

An Evaluation of Seven Oaks School Division SO Healthy SO Active (SASH) Pilot Project

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A Thesis Submitted to the Faculty of Graduate Studies of

The University of Manitoba

In partial fulfillment of the requirements of the degree of

MASTER OF SCIENCE

Department of Family Social Sciences

University of Manitoba

Winnipeg, Manitoba Canada

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Abstract

Children who engage in an active living and healthy eating programs early in life through their schools have been found to have a higher chance of living healthy later in life. Studies have shown that children are spending more hours per day in activities that restrict active movements resulting in them burning lesser calories than they normally consume daily. Schools are known as environments where learning takes place and children can be taught the importance of active living and healthy eating and be given feedback in the process.

The goals of the thesis were twofold: to evaluate the Seven Oaks School Division SO Healthy SO Active (SASH) two-year pilot program based in Winnipeg, Manitoba, Canada, and to analyze and critique the program theory of change underlying the SASH program and similar programs. The study used a utilization-focused evaluation approach that included the input on main decisions of a SASH committee representing program stakeholders. Four schools from the Seven Oaks School Division participated in the pilot program. They also participated in the data collection process. Both qualitative and quantitative data were collected. Twenty-two staff members from the four schools took part in semi-structured interviews. As well, 348 parents/caregivers and 741 students from the four schools completed a survey.

The findings suggested that the SASH program was successfully implemented in the four schools with some minor variations in their approach. Also, the program appears to be having some positive impact in the lives of the children and facilitating an environment across schools that supports active living and healthy eating. Overall, the theory of change was clear to stakeholders. Staff understood the value of encouraging active living and healthy eating early in life and that it could lead to positive health outcomes, including the notion that their own active

participation would encourage children. The program's set up and the activities were congruent with the theory of change.

Acknowledgement

My sincere gratitude goes to my advisor, Dr. Javier Mignone for all his support, encouragement, push and mentorship throughout this project. Your feedback kept me on track and pointed me in the right direction. Your energy became my driving force. My appreciation also goes to my advisory committee, Dr. Kerstin Roger, Dr. Marleny Bonnycastle and Greg Wazney for their timely comments. I would also like to thank the SASH committee of the Seven Oaks School Division for allowing me to be a part of this evaluation process and all the staff who partook in the interviews for sharing their experiences.

I would like to thank my wife because without her support on every level, this project would not have been completed. I want to thank my children, siblings and mom for all their support.

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Chapter One

Introduction

Childhood obesity and other healthy issues are becoming a growing concern globally among school age children. For example, The World Health Organization estimated that in 2016 over 41 million children worldwide under the age of five are obese (WHO, 2016). Childhood obesity and other health problems have been linked to several chronic diseases in adulthood including type 2 diabetes, cancer, heart disease, and stroke among others (Slawta & DeNeui, 2010; “Obesity in Canada,” n.d.). Chances are high that children might grow up to become unhealthy adults and cause a significant rise in cost to the healthcare system if nothing is done to prevent it. Children who engage in an active living and healthy eating programs early in life through their schools may have a higher chance of living healthy later in life.

Early intervention and prevention have been found to be beneficial in the reduction of the obesity epidemic (Tran, Ohinmaa, Kuhle, Johnson, & Veugelers, 2014; McAuley, et al., 2009; Ohinmaa, Langille, Jamieson, Whitby, & Veugelers, 2011; Vander Ploeg, Maximova, McGavock, Davis & Veugelers, 2014). Home and school environments have been seen to be the first set of places that can help with combating childhood obesity through active living and healthy eating (Lagarde & LeBlanc, 2010; Vander Ploeg, Wu, McGavock, & Veugelers, 2012). If the lifestyle is maintained, it may increase the odds of them becoming healthy adults (Ohinmaa, et al., 2011; Veugelers, Fitzgerald, & Angela, 2005). The thesis seeks to examine how school programs can play a positive role in tackling this serious issue.

