentioned they would like more drinks such as *"apple juice"* (Student 4) instead of only milk being offered, and also requested foods such as *"apples and carrots"* (Student 6), *"blueberries"* (Student 3), and *"strawberries"* (Student 1). It is clear that these students liked to eat healthy food and would choose them if given the choice. However, the students also said they wanted unhealthy items like, *"milkshakes"* (Student 5), *"cheeseburgers"* (Student 2), and *"gummy bears"* (Student 1). Furthermore, when students were asked what might help students to eat more healthily at school, Student 1 said, *"if they put more healthy stuff. Well they do put healthy stuff, but a little bit more."* Students believed that the school should offer more healthy food and beverage choices.

Only two parents suggested any changes to the school food. Parent 6 was comfortable with the school lunch options, but would like to see some healthy sides added:

> *I would like you know like even if you know, the pizza came with some carrot sticks or some celery sticks or something. Just a little something extra that came with it that would make it a little healthier. Like apple slices.*

Furthermore, he/she was willing to pay an added price for these options *"I mean I would pay a dollar more to, to have like carrot sticks or little cherry tomatoes thrown in"* (Parent 6). Also, Parent 1 who was unsatisfied with the selection offered during school-wide events would like to see healthy options offered in addition to the unhealthy ones so that people at least have the choice. *"You know I really think if they HAD the alternatives there. Not everybody likes that option. You can have the other ones available, and see how fast they go."*

There were two changes suggested by school staff for the school food. Staff 9 would like to see healthier choices *"Like subs, sandwiches you know, and milk"* during the Sports Day rather than the hot dogs and ice cream that students received. The second change requested by three different staff members was to have both the white and chocolate milk subsidized so that it is easier for families to get either one. *"The chocolate is double the price, easy, um, than the white milk. […] So I'd change that"* (Staff 1). However, the staff members were unsure if price was under the authority of the school or the milk company, so they did not know if it was possible for the school to make that change. Most of the participants were fairly content with the food and beverages offered by the school, but they did mention a few areas where nutrition could be improved.

Summary. Schools are believed to have a role in children's eating habits because students spend a great deal of time at school, and many of them eat breakfast, lunch and a snack there each day. The biggest influence that school food is perceived to have on student eating behaviour is through exposure to new foods. Participants also observed the school's eating environment as influencing food consumption. Staff of the school were believed to impact students by the behaviours they model, and through nutrition

education delivered in the classroom. Peers are seen to have both a positive and negative influence on children's eating habits within the school. In terms of the school food environment, the three participant groups would like to see healthy changes to the lunch program, milk program, and school events.

Theme 2: School Culture is Important for Supporting a Healthy Food Environment

Many of the adult participants alluded to the overall culture of the school during the interviews, in reference to the values expressed by the staff and school as a whole, and the way that the school interacted with outside parties such as parents and community members. The culture of the school was seen as important for determining the extent to which the school focused on healthy eating, provided students with access to food, and worked to implement the Food and Nutrition Policy.

The parents believed that this school was focused on health and nutrition *"it's not like they have things going on every day, but they focus on nutrition"* (Parent 1), and that the school tried to consider nutrition with anything they did, *"it does seem to be something that they think of, that they try for"* (Parent 3). Parent 1 also recognized the support that the school staff provided his/her child:

> *And even if [Child] were to go to school tomorrow, and ask [his/her] teacher a nutrition question, whether it's on the agenda or not, either one of [his/her] teachers would take the time to talk to [him/her] about it.*

Staff members reaffirmed these beliefs by stating that staff members were always reinforcing healthy choices, *"as a school we don't go 'OK! Christmas time! Bring in as much junk as you can!' *laughing* Like we do, as a school, promote healthy living and healthy eating"* (Staff 5), and used positive messaging to do so, *"you know pointing out*

like 'Wow that looks really good!' You know, cheese and crackers as opposed to chips"
(Staff 8).

Additionally, the school worked very hard to make sure that children were not going without food. Even though the lunch program is not free like the breakfast program, the school chooses to, *"always order extra here, so if they're, you know don't have a lunch there's always an extra pizza or something around for the kids to have, or a sub"* (Staff 10). Even at recess time, *"students that forget to bring a snack can go up to the office, and whatever we have, they are entitled to have. That can be anything from apples or maybe a box of raisins"* (Staff 11). The school also supported its staff members. *"And the school even got us a fridge up here [office on top floor], so that I could put a lunch […] just to have something quick and not have to travel across the building"* (Staff 8). Everyone seemed to be incredibly happy with the way to school focused on nutrition and ensured that everyone within the school had the opportunity to eat.

School is Working to Implement the Food and Nutrition Policy. The adult participants felt like the policy was being applied to the school food for the most part. It was applied to the breakfast program and lunch program, but not always applied to some of the school events. Staff participants also identified the policy as being largely under the control of the school staff, and requested additional support to ensure they were fully implementing the Food and Nutrition Policy.

The consensus from adult participants was that the Food and Nutrition Policy was being implemented within the elementary school, and also that the policy was important for the health of the school food environment. When discussing the school lunches, Parent 5 said, *"They have to follow guidelines […] Like for example the pizza is whole*

wheat, […] and then they have, offer salads, and wraps, and subs and stuff." School staff

also believed that the breakfast program was within the guidelines of the policy. *"Our*

breakfast follows the school board policy. Um, you know, pretty much we have the whole

wheat bagels. We have yogurt, we have juice, we do the light cream cheese" (Staff 7).

Parents acknowledged that staff members were trying to apply the policy to class parties

as well, *"they'll ask some of the parents to donate things, to donate something to the*

Valentines party or whatever. And, the teacher will always say please send nutritious

food" (Parent 4), which was confirmed by Staff 6:

> *In all my letters home when we have like a little celebration in the class […] I*
> *always write 'Please, you know if you are bringing something to share with the*
> *students, please make sure it follows our healthy foods guidelines.*

However, the policy was not seen as important for school events, such as dances, as

summarized by Parent 2:

> *I know like for the, for the Halloween dance the, I guess the same rigorous*
> *standards aren't there, but no one's really complained about that at this point.*
> *[…] It's probably going a little bit too far from school board policy, but everyone*
> *seems kind of fine with it.*

Even though the policy may not be strictly followed during school events, having the

policy in place still forced the staff to think more about choosing some better options

during these events, compared to offering only junk food:

> *At least this way, you're forced to think well do we really need to have pop at the*
> *dance or can we get some juice in? Or do we need to have chips, or can we*
> *choose at least better choices of chips like Sun Chips or baked Lays.* (Staff 4)

Lastly, the application of the policy was also seen as a benefit to the staff, not just the

students. Staff 2 thought that the policy helped staff members eat healthier too, "*not all*

teachers are healthy eaters themselves. Yeah, and it also keeps us under a bit of control

too." Overall, the policy was believed to be applied to this school as much as possible, except for some of the school-wide events.

Some of the staff members worked at other schools in the past and were able to give more perspective to the application of the policy because they had seen it implemented in other public schools. The feeling among the staff participants was that the policy is really left up to the school to decide how it will be implemented, *"But I also think that each school evaluates [the policy] in its own way"* (Staff 11), and to what extent the staff will follow the regulations:

> *Mainly it's kind of carried out differently in every school. Some are very strict, where it's like no sugar, you know, no junk at all. In other schools, there, you see sometimes people arriving with things of donuts from Tim Hortons for a class party. *laughs** (Staff 2)

Because of this inconsistency, one staff member indicated that he/she would like more instructions for school staff on exactly what the policy is supposed to look like in each school and in each classroom:

> *It would be nice if they maybe coached us a little bit more on things that we could do. Like as a school […] Things that we can do in our class to, you know, is there like a certain wording that you want us to give the parents? […] You know, support us. […] I mean, they threw the policy's out, but, does everybody understand it? […] what should it look like in our, in a classroom.* (Staff 6)

Staff at this school cared about trying to implement and follow the Food and Nutrition Policy because they believed it was important, but they would like additional support to figure out how best to carry out the policy in the school.

Barriers to Providing Healthy Choices. It became clear from the staff participants that it was difficult for the school to rigidly follow the policy as it was written for several reasons. Parent and staff alike recognized that the pizza may not be the healthiest choice in the lunch program and the school social events frequently provided

unhealthy options. However, most of the adult participants believed that it was acceptable to offer those options to students because the school faced many barriers around the food it was able to provide to the students. This did not mean that parents and school staff were completely happy about providing unhealthy food to the students, as noted by Staff 8 who said, *"I think I'd be lying if I thought that everybody was comfortable with [the pizza]."* There were several other factors outside of the nutrition level as to why the participants considered it acceptable to provide unhealthy food in the school environment. First, the school faced many barriers to accessing healthy food from the community. Second, student preferences for food and beverages limited the health of the school food options. Third, there was a lack of creativity for coming up with new ideas that shift the focus of school events or activities away from food. Finally, the norms of socializing with food and over-indulging during holidays influenced the choices offered during school events and class parties.

  Cost. The price of the school lunches was often referenced by participants, and pizza was the cheapest option. Staff 1 said that it cost, *"two fifty for a big pizza, four dollars for a salad."* Participants recognized the price difference between healthy and unhealthy options in the community *"it is expensive to buy healthier foods"* (Staff 3), so the school could not control the price difference for the school lunches. Unfortunately, financial resources limited what parents could afford to order for their children:

> *But you will find that parents who don't have very much money will take 5 dollars and buy their kid two dollar fifty pizza on [2 days a week], but they won't necessarily spend 4 dollars on a salad on [1 day a week].* (Staff 4)

Again, the participants understood that pizza was not the healthiest choice, but some families could not afford the other choices. *"But I think at a lot of schools, pizza... it's not*

great, but it is affordable" (Staff 8). Parent 3 was not fully satisfied with the quality of the pizza based on where it came from. *"It'd be nice if they could look around and maybe see if there are some other pizza vendors cause I've seen some of [the pizzas] come home, and they're just so greasy."* Conversely, this parent added that improving the quality may increase the cost, *"But again you know if you're stepping up your pizza quality sometimes the price is going to go up with that,"* so he/she understood why the school selected the lunch options that it offered.

Although having the milk program was perceived positively, the price of the chocolate milk was higher than the white milk because the white milk was subsidized, and this was viewed very negatively by staff members. *"I think it's just the white that's subsidized. Chocolate's not subsidized, which you know, I don't agree with that! […] cause the chocolate is double the price"* (Staff 1). The price difference was seen as a barrier to families ordering chocolate milk. *"Chocolate milk is double the price. […] Which is a deterrent"* (Staff 9). Chocolate milk may not be as healthy as white milk, but the staff believed that it would still be a healthier option than a lot of the sugary drinks that students were bringing to school. *"Cause you think of the other options. So much sugar […] But as far as juice boxes and stuff go, I mean I'd rather pick milk"* (Staff 6). It is believed that students would enjoy drinking chocolate milk as much as they like other sugary drinks, so reducing the price of chocolate milk at the school might help improve student milk consumption.

The cost of the food in the community was also a barrier for the school to purchase healthy food and provide it to all of the students for free. When complaining about the school offering hot dogs and ice cream to students on Sport Day, Staff 9 added,

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"And that's an economic thing," recognizing that the cost of food determined what the school could afford to feed all of the students.

Community Food Providers. The school itself did not have a cafeteria where lunches were made, so it had to rely on food providers from the community. The school needed to find options that were cheap and healthy according to the Food and Nutrition Policy, but without a cafeteria, the options also needed to be convenient and easy to clean up. Parent 4 stated that although the pizza was not the healthiest, he/she does not think that the school could find a healthier option because, *"Nobody could supply, like [local pizza company] makes it so easy. You know, they have it packed, they have it packaged so easily for the kids at lunch."* Staff 4 confirmed that a major determinant for choosing the lunch options was the level of ease provided by the suppliers, *"But it's the cost and the mess and, do they deliver? Do we have to go, send a staff member to go pick up? Like it's just not… it has to be really easy, or it's not worthwhile."* Additionally, not having a cafeteria meant that the students had to eat at their desks and this again limited the options for the lunch program. *"You might be able to do like a spaghetti, or if you have a cafeteria. But when kids are eating on their own desks… You want to have a few things that are pretty dry"* (Staff 4).

Student Preferences. The food that students prefer to eat was mentioned as a barrier to the choices that the school could provide because the belief was that children do not like to eat highly nutritious food, so the school food cannot assist the development of healthy eating habits if students were not eating it. However, there was a difference of opinion from the participants on whether children would eat healthy food when given the choice between healthy and unhealthy options.

As already discussed, pizza was the most popular item from the school lunch program, and much of this was because children liked pizza. *"Like as far as choices for kids go, they're pretty good because um, kids, you know, they're always going to want pizza"* (Staff 5). When describing his/her favourite food, Student 5 said, *"Pizza, cause it tastes good and it's cheesy and I love cheese,"* so this reinforced the school's selection. Pizza was something that a lot of students would eat, and in order to make some money from the lunch program to help the school fund the breakfast program, students needed to be ordering the lunches:

> *It probably could be better but um, the uptake would be lower, so, based on um, just kind of market realities *laugh* you got to hit that sweet spot with something that's good enough that enough kids are going to want to buy.* (Parent 2)

Moreover, this idea was not merely an opinion given by the participants. The school lunch options used to be different and students were not ordering them from the school. *"The principal before that we had, was trying to go into whole wheat crust and trying to get all natural […] we went to an extreme and the kids were just not buying it."* (Staff 10)

Along with personal preferences being a strong influence, taste was viewed as a barrier to healthy eating because the participants felt like unhealthy food generally tasted better than healthy options. Student 2 said, *"I think that all the food people like to eat is like junk food that isn't very healthy,"* and was supported by Staff 4's comment, *"I consciously have to force myself to eat healthy because I actually love the stuff that's bad for you. So I find it very challenging to eat healthy."* Given that taste was perceived as a barrier to eating healthily, many of the adult participants believed that children would choose unhealthy options, including pizza, when given the choice. Parent 3 mentioned that his/her own child *"would probably always go for pizza over top of [a healthy meal] if*

given the choice," and Staff 1 generalized this comment to all children by saying, *"There's no child that will turn down chocolate cake for an apple. There just isn't."* It was even seen as unfair to give children the choice because it was expected that they will always choose the unhealthy option. *"Is it really fair to give them the choice *laugh* of dunkaroos over I don't know, an apple? Cause I mean, you can't really blame them"* (Staff 6).

Although this opinion was expressed a number of times during the interviews, many adult participants discussed occasions when children chose healthy food on their own. *"If you give [child] a choice of what's going in [his/her] lunch bag, [he'll/she'll] pick green pepper every time"* (Parent 1). *"I mean my kids will eat broccoli and dip over chips. [...] when you go to like Christmas parties and stuff, the fruits and veggie trays are usually the first ones to go"* (Staff 8). This side of the debate was also generalized to all children beyond single cases. *"When you lay out the trays, and you invite them to come up and pick, they hover over the fruit [...] my vegetable and fruit trays are usually empty. What's left is some of the junk"* (Staff 9). In this staff member's classroom it seemed like the students actually preferred healthy choices. Lastly, another staff member commented on the fact that the school slowly switched the food in the breakfast program to healthier choices when the Food and Nutrition Policy came into effect, and the students did not notice:

> *We used to have the white bagels and then when the school board policy came out [...] we started, we'd give them half with white and half with whole wheat *laugh* And eventually they didn't realize they were getting all whole wheat* (Staff 7).

Many of the adult participants observed students willingly selecting healthy food, but overall there was a significant divide of opinions on whether children will eat healthily when given the choice.

Lack of Creativity. The adult participants were very pleased with the school's level of focus on nutrition, *"I really don't think there's a lot that they could do differently"* (Parent 1), and even though staff thought there would always be room for improvement in the area, some were not sure about what else the school could possibly try. *"Well there's always more you can do. […] I don't know if there's anything that anybody's thought of, that we haven't tried yet"* (Staff 7). The inability to think of new ideas was mentioned by a couple participants as a barrier to addressing healthy eating even further. Parent 4 had a large role in starting the school garden initiative, but some parents and school staff needed to see what other schools were doing before they were on board with the idea. *"It's incredible what other schools across the country have done. So once they saw the video, then they had ideas about what more we could do with our school."* Another participant noticed that it was hard to convince fellow staff members to change the way that a school activity had always been done. *"We were talking about doing like a hot chocolate thing with literacy, and I was like 'Should we really be having hot chocolate?' […] We fall in the trap of stuff we're used to"* (Staff 2). Lacking creative and innovative ideas made it difficult to shift the focus away from using food and beverages as fun, motivational tools for students.