Different initiatives related to children’s healthy eating and active living have taken place in recent decades in numerous countries in Europe and North America including Canada (Veugelers & Schwartz, (2010). What has been known as Comprehensive School Health Program is one of the initiatives that have been introduced in Canada to reduce the prevalence of

childhood health issues linked to inactivity and lack of nutritious foods. One such program is the APPLE school program in Edmonton, Alberta, that sought to “improve healthy eating and active living among elementary school children; increase the capacity of the school community to address health-related behaviors and to foster a healthy school environment” (Schwartz, et al., 2012, p. 3). Following the model of the APPLE school program, the Seven Oaks School Division in Winnipeg, Manitoba, developed and started implementing the SO Healthy SO Active (SASH) pilot program. The goals of SASH are: to increase children’s capacity to identify, understand and articulate fitness through daily healthy active living within a range of individual and group movement strategies, as well as to help children be well informed about food choices and to take the knowledge home to their respective families. With the support of the school administrators (principals and vice-principals) in the Seven Oaks School Division and funded by the Division, the program was launched at the beginning of January 2016 in four schools: School A (247 students), School B (262 students), School C (128 students), and School D (428 students).¹

The goals of the thesis were twofold: 1) to evaluate the Seven Oaks School Division SO Healthy SO Active (SASH) two-year pilot program based in Winnipeg, Manitoba, and 2) to analyze and critique the program theory of change underlying the SASH pilot program and similar programs. The intention was to provide evidence on how SASH is being run, assess its potential impacts, and reach a conceptual understanding of its processes and potential effectiveness.

The study findings can be of use: to make adjustments and strengthen the existing program; to provide a first level understanding of its theory of change that can be extrapolated for the development of similar school programs; to develop further program evaluation

¹ To ensure confidentiality, the names of the schools are not provided. Each school is identified by letter (A, B, C, and D).

approaches; and to propose a broader policy at the school division levels to foster active living and healthy eating among school age children and their families. The study used a utilization-focused evaluation approach that included the input on main decisions of a SASH committee representing program stakeholders. Four schools from the Seven Oaks School Division participated in the pilot program. Patton (2012) has defined utilization-focused evaluation as “a process for making decisions about issues in collaboration with an identified group of primary users focusing on their intended uses of evaluation” (p. 6). This was the first time the SASH program was evaluated.

Both qualitative and quantitative data were collected. Twenty-two staff members from the four schools took part in semi-structured interviews. As well, 348 parents/caregivers and 741 students from the four schools completed a survey. Mayne’s (2017) framework was adapted to analyze program documentation and data from interviews to articulate and critique SASH’s program theory of change and assess its congruence with the actual program.

The findings suggested that the SASH program was successfully implemented in the four schools with some minor variations across school in their approach. As well, that the program appears to be having some positive impact in the lives of the children and facilitating an environment in schools that supports active living and healthy eating. Overall, the theory of change was clear to stakeholders. Staff understood the value of encouraging active living and healthy eating early in life could lead to positive health outcomes, including the notion that their own active participation would encourage children. The program set up and the activities were congruent with the theory of change.

The thesis is organized as follows. Chapter Two provides a literature review of studies and programs offering theoretical background and evidence related to childhood physical

inactivity and lack of healthy nutrition, as well as specific programs that seek to address these issues. Chapter Three provides a thorough description of the SASH program. Chapter Four states the specific objectives of the study and explains the methodology that was utilized and how the data was analyzed. Chapter Five presents the evaluation findings. Chapter Six articulates and critiques the program theory of change underlying the SASH program, and Chapter Seven provides a discussion of the findings.

Chapter Two

Literature Review

This chapter provides a review of the literature on the prevalence of obesity and other health concerns among school age children, its causes and potential ways of tackling them within the school setting. As such, it reviews the literature on two main Canadian Comprehensive School Health programs that were implemented as interventions to increase active living and healthy nutrition in childhood. It reviews the theoretical background and the empirical evidence related to how these programs have addressed these issues.

There is a growing health concern over the rising of childhood obesity and other healthy concerns globally. The World Health Organization (WHO, 2016) estimated that in 2016 over 41 million children worldwide under the age of five are living with obesity and other preventable health concerns. Although a non-communicable disease, obesity is ranked as the fifth leading global risk of mortality. It has become an epidemic (McCambridge, Bernhardt, Brenner, & Congeni, 2006). According to Public Health Agency of Canada, more than one in four children are overweight and obese in Canada (Government of Canada, n. d)

WHO (2016) reported that many children are living in settings that increase their risk of obesity. poor nutrition and low consumption of fruits and vegetables, high cost of fruits and vegetables, poverty, illiteracy, heredity factors, lack of exercise, among others, have been found to be some of the leading causes of childhood obesity and poor health in later years (McCambridge, et al., 2006; Tran, et al., 2014; Faught, Vander Ploeg, Chu, Storey & Veugelers, 2016). It is therefore important that effective interventions be put in place to encourage active living. Interventions such as regular moderate to vigorous, structured or unstructured exercise and play and healthy eating are two proven major pathways to tackle obesity (Veugelers &

Schwartz, 2010; Ward, Bélanger, Donovan & Carrier, 2016; WHO, 2016; Weepie & McCarthy, 2002; Wu, Ohinmaa, & Veugelers, 2011).

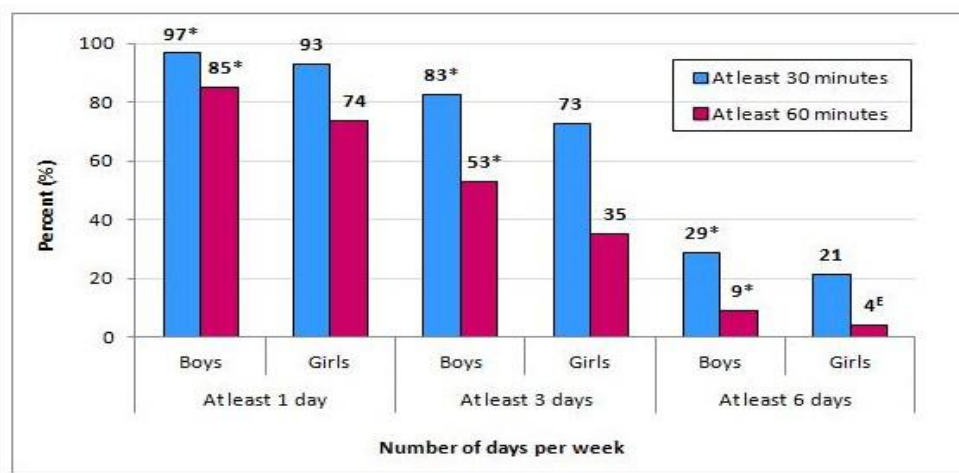
Activities that can inspire faster breathing, a warmer feeling, and an increased heart rate can include but are not limited to bike riding, power walking, engaging in organized sport, going to the park to play, routine moves, running, skating, skateboarding, tobogganing, dancing and jumping rope, all have been known to help in the process (Government of Canada 2018). Health Canada recommends that children should continually take part in any of these listed activities in a moderate to rigorous way at least one hour per day three days a week to strengthen their muscles and bones and increase their chances of staying healthy (Government of Canada 2018; McCambridge, et al., 2006).

In addition, Health Canada suggests that children should have a daily balanced diet rich in protein, carbohydrates, vitamins, and iron. Furthermore, children should reduce the intake of food and beverages high in calories, fat, sugar or salt. It is also recommended that they eat fruits and vegetables, food rich in grains, drink skim 1-2% milk each day and drink approximately 5-7 cups of water a day (Government of Canada, 2019).