Social Norms. Participants expressed that the norm in social situations and during the holidays was to eat less healthily. These beliefs were translated to social events and holiday parties at the school, making it acceptable for unhealthy choices to be offered at

these times. The adult participants expressed that they frequently ate less healthily in social situations and suggested that the switch in behaviour was expected. *"You always serve the things that are the worst for you when you're cooking for friends"* (Parent 6). The use of the word 'always' indicated that this action was common and the norm. Another staff member explained that being in a social situation did not necessarily mean eating things that are less healthy, but simply eating a greater quantity of food. *"Get togethers and parties and stuff like that change how I eat. […] you tend to eat more"* (Staff 1). Overall, socializing tended to lead to less healthy eating behaviour and this was seen as acceptable. This social norm transpired to the school-wide events because they were viewed as social events. *"I'm ok with that you know for a one time kind of social event"* (Parent 3).

Participants also repeatedly conveyed that it was typical to eat poorly during the holidays. When discussing the holidays, Parent 2 said, *"I guess like most people, uh the healthy eating kind of is forgotten about. *laughing* Yeah, it takes a holiday,"* demonstrating that he/she believed this behaviour was the norm. Similarly to socializing with food, bigger quantities of food were common for a holiday celebration. *"And then just the bigger meals that you tend to serve on the holidays. I mean yes there's lots of vegetables, but there's also a lot more of everything"* (Parent 6). One student identified Halloween as being the only time he/she really did not eat healthily, *"Um the only thing is like Halloween. All that candy, that's the only time"* (Student 1). Additionally, one parent even expressed that weight gain was expected during the Christmas season, which indicated that eating habits were predicted to greatly worsen during this time. *"But I mean, Christmas is Christmas, the holidays are the same thing. You're going to put on*

weight" (Parent 1). The shift in eating behaviour was due in part to the fact that unhealthy

food was seen as a fun way to celebrate the holidays, which also extended to any holiday

event at the school. *"There's you know cookies with Santa and of course that's just fun*

cookies right? […] you know people want, like for the Halloween dance, cupcakes or they

want the treat" (Parent 4). These two social norms impacted eating habits very

negatively, but the change in behaviour during the holidays and social situations was

accepted in this culture, which made it acceptable within the school as well.

Staff are Instrumental in Providing their Support. On top of school as a whole

being focused on nutrition, many staff members commented on initiatives they were

doing or had seen other staff do in classrooms that helped support healthy eating. Staff

members had encouraged students to eat healthier at school, requested that parents send in

healthy choices to the classroom, and promoted healthy eating to parents in attempt to

change the food in the home environment of some students.

 A couple of the classrooms in the school had 'gems' or tokens as a positive

reward system to motivate the students to bring healthy snacks to school:

> *Every time a student brings in a healthy snack, they get a token. They get 2 for*
> *fresh fruits or vegetables, and 1 if it's healthy as opposed to junk food. And I went*
> *from 2 or 3 kids with a healthy snack, to at least […] maybe 10 a day with a*
> *healthy snack.* (Staff 3)

Staff members who used a system like this said they saw a definite increase in the number

of students who brought healthy snacks to school, so they believed that this approach was

effective. Something else that made healthy snacks more popular to students was simply

making them more fun and imaginative. *"More and more kids during the week were*

bringing bananas cause the teacher was talking to the kids on the banana phone" (Staff

10). Being creative with healthy foods and allowing students to play with them seemed to make them more desirable for consumption.

Additionally, one staff member took the time to go to each classroom to promote the salad option for the school lunches, and was very successful:

> *[he/she] came in with the salad and showed everybody what it was. […] that went through the school. I think the next week through the whole school there was a really big increase in orders for the salads.* (Staff 11)

Evidently, a little promotion had a large impact on the students. Other staff members enforced certain rules in their own classrooms to encourage healthy habits *"they'll come in with like a banana and a cookie for a snack and I make them eat the banana first"* (Staff 1), and to ensure students were eating the healthy options that were provided to them *"I have to be on [my students] because the milk program's there and you feel badly cause the parents order it to make sure they're having some milk, and the kids don't drink it"* (Staff 6).

In order to try and combat the fact that parents often send unhealthy items to class celebrations, some of the staff told students they were only allowed to bring food that fit into a small bag which was given to them. *"We sent home like you know, all a little bag and they were to put their own healthy snack, just for themselves, for that day"* (Staff 6). Not all of the students brought in healthy snacks, but there was some improvement because it was a smaller quantity of food. *"So, this way they come in with just their bag, it's usually good, just little things of treats. […] At least it keeps the sizes down"* (Staff 2). These examples demonstrate that the school staff could influence what the students were eating within the school setting.

School staff tried to influence some of the parents as well. For example, one

student would only eat crunchy things, so Staff 10 tried introducing him/her to:

> *cucumbers and carrots and things that were crunchy, that were healthy. Um, and I, I'll write a note like 'Oh [he/she] ate carrots today, maybe you could try some carrot sticks.' Or whatever, but, they don't really get any cooperation*

However, this staff member was under the impression that his/her message did not make

much of an impact on the food in the home environment. Another staff member had a

much more positive experience with parents:

> *If I have a student that is easily distracted, not getting their work done, or sluggish, I always bring up that nutrition, or talking to their doctor might be something that they want to explore. […] and I've seen HUGE changes in kids that have, that, whose parents have taken that seriously.* (Staff 6)

It seemed that some parents might attempt to provide their children with healthier food

when nutrition was brought to their attention by school staff members.

Nutrition is Linked to Classroom Behaviour. Some of the school staff could have

been focused on student nutrition because of the effect they noticed in the classroom.

Staff members discussed the importance of healthy eating during the school day because

it helped improve focus and mental health in the classroom. According to the staff

participants, when students had sugary snacks at recess or lunch, they were much more

wound up and had difficulty focusing. *"You can see its effect on them, when they come

back from lunch time, OOH *motioning as if they're crazy* Like how much red dye are

you eating?"* (Staff 2). This effect on the students made teaching a lot more difficult.

*"How am I supposed to teach the child with ADD who just had a full chocolate bar for

recess?"* (Staff 3). Also, nutrition was mentioned as being extremely important for

students who were already dealing with behavioural issues:

There's no nutritional value, why send it? It's, it's sugar and colouring and both don't bode well with someone that's you know hyper anyway, or is autistic or whatever. […] It makes it harder to keep them focused or keep them, or keep them seated. (Staff 10)

The negative impact on classroom behaviour led to adverse effects on mental health. Staff 6 summarized this idea through observations from his/her classroom:

I've noticed some huge changes in kids and it's made a huge difference in, in their ability to stay focused, and then if they stay focused, I mean that makes a huge difference in everything, and even in their own happiness. […] they're feeling like they're getting stuff done and, and accomplished. And that affects your self-esteem, as opposed to when you're on them all the time.

Evidently, the school staff members perceived a negative impact on student behaviour when students were consuming unhealthy food or beverages.

Parents add Support to the School Food Environment. It came across in the interviews with adult participants that parents played an integral role in promoting healthy eating at the school. Parents adding their support to the school environment by sending in healthy food for students, running healthy eating initiatives, and educating the staff members. Parents provided donations of fresh fruit to the breakfast program, which gave many students access to fruit. Also, a parent from the school ran 'Taster Tuesdays' once a week at the breakfast program and contributed to the school's ability to expose some of the students to new, healthy foods:

And I know at the taster Tuesdays they've made different smoothies out of different things, […] cooked beets, […] But one of the parents is doing that. She just brings it in and, and does it. I don't think she, I don't know if she gets any money for buying the groceries or whatever. (Staff 10)

Parents assisted in making classroom parties healthier for the students. *"this year I have a class mom […] we'll brain storm as a class healthy ideas of snacks that we might like, and then we'll tell our class mom and she'll organize it"* (Staff 5). Additionally, parents

also influenced the school staff. Parent 4 worked very hard to set up a retreat for the staff, hoping to inspire some new ideas for the school:

> *I've organized for all of the staff to do a, a retreat at Windhorse Farm in New Germany, […] an award winning sustainable eco retreat. […] I'm hoping that it will inspire us to do something like a school supported you know agriculture.*

Clearly, parents helped to create a school environment that was supportive toward healthy eating.

School Needs Greater Community Support. It was suggested that in order for the school to fully follow the Food and Nutrition Policy and address healthy eating at a greater level, the school needed support from community members and organizations. School staff members were already extremely busy, so the school needed assistance in order to implement more healthy eating activities, as Parent 4 explained:

> *It would have to be complimented by whatever the school board is doing, capital health is doing, the IWK. There could be a coordinated you know program at the schools. […] The schools are stretched. They cannot take on something like this on their own. […] Because I think that the schools are open and willing to do that. It's just that they can't take on designing something like this and then delivering it.*

The school had already recognized this, as they were working on getting help from parents and the community to start a school garden initiative. A parent mentioned that the garden, *"is in the planning stages now, but I know that they're starting, they're going to be having another meeting and then looking for volunteers to get things started"* (Parent 6). The school knew that it needed outside help in order for the school garden to be a success.

While there was a need for greater community support within the school, the staff members commented on the difficulty in getting people involved in the school, especially parents. Some of this difficulty existed because parents disassociated themselves from the

school environment. *"It's not because they don't care, […] but I think a lot of people still believe that education happens in the school and not at home"* (Staff 1). Also, staff believed that parent disinterest in the school might be the result of negative experiences they had in schools when they were growing up. *"we have a lot of parents that just, haven't had probably really good experiences themselves at school, and uh, don't really want to be around us that much"* (Staff 10). There were several other barriers expressed as impeding the involvement of parents in the school. *"They don't have the money, they don't have the time, they don't have the interest"* (Staff 9). Many factors impacted whether parents viewed their involvement with the school as a priority.

Summary. The participants believed that the school as a whole did value and support healthy eating. Since nutrition was considered important, the school was working to implement the Food and Nutrition Policy and make the school food environment healthier for students, but the school was still restricted in several ways. Staff members wanted more specific instructions as to how the policy should look in the school environment, because it seemed to be up to each school to decide. The school also needed greater support from parents and the community to put on healthy eating initiatives. Barriers to implementing the policy included: the cost of food in the community; food choices available in the community; students preferring unhealthy food; lack of creativity for conceiving new school initiatives that did not focus on food; and social norms that accepted unhealthy food being provided during social and holiday events.

Theme 3: Food Brought from Home was the Unhealthiest part of the School Food Environment

Participants believed that most of the food provided by the school is healthy, but school staff frequently stated that the unhealthiest part of the food at the school was the food students brought for recess and lunch. *"They come in with like a big bag of chips and a bottle of pop and then, […] literally kids will show up with chocolate. That's what they'll have for lunch"* (Staff 2). Similarly, Staff 11 said, *"They'll have juice and a chocolate bar for lunch or pop and a pepperoni stick. Like there's, there's a lot of stuff in here that just makes you cringe."* It was clear that not all students ate this way, as some students were eating really nutritious food, *"It goes both ways. Like it's either really good or really bad"* (Staff 6), but the food students brought into the school seemed to either be really healthy or really unhealthy. Some parents believed it was the norm for children to eat unhealthily, such as Parent 4 who commented on his/her experience in classrooms at lunch time:

> *I cannot believe what children are eating now […] such highly processed, chemical laden, artificial food, packaged food. […] 80 percent of the children are eating a terrible lunch.*

Parent 1 confirmed that it was an accepted norm to send at least some unhealthy food to school when he/she said, *"when they bring their lunches from home, they're mostly nutritious. Of course there is some junk."* While some students were bringing healthy food to school, the perception was that many others were consuming a significant amount of unhealthy food for snacks and lunches.

Several staff members wanted to take the unhealthy food from the students, but they knew that the children got the food from their parents so it was not fair to punish the students. *"Because what happens then is, it's the parents that you're actually asking. So the kids become embarrassed because their parents pack their snack"* (Staff 9). This staff

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member understood that the school can promote and encourage healthy foods, but it could not control and enforce the food that students were bringing in. *"Otherwise you'd have to go into the community and say *laughing* we will fine you, the adult, for allowing this child a pop"* (Staff 9). Parents ultimately determined the food that was sent to school, and it was believed that parents have the greatest control on their children's eating behaviour.

Parental Influence. All three participant groups identified parents as having the largest role in children's eating practises, which included the food that students brought to school. Staff 10 noted that when he/she was younger, *"I probably just ate whatever my um parents stuck in my lunchbox,"* and Staff 3 said *"My kids don't really eat anything other than what I feed them,"* including food during the school day. Students confirmed this notion by explaining that their parents determined the foods that they ate. For example, Student 2 said, *"Mine do all the time [decide what to eat]. Like it doesn't usually matter what I crave for."* It was clear from the focus group that parents did not always give the children much choice in what was eaten, and also attempted to get the students to eat healthy choices. *"They say 'Eat your veggies right now!'"* (Student 5). The adult participants recalled some similar situations from their own parents when they were growing up, which had since transferred to their eating habits in adulthood:

> *We had, I would even say no choice, I mean as you know, as parents do. Um, all the meals we ate were always very well balanced. They were always home cooked, we didn't eat out. […] Um, so yeah I've learned it just also through, um just watching.* (Staff 1)

According to the participants, parents have the largest influence for several reasons. Parents ultimately determined, *"Where they eat, when they eat, what they eat. Yeah I think the biggest influence is at home"* (Staff 11). Parent set rules and limitations *"You know, like you can't have your dessert until you have this, or you can't um, you*

know that's it for, for sweets or sugar tonight" (Parent 4). Parents have a role in modelling and encouraging healthy eating. *"I mean we, we try to model what we'd want to see them eating [...] and um do what we can to um encourage the right stuff"* (Parent 2). Parents were responsible for purchasing the food and deciding what was available for children to eat *"But at the end of the day the kids, I mean they don't do the grocery shopping"* (Staff 6). Also, parents can assist in educating their children like Parent 5 did:

> *Last week or the week before, I kind of brought out the Canada's Food Guide. So we kind of did that for a whole week and tracked you know what they're eating. [...] I think it helped. My [child], instead of packing a, you know granola bar for [his/her] lunch, [he/she] packed a little fruit to go thing which is a better choice.*

Although everyone felt like parents have the biggest influence on children's eating habits when they are young, not all of the adult participants carried their parents' habits into adulthood. Two participants mentioned that they did not eat the healthiest growing up, but started to make the effort to do so later in life. Parent 1 said, *"My mother wasn't much on cooking. She's still not and just tends toward the more quick and easy. [...] So, not really. I think she's kind of influenced me to go the opposite way."* For these participants, valuing nutrition and health allowed them to break the mould provided by their parents, and create their own healthy eating habits.

Barriers to Healthy Eating at Home. Throughout the interviews, participants discussed numerous barriers that sometimes disrupted their intent to consume healthy foods and beverages, and many of the barriers mentioned also shaped the food that parents sent to school with their children. These barriers included cost, convenience and planning ahead.

Cost. It was clear that within the community, the cost of food was a major barrier to eating healthily, since it was mentioned by all three participant groups that healthy

food was more expensive than unhealthy food. One student who really loved to eat apples was asked what he/she thought might get other students eat more apples, and the response was, *"If they put the lower price on apple juice and apples"* (Student 6). Even though the students were probably not responsible for purchasing the groceries, at least one of them was still aware that it could be expensive to buy healthy options. This view that healthy food costs more was repeated time and again by adult participants. For example:

> *I know sometimes money is probably a problem for others because um, to eat healthy, it costs way more than to eat not healthy. Like to buy 2 litres of orange juice is like 5 dollars, but to buy a little packet of tang, is like a $1.20 and it makes the same amount.* (Parent 5)

Moreover, the cost of food limited what some of the participants were consuming. One parent mentioned the fact that he/she did not always eat as healthily as he/she would have liked:

> *It's way more expensive to eat healthy for sure. I would probably eat slightly healthier myself but I mean if we have the fruit and we have the vegetables, a lot of times I'll make sure [child] gets them before I would get them.* (Parent 6)

Another participant cut back on milk consumption because he/she found it too expensive to drink the amount that he/she preferred. *"I'm appalled at the price of milk in, outside of the city. […] I've kind of cut my intake of milk back drastically"* (Staff 8). The fact that healthy food was more expensive than unhealthy food limited the intake of healthy food for some participants, and this barrier was also seen as reducing the options that parents could send with their children to school.

When discussing the drinks that students brought to school, Staff 1 commented that students were *"coming in with their sippy juice bags. You know? And that was probably 20 cents, and that's the problem. It's cheaper."* The same issue occurred with the food students had for lunches, but school staff recognized that having something to

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eat was more important than purchasing more expensive, nutritious food. *"The kids bring a lot of packaged food to school. […] I don't really agree but it's also cheaper. […] it's a way of at least feeding their kids"* (Staff 10). This last point was seen as very relevant to this elementary school because it was repeatedly mentioned that the school was located in a fairly low socio-economic status area:

> *In this socio-economic uh, neighbourhood uh it's what's on sale. […] You know if dunkaroos are 10 cents a box, they're all having dunkaroos. Regardless of the fact that it's just sugar and icing, and cookies.* (Staff 9)

> ***Convenience.*** Participants repeatedly brought up two very interrelated concepts, time and effort, which represented the issue of convenience. The perception was that having more time to prepare food facilitated healthy eating, and having a limited amount of time dedicated to food was a barrier to healthy eating.

> *And there was a period of time where I was working and I was finding that you know I was making super simple, fast meals at home […] I noticed quite a stark contrast from how much time I can spend shopping for food and preparing food while I was working versus now. And it, it's quite a luxury I think.* (Parent 4)

The participants expressed that in general healthy food takes longer to make than unhealthy food *"You know, you're rushing home, trying to get supper ready, and you know, sometimes it can be, um, to eat unhealthy is definitely, *laughs* you can cut a few corners"* (Staff 6), and that it was an extravagance to have time available each day to focus on food *"Our lifestyles are such that we do not rush when we get home. We're both home between 4 and 4:30, so we have lots of time to put on a healthy meal"* (Staff 1).

Not only did participants believe that preparing healthy food takes a longer time, but also that it generally requires greater effort than less healthy options. The adults in this study noted that sometimes they preferred easier options, even though they may have known that those options were less healthy. *"As you get older it [education] sort of goes*

to the wayside for what's quick, what's easy and what's readily available" (Parent 1). It was stressed numerous times that people were relying much more on convenience food compared to a few decades ago. Staff 2 summarized this idea:

> *Less things are made. Everything's a pizza tossed in the oven, or something to open the package, put it in the pan and heat it up. [...] You can make a meal in an hour and you can be healthy, or you can pop something in the oven and sit down right away.*

Several school staff members also identified convenience as an influence on the food that children were bringing to school. Staff 3 said, *"Like kids come with those Lunchables that I hate *laughing* Everything is easier, in a, in a sense,"* and Staff 10 seconded this thought by stating, *"The kids bring a lot of packaged food to school. [...] I mean I think it's, it's easy for parents."* The perception was that convenience, packaged foods were less healthy, but parents sent them to school because it was easier than sending a healthy lunch.

The norm of working parents was frequently mentioned by participants as having a negative effect on eating habits when they discussed the amount of convenience food available to the community. Participants believed that decades ago when there was typically a stay at home parent, there was more time to prepare meals, but this norm had shifted so there was less time to focus on food:

> *And I think because now there's probably more parents like dual workers in the house. My mother stayed home, for I think 8 years when we were kids. [...] I think you don't see as much of that now. I think more people are working. So you've got all this available convenience food, people working with not as much time to be at home.* (Parent 3)

With convenience being combined with less time available in the average household, the adult participants believed this generation as a whole had developed worse eating habits:

My generation they had more children, but they stayed home. Uh, and they, they cooked, they cooked for their family and now they're on the run, so they buy for their family. And whatever comes out of the box is what they get. (Staff 9)

Planning Ahead. Another factor that was discussed regularly regarding the ability to eat healthily was that of planning and being prepared. Packing food ahead of time, or planning meals in advance was believed to facilitate healthier consumption. Parent 6 spoke about packing a lunch for work, *"Like a lot of times I'll bring my lunch. Well if I didn't bring my lunch and I went downstairs into the mall, I might be swayed into something slightly less healthy."* Planning ahead of time also assisted in having healthier meals at home, as demonstrated by Staff 11 who said that if "*I haven't taken anything out, or whatever, then, by then it's too late, we're hungry and we need to get something now rather than something good."* Packing lunches for school or work was reported as facilitating healthier eating, but that it required time and effort which have already been discussed as barriers. For packing his/her children's lunches, Parent 4 spoke about how he/she planned ahead:

> *I make sure that I have you know a fruit that, that's ready that's easy for me to put in their lunches. And then I have you know, at home I have this big thing of celery that's already cut up and put into water. And I have this big thing of carrots.*

Healthy eating needed to be valued in order for individuals to put effort toward being prepared for their meals, but even when it was valued, time could still be a barrier to packing healthy food. *"I make both of our lunches each time because [spouse] is not a morning person, so [he/she] would grab a Michelina's, and stuff"* (Staff 2).

Parents are Expected to Provide Children with Healthy Food. It became clear throughout the interviews that the adult participants felt as though parents have an

obligation to provide healthy food for their children, even with all the existing barriers to healthy eating. Staff 1 expressed his/her perceived norms for parenting practises:

> *because I obviously am more concerned about my children's health than my own. [...] we have the same rules as most people do, or I assume. a well-balanced meal, lots of fruit, lots of vegetables, um your carb, your protein. No juice at dinner, and you don't get dessert unless you finish. The usual."* (Staff 1)

The expectation was that parents should be providing children with healthy meals, and enforcing certain rules around eating behaviour. When discussing the food that students brought to school, Staff 9 stated, *"I'm a parent. I'd never have let my child in grade [number] have a sucker for recess,"* again demonstrating the belief that parents should not allow an unhealthy habit such as this. Also, Staff 2 said, *"everyone craves chocolate and salty things. That's just in nature right? You know, and it's up to the parent to be the adult and be like 'No, you can't, you shouldn't be eating that,'"* which added to the fact that it was up to parents to regulate what their children were eating.

Additionally, many of the participants seemed shocked at how many parents were not fulfilling this duty. When discussing his/her experience with student lunches, Parent 4 said:

> *Well I really think it's in a crisis right now. [...] I've met with the principal, and I've said to some of the staff here that I don't know how these children are growing. Actually. Like really, seriously, I don't know how their bodies are functioning on, on such highly processed, you know kind of chemical laden, artificial food, packaged food.*

This parent really did not understand how children could be fed such unhealthy food, and similarly Staff 2 said, *"I don't know how a parent can let them out of the house with a bag of chocolate and not a sandwich or anything."* Providing children with unhealthy food was seen very negatively and almost unacceptable.

Need to Educate Parents about Healthy Eating. Many of the participants

disapproved of parents giving their children unhealthy choices and parent education level

was viewed as the biggest part of this problem. It was suggested numerous times that the

school should offer nutrition education to parents to help mitigate this issue. Staff 3

identified the impact that the lack of nutrition education had in his/her classroom:

> *Some of the parents maybe in my particular class, just aren't educated. I had a*
> *parent say *sigh* 'My son needs a healthy snack, why?' Like, really!? *laughs**
> *[…] But some of them just don't understand why they need healthy snacks, OR*
> *even know what's healthy.*

Another staff member conceded that more education for parents might help children eat

better, and mentioned that schools would be a great setting to offer parents with that

opportunity:

> *more education for parents. And I think that is something that schools *sigh* it's*
> *not our responsibility, but it might be an easy way to reach parents. […] it's an*
> *easy avenue, it's free, it's close by"* (Staff 11).

The view was that schools have the ability to reach out to the parent population because

parents are already connected to schools through their children. Furthermore, one of the

parents expressed interest for educational programs being offered to the parents at the

school because *"as parents, we, we get no training. We get training to drive a car.*

There's not training to be a parent. Zero. None" (Parent 4). This comment suggested that

parents would attend an education program at the school.

Suggestions for Education Approaches. Participants proposed many ways that

the school could be involved in educating parents about nutrition, but it was stressed that

any information would need to be presented as suggestions or options for the parents

rather than a lecture on what parents are doing incorrectly. *"You don't wanna say you're*

wrong! You just wanna say […] Here try this! You know, this is how easy it was […]
more on the positive note" (Staff 2).

Numerous suggestions were given in terms of what information should be covered in parent education programs, as well as how the programs should be carried out. Parent 4 thought that parents should be taught *"about the consequences. So it's NOT doing this for your children, is resulting in […] fillings and cavities. […] It's not just the brushing, it's also the exposure to the sugar,"* and that parents should be given, *"techniques about, how to um, make it easier, to provide a healthy, lunch for your kids."* because he/she believed that healthy eating takes a lot of time and effort. Not only was it important to consider showing the parents how to make a healthy lunch for their children, but also *"how important it was to pack healthy lunches"* (Staff 10), to understand why the time and effort is needed. In attempt to thwart purchasing convenience food and show parents the value of the school lunch program, Staff 7 wanted to see parents being explained, "*That I know it's like 14 dollars a week, but you can spend almost 14 dollars a week buying 5 of those [lunchables] that aren't quite as healthy."*

Participants thought that parents could receive these messages in a variety of different ways. One idea was to have a nutritionist talk to parents when they sign their children up for grade primary, *"during primary orientation um, we do things for, our OT comes, or speech language person, but if we had a nutritionist come […] maybe that would be good too"* (Staff 10). Additionally, it was suggested that one of the local grocery stores could come do a taste-test session with healthy choices for parents and students, while providing them with some easy recipes of how to make the options they have tried:

But it's too bad like [Grocery stores] wouldn't do something where they'd come in and have the tasters at the school set up for kids and parents to come in, but healthy choices. Right? And then they come in and show them, this is the box, this is the recipe, this is how we did it, you know (Staff 2).

It was expressed that this idea could also be beneficial for the grocery stores because the parents would know exactly where to buy the products to make those healthy choices. Another idea involved using the school to promote the program so that all of the parents would hear about it, but not actually holding the education piece at the school. Staff 5 suggested this:

Maybe like in the community they could do it, or something. [...] if we promoted it in the schools, then they would know about it, [...] something free where teachers or like nutritionists offered to show them how to make a healthy, you know, affordable lunch.

The last idea put forward was seen by Staff 10 in another school, and he/she believed it would be very beneficial for parents at any school:

Once a month I think, they had a group of parents come in and they cooked with a, I don't know if it was a dietitian. And they made, they brought the ingredients with them and they made it all together in this huge kitchen and then they would have stuff to take home and put it in the freezer.

This initiative to provide cooking classes was very important, because cooking skills were discussed by participants as being directly related to one's ability to eat healthy food:

I *can't imagine going to the grocery store and buying frozen dinners [...] I never learned how to cook those things from my mom. She always showed me how to cook actual meals, like spaghetti sauce with meat and vegetables, things like that.* (Staff 5)

However, if a parent did not possess any cooking skills, they could not pass on that knowledge to their children, and not knowing how to prepare food could lead to a reliance on fast-food or pre-packaged foods because they were simple to heat up.

I didn't know how to do anything when I moved out. When I left my parents, I lived off soup for a week [...] If I could get it in a corner store and heat it, I ate it. If I could drive past it and there was a golden arch in front of it, I ate it. (Parent 1)

Evidently, people needed to develop some scope of cooking skills in order to truly be able to provide healthy food for themselves, and schools might be able to assist with this by hosting cooking classes.

Summary. The adult participants believed the food students were bringing to school was very unhealthy compared to any of the food that the school provided. The perception was that parents have the most control over children's eating habits and they were responsible for sending this unhealthy food to school. It was also expressed that parents faced numerous barriers to providing their children with healthy food: healthy food was more expensive than unhealthy food; healthy food took more time and effort to prepare; and healthy eating often required planning ahead, which again required more time and effort. Despite all the barriers that were discussed, the adult participants still expected parents to provide their children with healthy food, and believed that one of the main reasons parents were not fulfilling this duty was because they were not educated enough. The school was seen as an excellent venue to educate parents because parents are directly linked to the school, and numerous different methods were suggested for the school to try.

Chapter Summary

The chapter began by outlining the way that each participant group described healthy eating behaviour, the school food environment and the Food and Nutrition Policy to provide some background information to the themes that followed. The first theme presented was the perceived role of the school in student eating habits. The school food environment was only believed to impact student eating behaviour when students got to try a food or beverage that they had never had before. Within the school setting, the

school's eating environment, school staff members, and peers were seen as factors that influenced student eating habits. The time and space available for eating in the school affected the food that students were able to consume. Students often modelled their behaviour after authority figures, so school staff influenced students through the eating behaviour they displayed at the school. Also, students were impacted by the healthy eating education they received from school staff members. Lastly, students were influenced by their peers but this was either a positive or negative influence. Peers sometimes encouraged classmates to try new foods, which was a positive influence when the new item was a healthy choice. However, peers often pressured the other students to eat unhealthily because unhealthy choices were more popular than healthy. In terms of changes to the school food, students wanted to see healthier options provided by the school. Parents wanted to see healthy sides as part of the lunch program, and also requested the presence of healthy choices during school-wide events. The school staff wanted the chocolate milk to be the same low price as the white milk, and would like healthy choices provided to students during the school's Sports Day.

The second theme presented was that the school culture helped to support healthy eating to the students. This culture of support was created by school staff, parents, and the community working together to promote healthy eating, and allowed to school to focus on implementing the Food and Nutrition Policy. Staff members were identified as instrumental in supporting a healthy school food environment through initiatives going on in their own classrooms that promoted healthy habits. One of the reasons staff provided their support was because unhealthy food was noticed to have a negative effect on student behaviour, such as focus level and mental health, in the classroom. Parents were also

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observed to be important for creating a supportive environment because they influenced the food provided during class parties and ran healthy eating initiatives. The participants believed this school was focused on nutrition, but the school needed additional support from community members and organizations to be able to impact student eating behaviour further.

Even with a focus on nutrition, this school still faced barriers to implementing the Food and Nutrition Policy. The cost of food in the community impacted the food in the school because the school tried to provide food at a low cost to students, and healthy food was more expensive than unhealthy food. The school required convenient food options from the community because the school did not make any food itself, and these options tended to be less healthy. Student preferences were perceived to limit the health of school food because the belief was that children do not like to eat highly nutritious food, and the school would rather provide food that students will eat. However, there were participants from all three groups who stated that children do enjoy healthy food. The inability to think of new school initiatives that did not use food as the focal point was another barrier to following the policy. Finally, social norms were perceived as influencing school events because it was seen as acceptable to eat unhealthily during social events and the holidays.

The third and final theme presented was that the food students bring from home was the unhealthiest part of the school food environment. Not all students received food from the school each day, and many were bringing their own food from home. It was believed that parents had the largest control over the food brought from home, and that parents were facing several barriers to sending healthy food with their children. Again, healthy food was seen as more expensive than unhealthy food, so financial resources

often dictated how healthy the food sent to school was. Also, healthy food takes more time and effort to make than unhealthy food, so it was believed that parents relied more on convenience food especially considering most parents were in the workforce. Lastly, it could take more work to plan ahead and pack healthy lunches, so this was also considered a barrier to some parents. Attached to this theme was the belief that parents should be providing their children with healthy food, but a lack of education was inhibiting this practise. It was believed that the school should try to educate parents on the importance of healthy eating so that they can provide their children with nutritious food.

Chapter 5: Discussion

This study explored student, parent and school staff perceptions of the school food environment and its ability to impact student eating habits. The Social Ecological Model (SEM) was used as a lens for the study, so it was also used to outline the discussion. Through the SEM, this chapter explores the influences on student eating behaviour that the participants believed to exist within the school environment. Following that, this chapter looks at the factors impacting the school food environment, according to the participants. To conclude, this chapter discusses implications for health promotion and suggests ideas for future research.

Influences on What Students Ate in the School Environment

Throughout the focus group and interviews, participants discussed many ways that the school environment impacted student eating behaviour beyond just the food that the school provided. These factors were broken down into the individual, interpersonal and organization levels of the SEM. The community and public policy levels are not included in this section because participants did not discuss these two levels as having a direct impact on student eating behaviour within the school setting.

Individual Level

Knowledge. At the individual level, schools were discussed in terms of their role for providing knowledge to students through education. Health education is defined as a set of communication activities pertaining to knowledge, beliefs, attitudes, values, skills and competencies, and includes the topic of nutrition (International Union for Health Promotion and Education [IUHPE], 2010). Participants mentioned that some children did

not receive health information from any other source, so the school may be the only chance for children to receive healthy eating information. Also, even if children were receiving health education from other environments, participants stated that the more information anyone knows on healthy eating, the better off they will be. The school's role in providing health education was viewed as an important one.

Research shows that knowledge is sometimes connected to behaviour, which confirms the importance of health education. Before children will be able to make healthy choices, they need to first understand what a healthy choice is and why it is important to make that choice (Sobal & Bisogni, 2009). However, research also found that knowledge does not always lead to behaviour change. Evaluations of school-based nutrition initiatives that focused strictly on providing healthy eating information found improvements in knowledge level, but there was no significant behaviour change among elementary school students (Ellis & Ellis, 2005; Harrel et al., 1998; Moore et al., 2009). The inability to induce behaviour change may have been related to the educational approach that these initiatives used.