Studies have shown that children are spending more time in activities that put them at risk of being overweight (Schwartz, Karunamuni & Veugelers, 2012). Children are spending more hours per day watching television, playing with computers and video games, chatting on a cell phone, and surfing the internet and other social media platforms. These activities that restrict active movements have resulted in children burning lesser calories than they normally consume daily (Schwartz, Karunamuni & Veugelers, 2012; McCambridge, et al., 2006). The accumulation of excess calories has led to an increase in body weights and obesity (Weepie & McCarthy, 2002; Dorey & McCool, 2009; Mendelson, 2007). It is recommended that children take

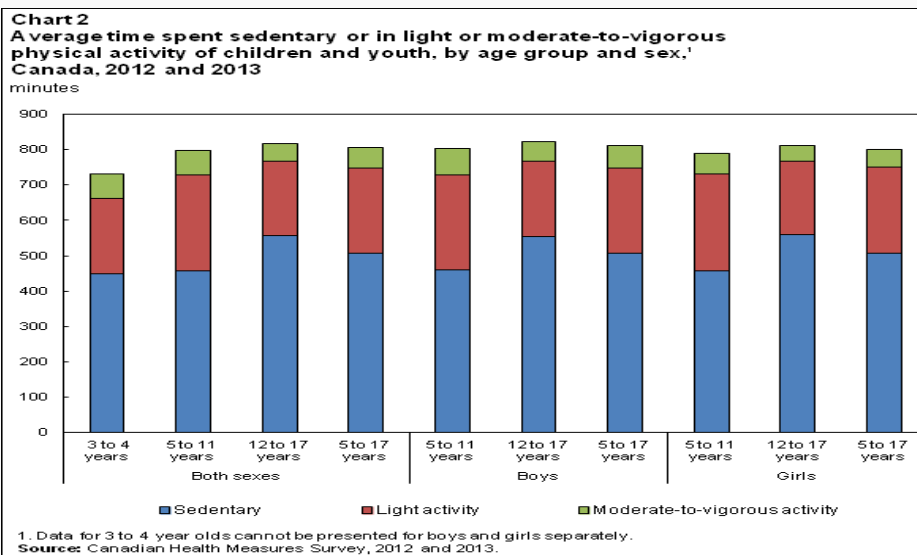
approximately 12,000 steps daily (Colley, Janssen, & Tremblay 2012). Physical activities level in Canada between 2007 and 2009 revealed that less than 7% of children met the standard daily 60 minutes of moderate to rigorous exercise (figure 1 and 2).

Figure 1: Percentage of children and youth attaining selected physical activity criteria



Source: Government of Canada, 2015

Figure 2: Average time spent on sedentary activities



Source: Government of Canada, 2017

If left untreated, childhood obesity has been linked to several chronic diseases in adulthood including type 2 diabetes, cancer, heart disease and stroke among others (Slawta & DeNeui, 2010; obesity in Canada, n.d.). Apart from these adverse health conditions, childhood obesity can also take its toll on health care costs of the nation as children are prone to grow into unhealthy adulthood (Weepie & McCarthy, 2006; Tran, Nair, Kuhle, Ohinmaa & Veugelers, 2013). Accordingly, WHO's (2016) "Report of the Commission on Ending Childhood Obesity" emphasized that "Childhood obesity is a strong predictor of adult obesity, which has well-known health and economic consequences, both for the individual and society as a whole" ("Ending Childhood Obesity", 2016, P.7). It can also negatively affect children's self-esteem and confidence, contribute to behavioral challenges and emotional difficulties, such as depression and anxiety and the inability to concentrate in school which may lead to reduced educational attainment (Veugelers, et al., 2005). Furthermore, childhood obesity can lead to stigmatization, poor quality of life and poor socialization among other issues. However, findings are inconclusive as to whether obesity affects students' academic performance (Veugelers, et al., 2005; Vander Ploeg, et al., 2014).