Several parent and staff members alluded to the importance of engaging students in more 'hands-on' education activities related to healthy eating. An extensive review of nutrition interventions for children by Blanchette and Brug (2005) found that the most effective education approach was one that addressed skills and competencies, such as selecting and preparing healthy choices, in addition to providing nutrition knowledge. Other programs that utilized cooking classes with elementary school students have shown increases in cooking competency and improvements in healthy eating behaviour (Bisset et al., 2008; Cabellero et al., 2003). Getting students involved and participating in activities

is an educational approach that the school should consider for the health curriculum and for any future nutrition initiatives. It seems to be more beneficial to the students if programs are focused on building skills and competencies, as opposed to solely providing them with information.

Interpersonal Level

Peers. Peers were mentioned many times by participants as being very impactful to children at school. Both staff and parents believed that peers have the ability to get their classmates to try new foods with greater ease than parents or staff members. Research demonstrated the influence of peers on eating behaviour, by showing that children decided to eat food they did not like when this consumption was viewed as a way to gain social acceptance (Patrick & Nicklas, 2005). Several studies found that children who claimed not to like a certain fruit or vegetable, consumed those fruits or vegetables if they saw peers eating them first (Cullen, Baranowski, Rittenberry & Olvera, 2000; Patrick & Nicklas). Therefore, peers can be great motivation for getting students to try a new, healthy food.

Although peers were recognized as having a positive influence on children within the school environment, the study participants and current literature both noticed that peers influenced other students negatively as well. Adult participants identified peer pressure as being much more influential toward less healthy eating compared to healthy eating when students were eating their snacks or lunches. Cullen et al. (2000) found that students in grade four to six were significantly more likely to provide negative comments to peers who were eating healthy food or beverages, rather than encouraging comments, and that these negative comments were given to healthy foods but not unhealthy ones.

Additionally, it has been shown that youth consumed a higher quantity of food when in a social setting, particularly with close friends (Herman, Polivy & Roth, 2003). This finding was related to the school setting because classmates spend a lot of time together and often develop very close relationships. However, two studies found a difference in this socializing effect between normal weight and overweight children. These studies observed that overweight children ate less than they normally would when they were in a social group, and normal weight children ate more than they normally would when they were in a social group (Salvy, Coelho, Kieffer & Epstein, 2007; Salvy, Romero, Paluch & Epstein, 2007). The difference in eating behaviour may have been the result of weight stigmatization since it has been shown that close relationships, such as peers, can be the biggest source of weight stigmatization for overweight individuals (Puhl, Moss-Racusin, Schwartz & Brownell, 2008). Overall, the influence of peer pressure in the classroom may depend on other factors at the individual level, but it was generally found to have a negative effect on healthy eating in schools (Cullen et al.; Herman et al., 2003).

On the other hand, research has shown that peers can be instrumental to the success of school-based nutrition initiatives and have a positive influence on healthy eating by being the ones to educate fellow students. A couple of programs using peer leaders to educate other students about nutrition found positive changes to healthy eating knowledge and behaviour among students (Birnbaum et al., 2002; Stock et al., 2007). These studies suggested that this method is effective because the leaders felt a sense of responsibility to model the behaviour they were teaching peers about, and that the other students took messages more seriously when given by peers (Birnbaum et al.; Stock et

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al.). The school may benefit by getting students more involved in the delivery of health education.

Staff. School staff members were identified throughout the interviews as being role models to students because they were seen as authority figures. Many staff members stated that they tried to provide positive reinforcement to students with healthy snacks or food, and also tried to model healthy eating behaviour themselves. Research supports these endeavors, as some interventions that made the school food environment healthier were found to be more effective at improving student eating behaviour when school staff members encouraged and promoted healthy choices (Hoelscher et al., 2004; Mendoza et al., 2010; Perry et al., 2004).

A couple of staff members tried to influence the eating behaviour of their students by discussing nutrition with their parents. One approach used was to send notes home to the parents, and the staff member that did this did not believe this was successful because he/she did not observe any changes to the food sent to school with the children. Another approach used involved verbally discussing the issue with parents face-to-face and this method was perceived to be effective because the staff member indicated that changes were made in what the students were eating at school, and felt that the parents were very receptive during the discussions. The second approach may have been more successful because the staff member explained the effect of healthy eating on academics. If education is valued by parents, this message from a staff member can increase the importance placed on providing children with healthy food (Sobal & Bisogni, 2009).

Staff members also reported how they supported healthy eating behaviour in their individual classrooms through what they allowed students to eat in the classroom,

promoting healthier lunch choices, and using 'gems' or tokens to encourage students to bring in healthy snacks. The staff members that used these tokens reported that it was successful because more students were bringing healthy snacks for recess. However, there could be stigma attached to the students who were not bringing in healthy food and missing out on the tokens. There was often stigma associated with students who used free lunch programs in schools because they were singled out from the other students, and bullied because their families could not afford healthy food (Dunifon & Kowaleski-Jones, 2003; Horgan, 2007). Some students even reported that they would rather go hungry than be identified as being unable to bring healthy food to school (Horgan). The students who rarely or never received these tokens may have been at risk of being stigmatized by fellow classmates. Even though students did not face any consequences for bringing in something unhealthy through this system, they may have been segregated from their peers. One staff member did recognize that students became embarrassed during school initiatives like a litter-less lunch if they did not bring appropriate foods, because they felt out of place. Although the gems were used as a positive reinforcement, they had the potential to be a negative experience for students who were unable to get them.

Organizational Level

School Culture. School culture has been defined as the norms and habits that are regularly practised by the school as a whole (European Network of Health Promoting Schools [ENHPS], 2006). One staff member mentioned that the school supported his/her own healthy eating, which was significant because research demonstrated that school staff were less likely to assist health initiatives if they did not believe their own health was being supported (ENHPS, 2006). Furthermore, it was mentioned by numerous

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participants that the school provided healthy snacks and lunches for free to students who did not have anything to eat at that time. This practise not only provided those students with healthy food, but it allowed the students to focus on school the rest of the day as opposed to their hunger level (Dunifon & Kowaleski-Jones, 2003). Offering free snacks and lunches was definitely beneficial to students, but those students could be stigmatized depending on how the food was distributed to them (Dunifon & Kowaleski-Jones; Horgan, 2007). Participants in the study did not state how the free food was given out and only spoke of this practise as a very positive experience for students, so it was unknown whether these students felt any segregation.

Additionally, both parents and staff members believed the school was constantly focused on encouraging the consumption of nutritious food and that the students felt comfortable asking questions about healthy eating. Current literature stated that schools need to ingrain health promotion programs into all components of the school in order to maximize behavioural change over the long term (Greenberg et al., 2003; West, Sweeting & Leyland, 2004), and the perception was that this school had a culture that encouraged and supported healthy eating behaviour.

While the school culture existed at the organizational level of the SEM, it was also created by interpersonal interactions between staff members, staff and students, staff and parents, and staff and the greater community (IUHPE, 2010). Staff members repeatedly expressed that there were some barriers to getting some of the parents involved in school activities. For example, staff members felt that some parents believed they were separate from the school environment. School staff also thought that some parents may have had negative experiences with schools, so they have no interest in becoming involved in their

child's school. Literature stated that schools may need to make extra effort to reach out to parents who have had previous unpleasant experiences, in order to gain their support and involvement (IUHPE). To do this, schools need to explain their goals with parents, request regular feedback, and utilize parent suggestions so the parents feel as though they are contributing to the school environment, and can see that they do have a role within the school (Gleddie, 2010; IUHPE). The social environment within the school was found to be pertinent to the success of any health promotion initiative, and this included the school's relationship with parents.

   Eating Environment. Many students were eating breakfast, a snack, and lunch at school each day, and even if the food was not coming from the school, the environment in which they were consuming this food could have impacted their eating behaviour. The eating environment included the amount of time allotted for eating, and the space provided for eating. According to the participants, if there was not enough time to eat, students could not be expected to consume nutritious food, and if there was no space to sit down and eat a snack at recess, the choices for snacks were limited and often less healthy. The focus on physical activity over healthy eating during recess time was also identified in the literature. Recess was frequently discussed as a tool to provide students with physical activity and that schools have the opportunity to promote higher activity levels during recess time (Story, Nanney & Schwartz, 2009; Wechsler, Devereaux, Davis & Collins, 2000). However, in the literature, healthy eating did not seem to be considered important during recess time (Story et al., 2009; Wechsler et al., 2000). One staff member from the school believed that healthy eating was important during recess, and gave his/her students time to eat a snack while sitting down in the classroom before going outside for

recess. None of the other school staff participants mentioned such a practise so it was unknown whether the whole school did this, or if it was a personal choice of this staff member. It may be beneficial for the school to assess the eating environment and whether it is conducive to healthy eating behaviour.

   Food Provided by the School. The breakfast program was believed to be a very positive program for students because it provides access to food in the morning for children who would otherwise not get to eat breakfast. It has been shown that children who ate breakfast every day had better nutrition levels compared to children who frequently skipped breakfast, and eating breakfast each day was associated with a decreased likelihood of becoming overweight or obese (Rampersaud, Pereira, Girard, Adams & Metzl, 2005). These results indicated that the breakfast program may have been having some positive effects on student eating habits that were not directly observable by the participants. Additionally, school breakfast programs have been linked to improved academic performance among students (Kleinman et al., 2002; Rampersaud et al., 2005; Taras, 2005). This evidence provides another reason for the school to continue supporting the breakfast program outside of the benefits to student eating habits. Lastly, staff members identified the breakfast program as being a time where students could socialize with each other. Overall, this program was believed to contribute positively toward nutrition, academics, and social health. Participants also mentioned that the program was offered to any student from the school, and staff members commented that some students attended the program who did not need to because they had access to breakfast at home. While it may appear as though these students were taking advantage of the program, this

also helped to reduce the stigma attached to students who attended the breakfast program, because it was open to any student (Dunifon & Kowaleski-Jones, 2003; Horgan, 2007).

Another way that the school food influenced student eating behaviour was through exposure to new foods. All three participant groups agreed that trying new foods at school could lead to requesting those foods outside of the school environment. This impact was likely related to the fact that preferences and willingness to try fruits and vegetables were all indicators of eating behaviour, and repeated exposure has been found to actually overcome dislike of foods by creating new preferences (Contento et al., 2006; Patrick & Nicklas, 2005). Participants spoke about taste tests for healthy foods being done in the breakfast program once a week, and occasionally done school-wide with all the students. Since children tend to choose foods they are most familiar with (Patrick & Nicklas), exposing students to healthy foods through taste-tests could improve their eating behaviour. This notion was confirmed by a parent who mentioned that after participating in the school milk program, his/her child now drinks more milk at home, and by another parent whose son requested dragon fruit at home after trying it at school.

Participants in all three groups identified the pizza and crazy bread as being the least healthy options from the lunch program, and the ones that were ordered most often by students. Although the parents and school staff listed several barriers for the school to offer healthier choices than pizza, such as cost and convenience, the participants still wanted the school to search for healthier alternatives. Given the link between familiarity with food and food decisions among children (Contento et al., 2006; Patrick & Nicklas, 2005), the school should eliminate the pizza and crazy bread choices in the lunch program, or at the very least decrease the frequency in which they are sold to the students.

Another change requested to the school lunch program was to add healthy sides for an extra cost, such as a vegetable or fruit. In the focus group, students requested the school serve more apples, carrots, blueberries and strawberries, which indicated that a healthier side dish may be readily consumed by the students.

Some of the parent and staff participants suggested that subsidizing healthy options at the school would increase healthy food consumption of students. Staff members would really like to see chocolate milk being offered to students for the same price as white milk. These participants believed that students would prefer chocolate milk to the same degree as they enjoy sugar sweetened beverages such as Koolaid, so if chocolate milk were cheaper, more students would be consuming milk over sugary drinks. While reducing the price may improve access to milk, current literature did not support the idea that a switch in consumption would occur. One study found that when healthy food subsidies were introduced, participants increased their overall energy intake without changing their nutrient proportions, indicating that participants were simply eating a greater quantity of the same foods as before (Epstein, Dearing, Roba & Finkelstein, 2010). Another similar study observed a small behavioural switch to healthy food consumption when subsidies were introduced, in conjunction with an increase in the price of less healthy choices (Powell & Caloupka, 2009). Reducing the cost of healthy choices may not be enough on its own to result in healthier eating behaviour, and the school did not control the price of sugar sweetened beverages because it was not selling them to students. Evidence did not indicate that changing the price of chocolate milk would produce the desired effect in the school.

The last suggested changes were to have healthy options available in addition to unhealthy choices during school social events, or to only offer students healthy choices during school-wide events, such as Sport Day. Availability of food is a large determinant for making food decisions (Larson & Story, 2009; Sobal & Bisogni, 2009), which is important for schools to remember when deciding on food and beverages to offer students. Children cannot make healthy choices if healthy choices are not available to them (Larson & Story). By offering only healthy items, the school could help to ensure that students are eating healthily, or by offering both healthy and unhealthy food during school social events the school could at least increase the chance of healthy eating behaviour being practised.

Influences on the Food Provided in the School Environment

Throughout the focus group and interviews, participants discussed many factors that impact the school food environment, and the school's ability to provide healthy choices to students. These factors included personal choices of school stakeholders, cost, convenience, social norms and the Food and Nutrition Policy. All of these factors had an indirect impact on student eating behaviour, by influencing the food that was provided to students in the school environment.

School Stakeholders

Students.

At the individual level, staff stated that student preferences influenced the lunch program choices because if students did not order the available choices then there could not be a lunch program at the school. Research did show that children tend to put a lot more emphasis on taste rather than health when choosing what to eat (Contento et al,

2006), and both the parents and school staff members believed that children prefer unhealthy choices over unhealthy ones. Also, one staff member mentioned that the school tried to make all of the lunch choices quite healthy at one point, but the students were not ordering anything, so this recollection substantiated the belief that students do not prefer healthy food.

However, another staff member spoke about the school slowly integrating healthy choices into the breakfast program so that once it was all healthy food the students did not even notice the changes. This could be related to the fact that repeated exposure to foods often created preferences for those foods (Patrick & Nicklas, 2005), so slowly exposing the students to healthier options allowed them to develop preferences for the foods over time. Additionally, many staff members spoke about instances where children chose healthy food over unhealthy food when given the option, so the generalization of students always wanting unhealthy foods did not stand in all cases. The student participants also negated the generalization when they specified the foods that they wanted the school to provide. Many of the requested items were unhealthy, such as a cheeseburger or milkshake, but the students also asked for a variety of fruits and vegetables such as apples and carrots. Although some students preferred unhealthy foods, others did not, and therefore the school should not base its food selection on what it is believed that students will or will not eat.

Parents. Across all three participant groups, parents were seen as the main food providers for children and many studies have confirmed this to be true. Parents or guardians were found to have the largest impact on children's eating habits because they model eating behaviour, determine the food available to children and set rules around

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eating behaviour (Gillespie & Johnson-Askew, 2009; Golan, Fainaru & Weizman, 1998; Larson & Story, 2009; Patrick & Nicklas, 2005; Yuasa et al., 2008). Parents were observed as impacting the school food environment through the food that they sent to school with children either for snacks and lunches, or for class parties and events. Aside from simply sending food to school, parents who took a more active role in the school food environment were seen as having a very positive impact. One parent took it upon his/herself to offer healthy taste tests in the breakfast program, another parent decided to organize the food that was sent to class parties so that the food was healthy, and a third parent set up a retreat for the staff at the school to learn more about healthy eating.

Although parents were having a positive effect on the school food environment, they were mostly seen as a negative influence. Most students did not order lunches from the school every single day, and the school did not offer food to students during recess time, so a large amount of food that students ate during the school day came from outside of the school. School staff perceived the outside food as being the unhealthiest part of the school environment, and they believed parents were the ones responsible for purchasing and sending this food with the students. Research has shown that in most households, parents or guardians decided what food to buy, and what food children were allowed to eat, which included the food that children took to school (Larson & Story, 2009; Yuasa et al., 2008). Parents may only be able to dictate what children eat up to a certain age (Yuasa et al.), but all three participant groups felt as though this control was in place at the elementary school level. Since parents were the ones responsible for sending in food to the school, parents also affected class events or parties. Even if the staff members requested healthy options from the parents, they found that there were always some

parents who sent unhealthy food, or treats. This parent contribution was viewed as a limitation toward the level of health for school events.