Early intervention and prevention have been found to be beneficial in the reduction of the obesity epidemic (Tran, et al., 2014; McAuley, et al., 2009; Ohinmaa, Langille, Jamieson, Whitby & Veugelers, 2011; Vander Ploeg, et al., 2014) with school environments and pro-active programs known to facilitate these early interventions and preventions (Lagarde & LeBlanc, 2010). Children who engage and participate in active living and healthy eating programs early in life through their schools have higher chances of being healthier. If the lifestyle is maintained, healthy childhood can translate into healthy adulthood (Ohinmaa, et al., 2011; Veugelers, et al., 2005).

The benefits of active living and healthy eating are enormous, ranging from having better overall health, lowering the risk of non-communicable diseases such as obesity, Type 2 diabetes, ensuring healthy body weight, feeling better, enjoying more energy, to having stronger muscles and bones (Government of Canada, 2019).

In response to this growing epidemic, several major initiatives have taken place in Canada (Tremblay, 2012), with Canadian provinces and territories coming together to establish different programs to promote healthy eating and active living among school children (Pan-Canadian Public Health Network, 2013). For example, Canadian Federal, Provincial and Territorial health ministers developed strategies to combat the issue of childhood obesity in 2005. They established a strategy called The Pan-Canadian Joint Consortium for School Health—a partnership of Health and Education Ministries across Canada working to promote a Comprehensive School Health approach to student wellness/well-being and achievement/success for all children and youth (Pan-Canadian Joint Consortium for School Health, n.d.).

Moreover, on a global level WHO established a commission in 2014 with a mandate to address the rising of childhood obesity because they understand that it can be treated (WHO, 2016). The commission recommended that countries “implement comprehensive programmes that promote the intake of healthy foods and reduce the intake of unhealthy foods and sugar-sweetened beverages by children and adolescents. Implement comprehensive programmes that promote physical activity and reduce sedentary behaviors in children and adolescents” (“Ending Childhood Obesity”, n.d., p. 16-21).

2.1 Comprehensive School Health Program

The Comprehensive School Health program was Canada’s response to the World Health Organization International Conference on Health Promotion in Ottawa in 1986 to promote

healthy eating and active living among children (World Health Organization, n.d.). The Comprehensive School Health program is a globally recognized framework that seeks to holistically address school health by transforming the school culture and partnering with and engaging different stakeholders—individuals, communities, and organizations who have direct and indirect influences on health (Veugeliers & Schwartz, 2010). The Comprehensive School Program:

Recognizes that healthy young people learn better and achieve more. Understands that schools can directly influence students' health and behaviours. Encourages healthy lifestyle choices and promotes students' health and wellbeing. Incorporates health into all aspects of school and learning. Links health and education issues and systems. Needs the participation and support of families and the community at large (what is comprehensive health? n.d.).

2.2 Annapolis Valley Health Promoting Schools Project (AVHPSP)

The Annapolis Valley Health Promoting Schools Project (AVHPSP) in Nova Scotia, Canada started in 1997 as a grassroots joint pilot project between some school teachers and parents at an elementary school who were concerned about the rising of childhood obesity in their community (Edwards, Munro, & Bligh, 2004). The program was a response to combating the poor eating habits and the lack of physical activities among children (Ohinmaa, et al., 2011). Most of the students who attended and participated in the program were from low-income families. Different policies and programs to support active living and healthy eating among the children were established. Initially, the program focused on active living and healthy eating

among students but was later expanded and took a holistic approach to caring for a person's general well-being (Edwards, et al., 2004).

Regular food samplings to encourage healthy eating and different physical activities such as biking, walking, and team sports participation were part of the activities that were encouraged by the project (Birch, Savage & Ventura, 2007). It should be noted that many of the participating schools did not have the funding, resources, or facilities to successfully implement the program at the outset. For instance, many of the schools did not have money to purchase fruits and vegetables, a gymnasium for activities, or a kitchen where children could cook healthy food during the regular school hours (Edwards, et al., 2004; Whitby, 2013).

In the beginning, eight schools—five elementary and three middle schools participated. The program had a Project Advisory Committee and was executed in most of the schools by volunteers (parents and community members), school administrators and teachers because of the limited resources to hire program staff. Students were encouraged to take active participation in the program. Regular program evaluation through surveys and focus groups were employed and the feedback was used to improve the program.