Parent and staff participants spoke about many barriers for sending healthy food to school with students, but one of the biggest barriers perceived to be in place was a lack of education. There was an expressed need for parents to be more educated on nutrition, and the school was identified as being a good venue for this education to occur. Research also recognized that schools can impact the parent population because they are directly connected to the school through their children (Stewart-Brown, 2006). Participants gave many suggestions about content that should be covered with parents related to nutrition, and methods for educating parents. Two of the topics identified by participants were also recommended in the literature as being important for behaviour change. The first educational topic was the importance of providing children with healthy food. When a behaviour is not valued at the individual level of the SEM, it is very unlikely to be practised (Gregson et al., 2001; Sobal & Bisogni, 2009), so education may be able to create a greater sense of worth for feeding children nutritious food. This study provided many reasons for healthy eating to be valued: improved academics; mental health benefits; and the physical consequences of eating unhealthily, such as cavities.

The second educational topic that was recommended was cooking skills. Schools that have hosted cooking lessons for parents and students have shown success at increasing self-efficacy in parents who participated, which indicated an increased likelihood of practising healthy eating (Bisset et al., 2008; Cabellero et al., 2003; Liquori et al., 1998). Evidence suggested that offering cooking classes to parents and students would help to improve student eating behaviour and the school food environment through

the food that parents send to school. Furthermore, the program that was evaluated by Bisset et al. (2008) found that parents who participated in cooking classes were more likely to become involved in other school activities. Although most of parents who participated in the cooking workshops were already involved in school activities, the ones who had no prior engagement did increase their involvement in the school (Bisset et al.). Staff members spending time with parents at the school may help to increase parental engagement in school activities. Therefore, offering cooking classes or other nutrition programs with parents at the school may have the added benefit of receiving greater input and participation from parents in the school's activities.

Staff. In addition to having an effect on student eating behaviour, school staff members were mentioned as being integral to the food that students received from the school. Staff members were responsible for the parties or events within their own classrooms. Some school staff members requested that healthy food was sent in for these events, or took full control of the food in the classroom by providing it themselves, such as the teacher who served yogurt and strawberries for Valentine's Day.

Parent and staff participants discussed creativity as a barrier for staff fully supporting a healthy school food environment. One staff member in particular commented on the fact that fun events at the school used to focus on unhealthy food, so it was sometimes difficult to get the staff to think of new ideas for these events. Research found that when innovation is lacking, it can take leadership and dialogue to foster newfound creativity and enthusiasm (Gurteen, 1998; Norris & Pittman, 2000). Leadership in this area does not have to be the principal's responsibility, but any staff member or community member can take the lead on proposing and supporting new ideas (Norris &

Pittman). Additionally, a dialogue with school staff members from other schools can lead to some creative brainstorming and different ways of thinking that help to develop new ideas (Gurteen).

Moderation. One major concept impacting the three stakeholders groups' beliefs about eating behaviour was that of moderation. Nearly all of the participants defined healthy eating as including the 'other' category, or unhealthy choices, as long as they were being consumed in moderation. However, none of them described exactly what the term moderation meant to them or quantified the amount in which less healthy choices could be consumed that would be acceptable for a healthy diet. The dictionary definition of moderation was similarly vague, as it stated that moderation is "the avoidance of excess or extremes, especially in one's behaviour" (Oxford Dictionaries, 2012). Overall, it was very unclear exactly what moderation meant in terms of eating behaviour, making it difficult to use moderation as a parameter for healthy eating behaviour, yet it was a very commonly used term.

Since there was no distinct definition for moderation, the term was left up to an individual's interpretation. The constructions that each person created for the word moderation could be impacting their eating behaviour (Annells, 1996; Burr, 2003). Furthermore, there may be varying classifications of the term depending on the food product that an individual is considering. For example, one parent spoke about it being acceptable to eat pizza once per week, and one staff member mentioned that fast food should be restricted to once per month. This variability made the concept of moderation even less clear. The way that the individuals within the three stakeholder groups defined moderation could have impacted both the food that students consumed in the school

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setting and the food that the school provided to the students because it affected their acceptance level for unhealthier choices.

There needs to be a more clear definition as to what it means to consume a moderate amount of unhealthy food while still remaining within the boundaries of healthy eating behaviour. Individuals needs a more tangible recommendation to follow, such as a number of times per week or percentage of daily food intake, instead of basing their eating habits on their own personal interpretations of moderation. Information such as this would help give school stakeholders a stronger idea as to how often it is appropriate to provide unhealthy choices within the school setting.

Cost. Participants frequently discussed the fact that purchasing healthy food was more expensive than purchasing less healthy items. Literature agreed that healthy food was more expensive, since it was very inexpensive to manufacture foods high in fat and sugar compared to growing fresh produce or raising animals for meat (Drewnoski & Darmon, 2005; Le Petit & Berthelot, 2004). The cost of food within the community was seen as impacting the food available to students in several important ways. The price of food determined what parents could afford to buy for their children, and participants believed that the higher cost of healthy food resulted in the students bringing very unhealthy food into the school. Having limited financial resources reduced the access to healthy food (Drewnowski & Darmon), and this did not only affect the food students brought from home, but it also affected what parents purchased from the lunch program or milk program. In addition, the price of food affected the school food environment because it determined what the school could afford to purchase for students during special events. Staff members mentioned that providing every student in the school with a hot

dog was much cheaper giving them all a sandwich. Ultimately, the school cannot be expected to provide the students with inexpensive, healthy choices, when the rest of society is not able to do so.

Convenience. Participants repeatedly cited the vast availability of convenience food in the community as a barrier to healthy eating because they believed that healthy food takes a great deal of time and effort to prepare. Just like cost, convenience was seen as impacting the school food environment through the food sent to school with students, and through the food that the school provided. School staff noted that parents sent a lot of pre-made or packaged food with their children, and reasoned that parents did this because it was easier than planning and packing healthy snacks and lunches. Current research demonstrated that pre-made options were typically less healthy than fresh produce, and that perceived level of convenience did influence eating behaviour (Fitzgerald & Spaccarotella, 2009). Furthermore, convenience was found to be a stronger barrier to healthy eating behaviour when nutrition was not valued at the individual level (Fitzgerald & Spaccarotella; Larson & Story, 2009). Again, educating parents about why healthy eating is so important may lead to greater effort in providing children with healthy food, and this could also influence the food sent to school with their children.

Convenience also impacted the school food environment by determining what kinds of food and beverages the school could easily get from community food providers. Both staff and parents recognized that because the school did not have a cafeteria, options were restricted to foods that were both quick and easy to obtain from community retailers. This decreased the health of the school food, given that Fitzgerald and Spaccarotella (2009) found these quick and easy options to be less healthy. Convenience was also

identified as impacting the selections for school-wide events. After one parent mentioned

not being overly happy with the food and beverages at these events, he/she added that the

school chose foods that were fast and easy. Additionally, the adult participants identified

the school to be in a relatively low-income neighbourhood, and research showed that low-

income areas typically have more fast-food and convenience store food retailers

compared to grocery stores and markets (Veugelers et al, 2008). Therefore, the food

providers that were actually present in the community may have further limited the

options that the school had to provide to students, and decreased the health of the school

food environment.

       Social Norms. Participants across all three groups stated that it was normal for

healthy eating behaviour to be a lot less important in social situations and during the

holidays. It was also expressed that this behavioural shift is acceptable, which affected the

school food environment because the participants thought it was appropriate for the

school to serve unhealthy choices during school social events, or any holiday event at the

school. Herman et al. (2003) found that it was the norm for individuals to consume a

greater quantity of food than would normally be eaten when in a social setting.

Additionally, literature identified holidays as a barrier to healthy eating because people

typically viewed them as a break from their normal routine, which included their normal

eating patterns (Kim, Eves & Scarles, 2008).

       Although social situations often resulted in unhealthy eating, Herman et al. (2003)

did also find that being in a social group with peers who exhibit healthy eating behaviour

made individuals eat more nutritiously than they normally would when they were trying

to impress those peers. Another study which looked at social norms in different

organizations, observed an increased intake in participant consumption of fruits and vegetables when the norms were more supportive of healthy eating behaviour (Sorenson et al., 2007). Evidently, social norms within the school can have a positive or a negative impact on student eating behaviour, so the culture of the school is critical to determine whether the school has a health promoting environment. The social norms during holiday and social events at the school were not described as being supportive toward healthy eating, so these were likely influencing student eating behaviour in a negative way. However, aside from the school events, the school culture was believed to be supportive of healthy eating. The inconsistency in healthy eating messages received at these events may have negatively impacted student eating behaviour, since behaviours are best promoted when a greater number of environments provide messages that complement one another (Gregson et al., 2001; Sobal & Bisogni, 2009).

Another social norm discussed by many of the adult participants, was the fact that the majority of students were consuming unhealthy snacks and/or lunches at school each day. One parent specifically stated that "*80 percent of the children are eating a terrible lunch*" (Parent 4), and other staff members confirmed that it was in fact the norm for students to bring unhealthy food and beverages into the school much more often than healthy choices. However, many of the participants who spoke about the very unhealthy eating habits of the students also suggested that it was acceptable for the school to serve unhealthy choices during school events because the events occur very infrequently throughout the year. The rationale that was given was not logical as it was clear that most of the students were already consuming unhealthy food quite regularly. The adult

participants were not always considering the school events within the entire context of the school food environment and the students' normal eating behaviour.

Food and Nutrition Policy for Nova Scotia Public Schools. The parent and staff participants believed that the Food and Nutrition Policy was beneficial to the school food environment because the guidelines made sure students received nutritious food, and it also helped the staff members to eat better too. Policies are important for ensuring optimal physical and social environments for health through the rules they impart (Hobbs, 2008), but if they do not have support from the individuals who will use the policy, implementation can be affected (Gregson et al., 2001). It was expected that school staff knew about the policy because they were part of the organizations to which the policy applied, but data collected in this study found that staff did not know all the details about what the school is expected to carry out. For example, staff members were uncertain about the criteria that determined which food and beverages the school was permitted to provide, and one staff member questioned whether the pizza and crazy bread would be considered healthy enough to serve under the policy. This finding was problematic for implementation given that participants believed it was up to the staff in each school to decide how the policy would be followed. Staff members were determining which food and beverages to provide within the school, yet they may not have been sure if the school was actually permitted to serve those options.

Also, staff cannot be following all twelve directives requested by the policy if they do not know what the directives are (Gregson et al.; IUHPE, 2010). It came out during the interviews that many staff members did not know the directives from the policy, beyond trying to make the food provided by the school healthier. For example, during one

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interview the staff member asked the researcher for more information about the policy. When the researcher mentioned the policy stated that food should not be used as a reinforcer, the staff member admitted this practise was used in his/her classroom, which demonstrated that the policy was not likely being completely followed if staff were not aware of what full implementation meant. Additionally, one staff member recognized the lack of awareness for the policy among the staff in the school and he/she requested that the school be given more specific instructions on how to implement the policy appropriately. Therefore, this school may benefit from guidance on how the staff could improve implementation.

Overall, participants believed that the school was following the policy well, except for one parent who expected that the lunch program would be healthier because he/she knew that there was a nutrition policy in place. However, it was expressed that the school did not always try to provide healthy choices during school social events. The Food and Nutrition Policy did permit the provision of unhealthy foods, or foods of minimum nutrition, once or twice a month at school-wide events, but it also stated that the minimum nutrition foods were not be used to fundraise for the school (NSDE & NSDHPP, 2006). While the policy allowed unhealthy food and beverages during school-wide events, the majority of participants referred to these events as fundraisers, so this behaviour was actually prohibited by the policy because the school was making money from selling minimum nutrition items. The fundraising and special functions directives of the policy were not seen to be connected by the participants. Many of the school staff members discussed the fundraising directive, but did not relate it to the fact that some of the special events held at the school were raising money for the school through the sale of

food and beverages. This disconnect was problematic for policy implementation because it was typically unhealthy options that were used to fundraise for the school during any special event.

Participants also discussed that these events were typically planned by parents of the school, but the parent participants had very limited awareness on the rules of the Food and Nutrition Policy. If the other parents of the school had similar awareness levels for the policy, then they would have been unable to apply the rules to the school events that they were involved in (Gregson et al., 2001). Therefore, the school should work to reach out to the parents who are planning these events and explain to them what the policy entails, so that there is a greater chance of the policy being followed during school events.

The only negative perceptions related to the policy were related to the fundraising regulations because it was believed that unhealthy foods were acceptable for students on occasion, and the school had to work harder to raise money compared to when it sold chocolate bars and baked goods. The fact that the policy was not seen as important for fundraisers and school-wide events may have limited the potential impact of the Food and Nutrition Policy. Policies were found to most effective when they sent the same messages across the physical and social environments of an organization (Gregson et al., 2001; Hobbs, 2008), and within schools this included any event at the school and any action associated with the school, like fundraising (IUHPE, 2010). Negative perceptions about the policy being implemented in these two areas could have decreased its overall effectiveness even though the rest of the policy was believed to be beneficial. Schools need to know that all the directives of the policy are mandatory, and they should be held more accountable for implementing each directive.

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Study Limitations

The study had several limitations. One of the limitations came from the fact that the study was set up as a convenience sample within the selected school. All staff, grade five students, and parents of grade five students were invited to take part, but participation was voluntary so this may have affected the results due to the characteristics of the individuals who chose to participate. While the participants were quite diverse on a number of demographic characteristics, they were likely interested in the topic, and willing to talk about their experiences and perspectives. The study may have missed the opinions from individuals who were not very interested in the nutrition level of the school food environment, or who are unwilling to share their perspectives. This limitation may have been especially relevant for the parent participants because recruitment changed for that participant group. Since the principal of the school contacted parents who were already involved in school activities in some way, those parents were likely concerned about the overall environment of the school, including food and nutrition. However, despite the fact that most of the participants seemed to believe that nutrition was an important issue, their demographics and overall life experiences were clearly very different which created an extremely rich and diverse data set.

Secondly, the characteristics of the researcher may have been a limitation. She had limited experience conducting qualitative interviews and focus groups, so this may have hindered the depth of the responses given by participants. The researcher tried to mitigate this by practising the interview scripts ahead of time with a few volunteers from her master's program to get a sense of what the responses might be and how best to probe for further information, or even re-word some of the questions. Additionally, the

demographics of the researcher may have impacted the responses given by participants if they were not completely comfortable sharing information with a Caucasian, 24 year old female. Moreover, the researcher came with biases about the importance of the policy within the school food environment, but tried to remain reflexive throughout the entire process to ensure that she understood the participants' perspectives and not her own. Field notes and triangulation with some of the transcripts assisted in remaining reflexive.

Thirdly, although focus groups are efficient in the sense that they are able to gather a lot of information in a short period of time, they do face several limitations. There can be certain participants who dominate the discussion, leaving the others with little chance to speak (Gibbs, 1997; Smithson, 2000). Participants sometimes respond based on social desirability in the presence of their peers (Gibbs; Smithson). Finally, data from focus groups can conform to the norm as participants with unusually positive or negative experiences are less likely to express those experiences, or downplay those experiences (Gibbs; Smithson). The researcher worked to ensure all participants had the chance to speak for each question. She also emphasized the fact that there could be no incorrect answers both before and during the focus group, and encouraged new, diverse responses throughout the session.

Implications for the Health Promotion and Future Research

This study adds to current literature by qualitatively exploring student, parent and staff perceptions of the school food environment within the context of the Social Ecological Model. In order to optimally promote healthy eating behaviour in children, their food decisions must be considered within a larger socio-cultural context (Ristovski-Slijepcevic et al., 2008). One of the strengths of this study was that it looked at the

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perspectives from students, parents and school staff. Other studies have looked at these groups individually, or quantitatively explored the eating behaviour of students and parents, but this study was unique in its approach. This research project sought to understand the similarities and differences among the perceptions from the three groups, and how they collectively impacted the school food environment because they each had a strong influence on the school setting. The use of qualitative methods was another strength of this study because it demonstrated where the participants' thoughts and opinions were inconsistent, and allowed for greater depth in understanding the complexity of the school food environment and food decisions that a quantitative study would not have found.

This study also adds to the literature by looking at the perceived impact of the School Food and Nutrition Policy on the school food environment, and the barriers and facilitators present for implementing the policy. While it was known that health promotion policies were most successful when they were supported by consistent messaging from multiple environments (Gregson et al., 2001), it was unknown whether the School Food and Nutrition Policy was able to achieve this high level of support for implementation. This study was also unique because no one had assessed how well the Food and Nutrition Policy had been integrated into the school setting in Nova Scotia yet. It was up to each individual school to ensure that the policy was being implemented, and there was no person or position to hold the schools accountable, so it was important to address the extent and ease of implementation.

Enhancing the School's Influence on Student Eating Behaviour. This study found that the school did appear to have the ability to impact student eating behaviour,

but there were many additional things the school could have been doing to take advantage of the influential capacity. At the individual level, the school should try to incorporate more hands-on learning activities into the health curriculum because teaching children skills and competencies has been found to be more effective at inducing behaviour change than strictly teaching them information. This approach to education is not only important for the school to consider for the curriculum, but also for any nutrition initiatives it may carry out in the future. One of the best ways to do this is to engage students in cooking classes because it teaches them what to do with fresh ingredients (Blanchette & Brug, 2005). The school should also continue to do taste tests that expose students to healthy foods. These activities can develop new preferences for food and familiarity with healthy choices, which can then transfer to eating habits outside of the school environment (Contento et al., 2006; Patrick & Nicklas, 2005).

At the interpersonal level, research has found that peers can exert a positive or negative influence on student eating habits (Birnbaum et al., 2002; Herman et al., 2003; Stock et al., 2007). When students are eating among themselves, peers seem to have more of a negative impact (Cullen et al., 2000), but when students feel a sense of responsibility, they have a positive influence on their peers (Stock et al.). It would be beneficial for the school to harness the positive side of peer pressure within any nutrition-based intervention. The school can do this by getting students involved through teaching their peers about healthy eating, and encouraging their peers to try new foods during taste-tests.

The data collected in this study really demonstrated how important it was for the school to have a culture that supported health and nutrition in order to impact student

eating behaviour. School culture was created through many interpersonal interactions (IUHPE, 2010), and therefore there needed to be a collaborative effort from key school stakeholders to target healthy eating. Ultimately, staff, parents, and the school community needed to work together in order to cultivate a healthier school environment and maximize the school's influence on healthy eating behaviour.

School staff members must recognize that they are role models to the students, and that when they encourage healthy eating and model healthy eating behaviour, students are more likely to make healthier choices (Mendoza et al., 2010). Healthy eating and nutrition initiatives that were found to be successful usually included ongoing capacity building opportunities for teachers and associated staff (IUHPE, 2010). Ensuring that school staff have opportunities to develop the skills for supporting healthy eating initiatives is critical to the effectiveness of those initiatives. Staff members should also be reminded that healthy eating can help to improve behaviour and mental health among students in the classroom so that school staff understand how these efforts can be of benefit them as well. Additionally, it is important for staff members to consider the fact that when all students do not have an equal chance to participate in an initiative or an activity, stigmatization can result (Horgan, 2007). Being aware of this can help to make sure that students do not end up feeling alienated from their peers.

Schools can also impact the parent population (Stewart-Brown, 2006), and it was repeatedly recommended that the school offer nutrition education to parents. Since skills and competencies have a more profound effect on behaviour compared to just knowledge (Wethington & Johnson-Askew, 2009), it may be very beneficial for the school to host cooking lessons in conjunction with nutrition education, so parents can develop the skills

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and confidence necessary to provide healthy choices for their children. Furthermore, offering cooking classes or other nutrition programs at the school might help to build relationships between staff members and parents, while increasing parental engagement in school activities (Bisset et al., 2008). Gaining greater parent involvement may enhance the overall culture of the school and help to establish a healthier school environment.

One approach that was found to be very effective for parent programming used parent volunteers to lead the cooking session as peers, instead of school staff or health professionals (Marshak, De Silva, & Silberstein, 1998). Staff members also felt like many of the parents were reluctant to trust the school, so parents may be more apt to get involved with an initiative like this if it is delivered by their peers. Given that the participants believed the school staff cannot take on anymore initiatives by themselves, using parent volunteers to offer educational programs may be an excellent approach for this school. However, it would still be important for staff members to be present and even participate in the workshops, so they can work on building relationships with the parents and develop a more collaborative school culture (Bisset et al., 2008; IUHPE, 2010).

The perception from the participants was that the school needed additional input from outside of the school to be able to promote healthy eating further to students. Receiving added parental and community support would enhance the health promoting culture of the school, but it would definitely take work from the school to engage the wider community. In order to do so, the school needs to explain its health education goals with parents and the community, request regular feedback, and utilize outside suggestions so that parents and community members actually feel like they are contributing to the school environment (Gleddie, 2010; IUHPE, 2010). Targeting some of the parents and

community members/organizations who are more hesitant toward involvement could require significant effort from school staff, but it may also lead to greater participation and collaboration. Having more human resources within the school environment may allow the school to increase the extent to which it can target student nutrition by decreasing the expectancy placed on school staff to offer more healthy eating initiatives.

Fostering a Healthier School Food Environment. This study found that there were several areas the school could focus on to ensure it was providing students with a healthy food environment. The school should check to see whether students have enough time to finish their lunches within the time provided, or at least allow students to take some food outside with them because the belief from parents was that students were not permitted to do this. The school could also provide a seated environment for students to eat their snacks before or after they go outside for recess, as it was discussed by both parent and staff participants that less healthy choices were sent with to school with children when they had to eat on the run. Additionally, some participants requested that healthy options at least be provided in addition to unhealthy choices during school events, which was important because students can only consume unhealthy food and beverages when those are the only choices provided (Sobal & Bisogni, 2009).

Participants felt that student preferences were a major barrier to a healthy food environment because if the food is too healthy, the students will not eat it, and then it cannot benefit them. While many students may have preferred unhealthy food, that was not the case for all of them and some students chose healthy options. The school should recognize that exposure can lead to preferences, so offering pizza and crazy bread may have enhanced student preferences for these items (Contento et al., 2006; Patrick &

Nicklas, 2005). It may be beneficial to the school food environment to re-evaluate whether there are any healthier options from the community that the school could include in the lunch program. Some of the participants even expressed that they were willing to pay an extra cost for healthier lunches. It was discussed that in the past when the school tried to make the lunch program very healthy, the new options did not bode well with students. However, the school could follow the example of how changes were made to the breakfast program as it may be a more effective approach to integrate healthier options over an extended period of time rather than all at once. This method would allow students to slowly become familiar with the changes and accept them before more changes are made (Contento et al., 2006; Patrick & Nicklas, 2005), as opposed to introducing all new items at once that the students are unfamiliar with.

The school should recognize that social norms have the potential to negatively impact student eating behaviour (Sorenson et al., 2007). The social norms seemed to be negatively affecting the social and holiday events because most participants believed it was acceptable to provide unhealthy food during these events. Social norms within the school setting were very complex because they were created by students, staff, parents and the surrounding community (ENHPS, 2006; Sorenson et al.). It would take a large concerted effort to change these norms, but the shift could result in a school food environment that has a positive influence on student eating behaviour under all circumstances (Sorensen et al.). This would assist the school in maximizing the impact on healthy eating behaviour because students would receive consistent messages about nutrition from all facets of the school (Gregson et al., 2001; IUHPE, 2010).

Supporting Full Implementation of the School Food and Nutrition Policy. It

became evident from participants that there were several barriers to full scale

implementation of the policy within the school. There was one major barrier at the

community level that was beyond the school's control: cost. Policy makers should switch

the cost piece from a mandatory directive to a recommendation within the Food and

Nutrition Policy. While it was a great idea in theory to mandate affordable, healthy food

as part of the policy, it was not practical because these choices were not even available to

the rest of society at the community level. It could still be a recommendation within the

policy so that the schools continue to work toward providing healthy food that everyone

can afford, but should not a requirement because healthy, affordable options are not

always accessible.

Another recommendation for the Food and Nutrition Policy would be to take out

the directive that allows minimum nutrition foods during special events/functions. This

proposal is being offered for two reasons. The first reason is that the connection between

the fundraising piece of the policy and the events that the school holds was being missed,

so the school events were reducing the impact that the fundraising directive can have

because they were selling unhealthy choices to the students. The second reason is that

there is another disconnect between the acceptability of celebrating with unhealthy eating

behaviour during social and holiday events because of their infrequency, and the fact that

many students were eating unhealthily each day. Since the policy cannot regulate what

students bring into the school, which was typically unhealthy according to the

participants, the policy should take more control over the food and beverages that

students receive from the school by eliminating the special functions directive. However,

this is likely to be a controversial issue and further public engagement would need to take place to allow a full discussion of this approach.

Another major barrier to implementing the policy was the lack of creativity for coming up with new ways of doing old initiatives, which was found to be problematic when combined with one of the directives within the policy: eliminating the use of food as a reinforcer (NSDE & NSDHPP, 2006). This directive required that any school activities using food as a fun, motivational tool must be changed so that food was not always associated with having fun. Participants in the study spoke about the difficulty in changing the activities from the way they have always been done because parents and staff sometimes did not want to come up with new ideas. The same difficulty was described for coming up with new fundraising ideas, as the policy stated that schools cannot fundraise with minimum nutrition foods, and recommended fundraising with non-food items (NSDE & NSDHPP). The school should speak to staff from other schools and other school boards to learn about different activities that support a healthy school food environment. The school can learn which ideas have been effective for other schools, and also help these other schools by sharing what they have done. Again, the school may also benefit by working to generate greater parental and community participation. Having added support through collaborative partners from outside the school may help to generate new ideas, especially if those individuals have not been exposed to the initiatives that the school has previously done.

Additionally, the School Board, Department of Education and the Department of Health and Wellness may need to support schools by providing suggestions to change their events and activities. The school needed more administrative support to implement

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all of the policy directives. It was requested that more specific instructions be given on how to implement the policy across the school, and within individual classrooms, and this support could be incorporated into skill development opportunities. Overall, this school would benefit from guidance on how to improve policy implementation, as the policy was not monitored by anyone, but instead left up to the staff members of each school to carry out.

Furthermore, additional support from the board level could increase staff awareness for the policy and the criteria within it. Results from this study suggested that the school look into the nutrition content of the pizza and crazy bread lunch options to determine whether or not the school should have been offering those choices to students. The school should also ensure it was not fundraising with foods of moderate or minimum nutrition, which included any food or beverages sold during social and holiday events. The policy permitted the school to offer these items to students once in a while, but only if the school was not generating a profit by doing so.

The need for greater awareness and guidance did not mean that the school staff were unsupportive of the policy. It came out in the interviews that staff were doing many things to facilitate policy implementation such as encouraging healthy choices during class parties, and promoting the healthy lunch options to students. School staff need to recognize their role within the school and that they can really make the implementation of any health promotion policy successful through their actions (IUHPE, 2010). Parents were also identified as facilitators to a healthy school food environment by running taste tests, sending healthy food for school events and impacting staff members. Again, the

school needs to work to engage parents in a positive way in order to gain further benefit from their involvement.

The Food and Nutrition Policy came from the public policy level, but it was applied to the organizational level. Literature showed that health promotion policies were most effective when there were strategies within all level of the SEM that complemented the policy (Gregson et al., 2001; Stokols, 1996), and participants made it clear that there were numerous barriers within the community level beyond the immediate control of the school. Because the levels of the SEM are so interconnected, without additional support at the community level, the Food and Nutrition Policy may not have been able to achieve optimum behaviour change among students at this school because it had to compete against cost, convenience and social norms. Collaboration with key school stakeholders would assist the implementation of the Food and Nutrition Policy. The school needs staff members, parents, community members and community organizations involved so they can all work together to minimize any barriers to full-scale implementation.

Future Research. This study provided insight into the way that the school environment impacted student eating behaviour and how the Food and Nutrition Policy affected the school environment. However, the study only looked at one elementary school from the Halifax Regional School Board (HRSB) and was not intended to be representative of all schools within the HRSB or other school boards. Other schools and other school boards should be studied qualitatively to see if the barriers and facilitators to policy implementation are similar. It would also be important to look at schools that are located in different types of neighbourhoods such as high socio-economic versus low, and rural versus urban areas. This would help to show whether schools in certain areas face

different challenges, and what kind of support would best be given by the School Boards, Department of Education and Department of Health and Wellness.

Student eating behaviour was not measured, so the study cannot determine whether the perceived influences within the school environment did have a significant impact on the eating habits of students. A quantitative approach may help to present a more complete view of the school food environment and the extent to which it can influence student behaviour. Also, the student participants were all from grade five, but students of different age groups may have had different perspectives. A study that looks at the perceptions of elementary school students from all grade levels may provide the school with more specific results as to which factors are most influential on eating behaviour at different ages. Furthermore, the majority of grade five students in the focus group were males and gender may have affected the cues and influences that children responded to. For example, the school nutrition program evaluated by Gortmaker et al. (1999) found a significant change in eating behaviour among female students, but not male students. It may be important to examine the impact of gender on healthy eating messages and approaches to nutrition initiatives to ensure that schools are utilizing approaches that maximize the impact of their initiatives.

Participants believed that educating parents about nutrition would benefit student eating behaviour, and literature has found that both students and parents benefit from cooking classes. If any cooking workshops are done with parents and/or students, they should be evaluated in terms of the impact on knowledge, skills, efficacy and behaviour to assess whether continued delivery of the workshops would be beneficial. The evaluation should also assess whether behaviour change occurs in the home and school

setting, since the food brought from home was perceived to be the unhealthiest part of the school food environment. Finally, the evaluation should examine whether parent participants increase their engagement in school activities, to see whether programs such as this help to improve parent involvement with the school.

This study found that school culture was incredibly important for promoting healthy eating to students, and that the school needed additional support and collaboration from parents and the community. Research should look at the approaches used by schools to build relationships with outside community partners and parents to determine which methods are the most successful. The results could allow schools to better enhance their collaborative culture, and increase their overall capacity for targeting healthy eating behaviour in students.

Lastly, there needs to be more research put into the term moderation and how best it can be defined to provide more concrete guidelines for individuals to follow with regards to their own eating behaviour. Providing stronger parameters for the word would reduce the extent to which school stakeholders can use their own personal constructions to decide when it is appropriate to offer students unhealthy choices. This definition could also help to improve school culture and collaborative efforts toward healthy eating behaviour because everyone would have the same definition of moderation to work from.

Summary & Conclusion

This research suggested that the school did impact student eating behaviour through the food it provided, the education it provided, peers, school staff, and social norms. The school needs to provide a positive eating environment for students, and remove the pizza and crazy bread options from the lunch program or at least reduce the

frequency in which they are sold. Policy makers should switch the cost directive to a recommendation with the Food and Nutrition Policy, and the school should continue to look at new community food providers to see whether there are healthier choices that can be offered for the same price and convenience level. Furthermore, the school should ensure it is not fundraising with foods of moderate or minimum nutrition, which includes any food or beverages that are sold during social and holiday events. Policy makers should consider removing the special functions directive from the policy altogether to eliminate any discrepancies about fundraising during special functions, and also because the majority of students were consuming unhealthy food and beverages on a regular basis.

To capitalize on the positive influence of peers, schools should get students involved in health education delivery. Cooking classes for parents and students are predicted to improve eating behaviour, so the school should consider whether this is a viable option. This study found that school staff needed additional support in order for them to fully implement the Food and Nutrition Policy and they needed capacity building opportunities to ensure they have the skills necessary for promoting healthy eating to students. Lastly, student eating behaviour may further be improved if the school started to work on shifting the social norms for social and holiday events.

Additionally, the school would benefit from building stronger relationships with outside partners because it would enhance the overall health promotion culture of the school. Participants from this study identified food and nutrition as being connected to physical health, social health and mental health, so promoting healthy eating at a greater level would benefit students in these health areas as well. Working to engage parents, community members and community organizations would provide the school with greater

human resources to offer healthy eating initiatives. Furthermore, these school

stakeholders could collaborate with the school to eliminate some of the barriers for

implementing the Food and Nutrition Policy, and brainstorm new ideas for school

activities.

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Appendix A: Letter for Potential School

Dear [Principal],

Last year, your school was one of the 272 schools that took part in the data collection with Grade 5 students and their parents. Based on a recommendation from your school board, **your school is being invited to take part as a case study school.**

CLASS II is a province-wide project that is studying the relationships between health, nutrition, physical activity and school performance of Grade 5 children in Nova Scotia. The purpose of the CLASS II case studies is to learn more about the different factors that are influencing the implementation of health promoting practices in Nova Scotia schools. The purpose of this particular case study is to look at perceptions of nutrition and factors that influence eating habits from three different perspectives.

> **Your participation as a case study school is voluntary. If you agree to take part, your school will be asked to do the following:**
>
> - At your convenience, hold a brief staff meeting (10 minutes) to allow the Project Assistant to speak with your staff, and also allow the Project Assistant to speak with each grade 5 class in your school for approximately 10 minutes. The purpose of these meetings will be to explain the intention of this case study, how the research will take place, and to ask both staff and students to participate.
> - Allow the Project Assistant to conduct a qualitative focus group with grade 5 students after the school day finishes. This would also be at your convenience, preferably on a day when other staff members are staying on school grounds past normal school hours for other extra-curricular activities.
> - Let the Project Assistant into the school to meet with any staff who choose to participate in the case study for an interview
>
> We want to understand more about the factors that both help and prevent schools from supporting health promotion activities.

What we can learn from your participation?
We know that schools are asked to take part and implement an abundance of health promotion initiatives. We want to learn more from your experiences in relation to the food environment in the school, to help inform our recommendations to policy makers about health promotion in schools.

Benefits of taking part:
Your school will benefit from taking part as a case study by having the opportunity to understand what the results suggest for your school. Participation could help to develop a plan to further support the health and learning of your students, as well as support your school's improvement and/or accreditation plan. As the time that your school invests in this case study is dependent on your interest, there are no anticipated risks in taking part.

All responses will be confidential and will only be seen by project staff at Dalhousie University. Without your permission, we will not be sharing individual school information with your School Board or the Province. If you agree to take part, please complete the consent form on the next page.

Thank you for your consideration of taking part in this phase of the CLASS II research project. If you have any questions, please do not hesitate to contact Erica Siba at 902-494-8439.

Dr. Sara Kirk, Co-Principal Investigator (Sara.Kirk@dal.ca)
Erica Siba, Project Assistant (er238247@dal.ca)

Appendix B: Script for Student Recruitment

Hi everyone! Thank you so much for letting me speak to your class today. My name is Erica Siba and I am a student at Dalhousie University. I am doing a study and am looking for grade 5 students to participate. I will also be asking your parents to take part. I am doing this study because I want to know what you think of the food available in your school. I also want to know what sort of things influence how you choose what to eat every day, and what you think healthy eating means. I'm not looking at how healthy your eating habits are, but just at what sort of things like your family, friends or neighbourhood might change what you decide to eat each day.

If you decide to participate, you will be asked to meet with me here at the school with some of your classmates who also agree to take part. I will be asking all of you questions as a group and this will take about an hour. With your permission, I will audio-record the interview, then type up the responses and write about what I've learned from the collection of interviews. I might use some of the things you say in my reports, but your name and identity will not be linked to any of that information. I will be the only person to know what each of you say in the interview. Your answers will be kept private and your parents and teachers will not know how you responded. I will never use your name and will not be comparing any of you against one another. All of your personal information will be kept in a locked in an office at Dalhousie University, that only my supervisor and I will have access to. Also, if you decide to take part, you can stop the interview at any time or choose not to answer any of the questions if you don't want to. Those who choose to participate will be given a $10.00 gift card for Sport Chek.

I'll give you an information sheet that says everything I just explained to you now and it has my contact information as well. There is also one included for your parents because I would like to interview them too. Please take this home to your parents so they can read it, and they also need to sign the form in order for you to participate. If you would like to participate in this study, please bring back this form to your teacher, but it has to be signed. I'll be coming back to the school in 2 weeks to see who wants to take part. Does anyone have any questions? If you, or your parents have any questions later on, you can call or email me at any time. Thanks again for letting me come to your class today!

Appendix C: Student Consent Form

Study Title: Student, Parent and Teacher Perceptions of the Food
           Environment in Schools

Degree Program: Master of Arts, Health Promotion
           School of Health and Human Performance
           Dalhousie University

Research Supervisor: Dr. Sara Kirk
           Applied Research Collaborations for Health (ARCH)
           School of Health and Human Performance
           1318 Robie Street, Dalhousie University
           PO Box 15000
           Halifax, Nova Scotia, B3H 4R2
           Telephone: (902) 494-8440
           Fax: (902) 494-7567
           Email: Sara.Kirk@dal.ca

Principal Investigator: Erica Siba, BHSc, MA (Candidate)
           School of Health and Human Performance
           Dalhousie University
           PO Box 15000
           6230 South Street, Halifax, NS, B3J 3J5
           Telephone: (902) 494-8809 (office) or 403-3310 (cell)
           Fax: (902) 494-5120
           Email: er238247@dal.ca

Contact Person: Erica Siba
           School of Health and Human Performance
           Dalhousie University
           Telephone: (902) 494-8809 (office) or 403-3310 (cell)
           Email: er238247@dal.ca

Please feel free to contact Erica Siba by phone or email if you have any questions.

<u>Introduction</u>

You are invited to take part in a research study. This study is being conducted by Erica Siba who is a student at Dalhousie University. Your participation is completely voluntary. If you decide to take part you may stop at any time. You do not have to answer any questions that you do not want to answer. This will in no way affect your grades at school.

<u>Purpose of the Study</u>

This study will involve you talking about the food available at your school and how this might influence you eating habits. We want to know what kind of foods you think are healthy, and how other things, like your family and friends, may influence your eating habits. Attached to this consent form is a letter from the school board stating that they support this research.

<u>Study Design</u>

If you choose to take part, you and 7-9 other grade five students will be asked some questions as a group. The interview will be audio-recorded and will last about 60-90 minutes. If a lot of you want to take part, there will be two different groups so that everyone can participate.

<u>Who Can Participate in the Study</u>

Any grade five student at this school who has permission from a parent or guardian, and who also agrees to have the interview audio-recorded.

<u>What you will be asked to do</u>

If you agree to take part, you must first sign this form. Signing this form also means that you are okay with Erica recording the interview and using things that you say in the interview in any of her reports. Then, you will be asked to meet with Erica and the other students who are participating. The interview will be done after school, at a time that works best for all of you.

<u>Possible Risks</u>

Sometimes, talking about food and your eating habits may be uncomfortable. You do not have to answer any questions that you do not want to. **You are only asked to share information that you feel comfortable talking about.** Also, this study is not looking at how healthy your eating habits are, but we want to know about the kinds of things that might influence what you choose to eat.

Withdrawal from Study

If you have signed the form, but then decide you do not want to take part anymore, you may call or email Erica to tell her so. This will only be possible before the interview takes place.

Possible Benefits

The research may not directly benefit you, but we hope to understand eating habits better, which may help to make healthy changes at your school.

Compensation

As a thank you for taking part, you will receive a $10.00 gift card for Sport Chek.

Confidentiality and Anonymity

All information from this study will be kept private. Nothing will have your name on it except for this form, which will be kept separate from the rest of the information. You will **not** be named in any reports about this research. We need your permission to use some quotations from the interview that Erica may use in her reports to back up any results and conclusions she makes. Erica may use things that you said to her in the interview, but she will not reveal your name or any other personal information about you.

Other students who are part of the interview will know that you took part and will know what you said. Everyone will be asked to keep this information private.

If you talk to Erica about a situation where you or another child (16 years and under) is in danger, Erica is legally required to speak with the proper authorities (the police or Child Protection Services) to ensure your safety.

Problems and Concerns

If you have any problems or concerns about your participation in this study, you may contact Catherine Connors, Director, Research Ethics at Dalhousie University, for assistance at (902) 494-1462, or at catherine.connors@dal.ca.

Signature Page

Study Title: Student, Parent and Teacher Perceptions of the Food Environment in
                Schools

I have read the explanation about this study. I have thought about it and my questions
have been answered. I agree to take part in this study. I realize that my participation is
completely voluntary and that I do not have to answer any of the questions that I am not
comfortable with. I understand that the interview will be audio-taped and that the
researcher may use direct quotes from my interview in the findings. I understand that my
name and/or other personal information will **not** be revealed.

☐   I would like Erica Siba to send me a summary of the final results

Full name (print):

_____

Full Signature: _____

Date: _____

Phone number and/or email address to set up an interview date:
_____

Parent or Guardian name (print): _____

Full Signature: _____

Date: _____

Please send results to:
Email: _____
OR Address: _____
                _____
                _____

Researcher's Name (print): _____

Researcher's Signature: _____

Date: _____
            Please keep a copy of this consent form for your information. Thank you.

Appendix D: Parent Consent Form

Study Title: Student, Parent and Teacher Perceptions of the Food
           Environment in Schools

Degree Program: Master of Arts, Health Promotion
           School of Health and Human Performance
           Dalhousie University

Research Supervisor: Dr. Sara Kirk
           Applied Research Collaborations for Health (ARCH)
           School of Health and Human Performance
           1318 Robie Street, Dalhousie University
           PO Box 15000
           Halifax, Nova Scotia, B3H 4R2
           Telephone: (902) 494-8440
           Fax: (902) 494-7567
           Email: Sara.Kirk@dal.ca

Principal Investigator: Erica Siba, BHSc, MA (Candidate)
           School of Health and Human Performance
           Dalhousie University
           PO Box 15000
           6230 South Street, Halifax, NS, B3J 3J5
           Telephone: (902) 494-8809 (office) or 403-3310 (cell)
           Fax: (902) 494-5120
           Email: er238247@dal.ca

Contact Person: Erica Siba
           School of Health and Human Performance
           Dalhousie University
           Telephone: (902) 494-8809 (office) or 403-3310 (cell)
           Email: er238247@dal.ca

Please feel free to contact Erica Siba by phone or email if you have any questions, comments, or concerns regarding this research, or if you require further information.

<u>Introduction</u>

You and your son/daughter are invited to take part in a research study. This study will be conducted by Erica Siba who is a graduate student at Dalhousie University. Participation is completely voluntary for both of you. Even if you provide consent for your son/daughter, they still need to agree to take part as well. If you decide to take part, you may still withdraw from the study at any time. You do not have to answer any questions that you do not want to answer. The study will in no way affect your son/daughter's participation in school activities.

The study is described below. This description tells you about the risks, inconveniences, or discomforts that might be experienced. Participating in the study might not benefit you, but we might learn things that will benefit others in the future.

<u>Purpose of the Study</u>

This will involve you talking about the food environment in the school, and the way it may influence food choices and eating habits in students like your son/daughter. We want to know what kind of food you and your child consider to be healthy, and how other factors like family members, friends, and the community environment may influence your eating habits. Also, we want to know what you think may help students like your son/daughter to eat more healthily. Attached to this consent form is a letter of support for this research study from the school board.

<u>Study Design</u>

If you choose to participate, we will be conducting a one-on-one face-to-face interview with you, which will last about 45-60 minutes. With your permission, the interview will be audio-taped and later transcribed word-for-word.

If you choose to allow your child to take part, we will be conducting a focus group interview with him/her and other grade five students who have permission to participate. The focus group will last about 60-90 minutes. The focus group will be audio-taped and later transcribed word-for-word.

<u>Who Can Participate in the Study</u>

Any parent or legal guardian of a grade five student currently attending this school, and any grade five student attending this school who has obtained consent from a parent or legal guardian. Your child does not have to participate in order for you to take part, and vice versa.

<u>Who will be Conducting the Research</u>

Erica Siba, a graduate student at Dalhousie University and principal investigator, will be primarily responsible for the research. Erica Siba's supervisor, Dr. Sara Kirk, will be assisting with all aspects of the research process.

<u>What you will be asked to do</u>

If you agree to participate in this study, you must first sign this consent form to let us know that you agree to participate voluntarily. You will be asked to meet with Erica Siba either at your son/daughter's school or at a mutually agreed upon location for the interview at a time that is most convenient for you. Erica will ask you questions about the food environment at your child's school, what you think healthy eating means, and what sort of things help you decide what to eat each day. At the end of the interview, you will be asked whether you would like to be contacted to discuss preliminary results and give feedback. You can also choose to receive a summary of the results from the study. Giving permission to be re-contacted is completely voluntary (your choice). You will also receive a copy of this consent form for your records.

If you grant your son/daughter permission to participate, he/she will be asked to meet with Erica Siba and the other students who are participating in an empty room at the school, for the focus group. The focus group will take place after school, at a time that is convenient for your son/daughter and the rest of the students who are participating. Your son/daughter will be asked very similar questions, and at the end of the interview, they will also be asked if they would like to be contacted to receive a summary of the results. His/her permission to be re-contacted is completely voluntary and he/she will also receive a copy of his/her consent form.

<u>Possible Risks and Discomforts</u>

There is minimal risk to taking part in this study. Nonetheless, talking about food and personal eating habits may be uncomfortable or cause some distress. You do not have to answer any questions that you are not comfortable with. **Participants are only asked to share information that they feel comfortable talking about.** Also, this study is not focused on how healthy your eating habits are, or your son/daughter's eating habits, but we want to know about the food available at the school and what kinds of things might influence how you and your family choose the food you eat.

<u>Withdrawal from Study</u>

If at any point you no longer wish to participate in the study you may simply end the interview. If you decide after you have been interviewed that you no longer want to be part of the study, and do not want Erica to use the information you have told her in your interview, simply call or email her to say so. This will only be possible for three weeks after your interview.

This option is not available for your son/daughter because the group nature of the focus group will make it difficult to accurately determine what each student said from the audio-recording. Your son/daughter will still be able to withdraw from the study any time before the focus group is held, and can still refuse to answer any of the questions during the focus group.

<u>Possible Benefits</u>

Talking about the factors that influence eating habits may not directly benefit you or your son/daughter, but it may be beneficial by helping to better understand personal eating behaviour. Through this research, we hope to gain a better understanding of eating habits, which may help to inform future health promotion programs and policies.

<u>Compensation</u>

Any participation in research is greatly appreciated, so as a thank you for taking part you will receive $20.00 at the beginning of the interview. If your son/daughter chooses to participate, he/she will receive a $10.00 gift card for Sport Chek for taking part. Any additional transportation or child care costs that occur as a result of your participation, or your son/daughter's participation, will also be reimbursed.

<u>Confidentiality and Anonymity</u>

All information from this study will be kept confidential. After the interview, Erica Siba will type the responses word for word, and all names or other personal identifiers will be removed. Nothing will have your name on it except for this consent form, which will be kept separate from the audio-tapes and typed responses. Everything that has to do with this study will be kept in a locked filing cabinet at Dalhousie University for a minimum of 5 years, after which all information will be destroyed. Only Erica Siba and her thesis supervisor, Dr. Sara Kirk, will have access to the audio-tapes and transcription of the interview.

Participants will **not** be personally identified in any reports, publications, or presentations of this study. Major themes identified in the interviews will be reported and direct quotes from the participants may be used to illustrate these themes. We need your permission to use quotations from your interview, which will be used as evidence of any results or conclusions that Erica has found. The quotes will only be described by an assigned participant number, and the research team will make every effort to protect the identity of all participants.

If a participant talks to the researcher about a situation where a child (16 years and under) is in danger, the researcher is legally obligated to speak with the proper authorities (i.e. the police or Child Protection Services) to ensure his/her safety.

<u>Problems and Concerns</u>

If you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Catherine Connors, Director, Research Ethics at Dalhousie University, for assistance at (902) 494-1462, or at catherine.connors@dal.ca.

Participant Informed Consent Signature Page:

Study Title: Student, Parent and Teacher Perceptions of the Food Environment in Schools

I (the participant) have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in this study. However, I realize that my participation is **completely voluntary** and that I am free to withdraw from the study at any time, and can withdraw my information within three weeks after my interview.

☐   I hereby consent to my interview being audio-taped.

☐   I agree to let the researcher use direct quotes from my interviews in the study findings. I understand that my name and/or other personally identifying information will **not** be revealed.

☐   I would like Erica Siba to contact me to discuss the study's preliminary results.

☐   I would like Erica Siba to send me a summary of the final results

Full name (print): _____

Full Signature: _____

Date: _____

Phone number and/or email address to set up interview date:

_____

Please send results to:
Email: _____
OR Address: _____
                     _____
                     _____

Researcher's Name (print): _____

Researcher's Signature: _____

Date: _____

Please keep a copy of this consent form for your information. Thank you.

Appendix E: Script for Staff Recruitment

Hi everyone! Thank you so much for meeting with me. My name is Erica Siba and I am a student at Dalhousie University. I am doing a study and am looking for any staff members of this school to participate. Grade 5 students and their parents will also be participating. I am doing this study because I want to better understand what you think about the school's food environment. I also want to know what factors influence what you choose to eat every day, and what you think may be most effective in helping students to eat more healthily. This is a really good opportunity to give your feedback on something that's going on in your school, whether it's positive or negative, and also to suggest different approaches that might be better for your students.

If you decide to participate, you will be asked to meet with me here at the school at a time that is convenient for you, for an interview that should take no more than an hour. With your permission, I will audio-record the interview, then type up the responses and write about what I've learned from the collection of interviews. I might use some of the things you say in my Master's thesis, but your name and any other personal information will not be linked to any of the quotations. I will never use your name and will not be comparing any of the interviewees against one another. All of your personal information and the audio-tapes from the interviews will be kept in a locked cabinet at Dalhousie University, that only my supervisor and I will have access to. Also, if you decide to take part, you can stop the interview at any time or choose not to answer any of the questions if you don't want to. Those who choose to participate will be compensated for their time.

I'll give you an information sheet that says everything I just explained to you now and it has my contact information as well. If you would like to participate in this study, you can either call me or email me. Does anyone have any questions? Thanks again for letting me speak to you about this!

Appendix F: Staff Consent Form

Study Title: Student, Parent and Teacher Perceptions of the Food Environment in Schools

Degree Program: Master of Arts, Health Promotion
School of Health and Human Performance
Dalhousie University

Research Supervisor: Dr. Sara Kirk
Applied Research Collaborations for Health (ARCH)
School of Health and Human Performance
1318 Robie Street, Dalhousie University
PO Box 15000
Halifax, Nova Scotia, B3H 4R2
Telephone: (902) 494-8440
Fax: (902) 494-7567
Email: Sara.Kirk@dal.ca

Principal Investigator: Erica Siba, BHSc, MA (Candidate)
School of Health and Human Performance
Dalhousie University
PO Box 15000
6230 South Street, Halifax, NS, B3J 3J5
Telephone: (902) 494-8809 (office) or 403-3310 (cell)
Fax: (902) 494-5120
Email: er238247@dal.ca

Contact Person: Erica Siba
School of Health and Human Performance
Dalhousie University
Telephone: (902) 494-8809 (office) or 403-3310 (cell)
Email: er238247@dal.ca

Please feel free to contact Erica Siba by phone or email if you have any questions, comments, or concerns regarding this research, or if you require further information.

<u>Introduction</u>

You are invited to take part in some research with Erica Siba who is a graduate student at Dalhousie University, as part of her Master of Arts in Health Promotion. Your participation is completely voluntary. If you decide to provide consent you may still withdraw from the study at any time. You do not have to answer any questions that you do not want to answer.

The study is described below. This description tells you about the risks, inconveniences, or discomforts that may be experienced. Participating in the study might not benefit you, but we might learn things that will benefit others.

<u>Purpose of the Study</u>

This is being done to understand more about the food environment in schools, and the way it may influence food choices and eating habits in students. We want to know what kind of food you consider to be healthy, and how other factors like your family members, friends, and the community environment may influence your eating habits. Also, we want to know what you think might help students to eat more healthily. Attached to this consent form is a letter of support for this research study from the school board

<u>Study Design</u>

If you choose to participate, we will be conducting a one-on-one face-to-face interview with you, which is expected to take 45-60 minutes. With your permission, the interview will be audio-taped and later transcribed word-for-word.

<u>Who Can Participate in the Study</u>

Any staff member at who works at this school and has worked in an elementary school for at least one year.

<u>Who will be Conducting the Research</u>

Erica Siba, a graduate student at Dalhousie University and principal investigator, will be primarily responsible for the research. Erica Siba's supervisor, Dr. Sara Kirk, will be assisting with all aspects of the research process.

<u>What you will be asked to do</u>

If you agree to participate in this study, you must first sign this consent form to let us know that you agree to participate voluntarily. Then, you will be asked to meet with Erica Siba in an empty room at the school for the interview at a time that is convenient for you. Erica will ask you questions about the food available in your school, what you think healthy eating means, and what sort of things help you decide what to eat each day. At the

end of the interview, you will be asked whether you would like to be contacted to discuss preliminary results and give feedback. You can also choose to receive a summary of the results from the study. Giving permission to be re-contacted is completely voluntary (your choice). You will receive a copy of this consent form for your records.

Possible Risks and Discomforts

There is minimal risk to taking part in this study. Nonetheless, talking about food and your eating habits may be uncomfortable or cause some distress. You do not have to answer any questions that you are not comfortable with. **Participants are only asked to share information that they feel comfortable talking about.** Also, this study is not focused on how healthy your eating habits are, but we want to know about the food available at your school and what kinds of things might influence how you choose the food that you eat.

Withdrawal from Study

If you decide after you have been interviewed that you no longer want to be part of the study, and do not want Erica to use the things you have told her in your interview, simply call or email her to say so. This will only be possible for three weeks after your interview.

Possible Benefits

Talking about the factors that influence eating habits may not directly benefit you, but it may be beneficial to you by helping you understand your own eating behaviour. Through this research, we hope to gain a better understanding of eating habits, which may help to inform future health promotion programs and policies.

Compensation

Any participation in research is greatly appreciated, so as a thank you for taking part you will receive $20.00 at the beginning of the interview. Should the timing of the interview result in any additional transportation or child care costs, you will also be reimbursed for this.

Confidentiality and Anonymity

All information from this study will be kept confidential. After the interview, Erica Siba will type the responses word for word, and all names or other personal identifiers will be removed. Nothing will have your name on it except for this consent form, which will be kept separate from the audio-tapes and typed responses. Everything that has to do with this study will be kept in a locked filing cabinet at Dalhousie University for a minimum of 5 years, after which all information will be destroyed. Only Erica Siba and her thesis supervisor, Dr. Sara Kirk, will have access to the audio-tapes and transcription of the interview.

You will **not** be personally identified in any reports, publications, or presentations of this study. Major themes identified in the interviews will be reported and direct quotes from the participants may be used to illustrate these themes. We need your permission to use quotations from your interview, which will be used as evidence of any results or conclusions that Erica has found. The quotes will only be described by an assigned participant number, and the research team will make every effort to protect the identity of all participants.

Problems and Concerns

If you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Catherine Connors, Director of Research Ethics at Dalhousie University at (902) 494-1462, or at catherine.connors@dal.ca.

Participant Informed Consent Signature Page

Study Title: Student, Parent and Teacher Perceptions of the Food Environment in
                Schools

I (the participant) have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in this study. However, I realize that my participation is **completely voluntary** and that I am free to withdraw from the study at any time, and can withdraw my information within three weeks after my interview.

☐   I hereby consent to my interview being audio-taped.

☐   I agree to let the researcher use direct quotes from my interviews in the study findings. I understand that my name and/or other personally identifying information will **not** be revealed.

☐   I would like Erica Siba to contact me to discuss the study's preliminary results.

☐   I would like Erica Siba to send me a summary of the final results

Full name (print): _____

Full Signature: _____

Date: _____

Phone number and/or email address to set up interview date:
_____

Please send results to:
Email: _____
OR Address: _____
                _____
                _____

Researcher's Name (print): _____

Researcher's Signature: _____

Date: _____

Please keep a copy of this consent form for your information. Thank you.

Appendix G: Student Interview Guide

Before the interview:

- Thank the participants for agreeing to volunteer for the research study.
- Provide the participants with a copy of the consent form.
- Verbally review key elements of the consent form with the participants
    - Everything the participants say will be kept completely confidential, which means their name will not be connected to anything they say.
    - Participation is completely voluntary and that they may stop the interview at any time, or refuse to answer any of the questions.
- Verbally check whether the participants consent to the interview being audio-taped
- Check signatures on the consent form.
- Ask the participants if they have any questions before the interview begins.
- Give the participants the $10.00 gift card for participating
- Check the recorder.
- Start the interview.

Script:

I will be asking you all of you questions about healthy eating, and what sort of things influence your eating habits. There are absolutely no right or wrong answers, so please just answer the questions the best you can, and only answer the questions that you feel comfortable with. I'm going to do everything I can to keep your answers private, but it's very important that all of you keep the answers private as well. Nothing that your classmates say should be repeated to anyone else outside of this room. All of you will have a chance to answer each question, but please do not shout out your answers or talk over each other. Just like in class, please raise your hand if you have an answer so I can hear all of them one at a time. If no one has any more questions, we'll get started.

1. What is your favourite food?
    Probes: Why is it your favourite food?
    What do you know about this food?
    How often do you eat it?
    Where do you eat it the most?

2. What does 'healthy eating' mean to you?
    Probes: What do you think makes a food healthy or unhealthy?
    Can you give me any examples?

Would you say you know a lot about healthy eating or not very much?

How did you learn about healthy eating?

How important is healthy eating to you?

3. Tell me about the food at your school.

    Probes: Is there a breakfast program?

    What kinds of snacks are there?

    What kinds of things does the school sell at lunch time?

    Do you like the food that is in your school? (Why or why not?)

    If you could change the food here, would you? What food would you have?

4. Do you think the food from your school affects the way you eat?

    Probes: Do you eat food from the school?

    How often do you eat food from your school?

    What do you eat at school?

    Is this different than what you eat at home or any other place?

5. What other things help you decide what to eat each day?

    Prompts: Family members, friends, availability, cost, how far it is, mood, time, etc.

    Probes: Do you eat differently when you are with different people or in different places?

    What sorts of things change what you would normally have to eat for breakfast, lunch and dinner?

    When do you eat the healthiest/least healthy?

    How would you describe the food that is available in your neighbourhood?

6. What do you think affects the food you eat the most?

    Probes: Who plans and prepares the meals at home?

    How do you decide what to eat when you're with your friends?

    Would you say you eat the same way as other grade 5 students, or different?

7. Tell me about some of the things that stop you from eating healthy food.

    Probes: Where or when do these happen the most?

    Can you avoid these things?

    What do you think would help you to eat healthier food?

8. What do you think might help students like you to eat healthy food?

       Probes: Do you think it is important for your school to promote healthy eating?

       Is there anything else that could be done at your school that would help you to eat healthier?

Those are all the questions I have for you. Can you think of anything else you would like to tell me? Do you have any questions for me or think that there is anything I might have missed?

Would you like to receive a summary of the results once I've talked to everyone else? It's completely voluntary, and if you change your mind, my contact information is on your copy of the consent form. Thank you so much for your time and for participating in the study!

Appendix H: Parent Interview Guide

Before the interview:

- Thank the participant for agreeing to volunteer for the research study.
- Provide the participant with a copy of the consent form.
- Verbally review key elements of the consent form with the participant
    o Everything the participant says will be kept completely confidential, which means his/her name will not be connected to anything he/she says.
    o Participation is completely voluntary and that he/she may stop the interview at any time, or refuse to answer any of the questions.
- Verbally check whether the participant consents to the interview being audio-taped
- Check signatures on the consent form.
- Ask the participant if they have any questions before the interview begins.
- Give the participant the $20.00 honorarium for participating
- Check the recorder.
- Start the interview.

Script:

I will be asking you questions about healthy eating, the food in the school, and what sort of things influence your eating behaviour as well as your child's. There are absolutely no right or wrong answers, so please just answer the questions to the best of your ability and only answer the questions that you feel comfortable with answering.

1. What does 'healthy eating' mean to you?
      Probes: What do you think makes a food healthy or unhealthy?
              Can you give me any examples?
              Would you say you know a lot about healthy eating or not very
      much?
              How did you learn about healthy eating?
              How did your child learn about healthy eating?
              How important is healthy eating to you?

2. What factors play a role in what you decide to eat each day?
      Prompts: Other family members, friends, availability, cost, transportation,
              mood, time, etc.
      Probes: Do you eat differently with different people or in different places?

What sorts of things change what you would normally have to eat for breakfast, lunch and dinner?

When do you tend to eat the healthiest/least healthy?

How would you describe the food that is available in your community?

3. Do you think the food that is sold at the school has had an impact on your child's eating habits?

        Probes: Does your child eat food from the school? (Snacks, drinks, meals)

                How often do they get food from the school?

                What does your child eat at school compared to at home?

                How would you describe the food that is available at your child's school?

                Do you like the food that is provided at the school? (Why or why not?)

4. How important do you see yourself as influencing your child's eating habits?

        Probes: Who plans and prepares the meals in your household?

                How much did your parents influence your own eating behaviour when you were younger?

                How do you think children (not just your own) tend to eat now, compared to when you were younger?

5. What are some of the challenges or barriers for healthy eating?

        Probes: For yourself and for your child

                Where or when do these occur the most?

                Are any of these avoidable?

                What factors or changes would help you to eat healthier food?

                What factors or changes would help your child to eat healthier?

6. Tell me about the Food and Nutrition Policy that is in your child's school

        Probes: Do you know about the policy?

                What does the policy involve?

                How important is this policy to you?

                Do you support it?

7. Are there any changes that you think should be made to the Food and Nutrition Policy?

        Probes: Do you agree with all of it, some of it, or none of it?

                Is there any way it can be improved?

Should it remain in the school?

8. Do you have any suggestions for other ways to address healthy eating in elementary school students?

> Probes: What do you think is the biggest influence on children's eating habits?
> Is this an important issue that the school has a part in addressing?

Those are all the questions I have for you. Can you think of anything else you would like to tell me about the food at the school, your eating habits or your child's eating habits? Do you have any questions for me or think that there is anything I might have missed?

Would you be interested in being contacted so I can provide you with the preliminary results of the study? This is so that you can give feedback and help me to make sure that I understood what you have said today and that I didn't misinterpret any of the information. This can be done either by phone or email. Also, would you be interested in receiving a summary of the results once the study is completed? This can be done either by email or regular mail. Both of these options are completely voluntary, and should you change your mind, my contact information is on your copy of the consent form. Thank you so much for your time and for participating in the study!

Appendix I: Staff Interview Guide

Before the interview:

- Thank the participant for agreeing to volunteer for the research study.
- Provide the participant with a copy of the consent form.
- Verbally review key elements of the consent form with the participant
    - Everything the participant says will be kept completely confidential, which means his/her name will not be connected to anything he/she says.
    - Participation is completely voluntary and that he/she may stop the interview at any time, or refuse to answer any of the questions.
- Verbally check whether the participant consents to the interview being audio-taped
- Check signatures on the consent form.
- Ask the participant if they have any questions before the interview begins.
- Give the participant the $20.00 honorarium for participating
- Check the recorder.
- Start the interview.

Script:

I will be asking you questions about healthy eating, the food at the school, and what sort of things influence your eating behaviour as well as what you think influence the eating habits of children. There are absolutely no right or wrong answers, so please just answer the questions to the best of your ability and only answer the questions that you feel comfortable with answering.

1. What does 'healthy eating' mean to you?
    Probes: What do you think makes a food healthy or unhealthy?
    Can you give me any examples?
    Would you say you know a lot about healthy eating or not very much?
    How did you learn about healthy eating?
    How important is healthy eating to you?

2. What other factors play a role in what you decide to eat each day?
    Prompts: Family members, friends, availability, cost, transportation, mood, time, etc.
    Probes: Do you eat differently when you are with different people or in different places?

What sorts of things change what you would normally have to eat for breakfast, lunch and dinner?

When do you tend to eat the healthiest/least healthy?

Who plans and prepares the meals in your household?

How would you describe the food that is available in your community?

3. Do you think the food that is sold at your school has had an impact on your eating habits?

        Probes: Do you eat food from the school? (Snacks, drinks, meals)

              How often do you eat food from the school?

              What do you eat at school compared to home, or other places?

              How would you describe the food that is available at your school?

4. What do you see as the biggest influence on a child's eating habits?

        Probes: What had the biggest impact on your eating habits when you were growing up?

              Do you eat the same way you did when you were younger?

              Why or why not?

              How do you think children tend to eat now, compared to when you were younger?

5. Tell me about some of the challenges or barriers for healthy eating?

        Probes: Where or when do these occur the most?

              Are any of these things avoidable?

              What factors or changes would help you to eat healthier food?

              What factors or changes do you think would help children to eat healthier?

6. Tell me about the Food and Nutrition Policy that is in your school

        Probes: Do you know about the policy?

              What does the policy involve?

              How important is this policy to you?

              Do you support it?

7. Are there any changes that you think should be made to the Food and Nutrition Policy?

        Probes: Do you agree with all of it, some of it, or none of it?

              Is there any way it can be improved?

              Should it remain at the school?

8. Do you have any suggestions for other ways to address healthy eating in elementary school students?

> Probes: What do you think is the biggest influence on children's eating habits?
>
> Is this an important issue that the school should have a part in addressing?

Those are all the questions I have for you. Can you think of anything else you would like to tell me about the food at the school, your eating habits or what you think about students' eating habits? Do you have any questions for me or think that there is anything I might have missed?

Would you be interested in being contacted so I can provide you with the preliminary results of the study? This is so that you can give feedback and help me to make sure that I understood what you have said today and that I didn't misinterpret any of the information. This can be done either by phone or email. Also, would you be interested in receiving a summary of the results once the study is completed? This can be done either by email or regular mail. Both of these options are completely voluntary, and should you change your mind, my contact information is on your copy of the consent form. Thank you so much for your time and for participating in the study!