The initiative later enlisted the efforts of other stakeholders in the community with the goal of creating an environment where the “healthy choice” becomes “the easy choice” for the children (Ohinmaa, et. al 2011, p. 452). The joint partnership included different sectors in the community such health, recreation, and food (grocery stores).

The program was later financed with contributions from different stakeholders such as the Canadian Diabetes Strategy and Health Canada, charitable organizations, and individuals from the community through donations, free promotion, volunteering services, and other free

services. The school has since expanded to additional five elementary and three middle schools (Edwards, et al., 2004; Ohinmaa, et. al 2011).

An evaluation of the program showed that children's interest in participating in the program increased and there was a decrease in the number of children who were overweight and obese in comparison to other children not in the program. (Edwards, et al., 2004; Veugelers & Angela 2005). Children were able to choose healthier food and became more physically active. However, the impact of active living and healthy eating on the academic performance of the children involved was inconclusive (Edwards, et al., 2004; Veugelers & Angela 2005; Ramanathan, Allison, Faulkner & Dwyer, 2008).

2.3 The APPLE School Project

The Alberta Project Promoting active Living & healthy Eating (APPLE) project is another program that was developed in response to the Comprehensive Healthy School initiative (Schwartz, et al., 2012). The rationale of this program is not only to promote healthy living, it is also to create an environment where it can be achieved (Storey, et al., 2016; McAuley, et al., 2009). The program started in 2008 in ten schools and by the end of 2015, it has extended to 55 schools (Roberts, et al., 2015; Storey, et al., 2012; Tran, et al., 2014). The APPLE school program has impacted approximately 90,000 students since its inception (Storey, et al., 2015) and continues to impact approximately 16, 500 students yearly in about 63 schools in northern Alberta ("Apple School," n. d.). According to several authors, the APPLE school program is as a "best practice" in preventing childhood obesity" (Ekwaru, et al., 2017, p. 1; Tran, et al., 2014) that other schools in Canada can use as a prototype to set up their own programs in combatting childhood obesity. The project is evaluated yearly. This program studied and modeled the

existing active living and healthy eating program from Annapolis Valley Health Promoting Schools Project (AVHPSP) with a slight modification: hiring health facilitators to oversee the project (Schwartz, et al., 2012).

The goal of the APPLE program is to “improve healthy eating and active living among elementary school children; increase the capacity of the school community to address health-related behaviors and to foster a healthy school environment” (Schwartz, et al., 2012, p. 3). Similar to the AVHPSP, this initiative wants to make the healthy choice the easy choice. The criteria for being a part of the APPLE school project includes the following:

have a configuration that includes Grade 5; demonstrate a need for better nutrition and promotion of healthy living (this decision was made by a ranking system which took into account factors such as lower socio-economic status); support the interventions and participate in ongoing and new research that may be presented within the time frame; commit to a three and a half year involvement; provide office space for the facilitator and access to infrastructure support such as telephones, photocopy and fax machines; include the facilitator as part of the school staff, and participate in meetings of administrators and facilitators (Schwartz, et al., 2012, p. 5).

The health facilitators who were hired had some background qualifications, training, and experience in nutrition, aerobics, education, and management. They received training for six weeks initially, followed by additional on-the-job training (Schwartz, et al., 2012; Tran, et al., 2014). The health facilitators were tasked with the development and implementation of different programs around active living and healthy eating to complement the efforts of the physical education teachers with the understanding that children need to be actively engaged and should not be limited to their time in the gym. They were also responsible to get children active in and

out of the class and after school hours as well (Fung, et al., 2012; Stolp, et al., 2014; Vander Ploeg, et al., 2014).

In addition, they were "responsible for implementing active living and healthy eating strategies while addressing the unique needs and barriers to health promotion in the school environment by engaging all stakeholders including parents, staff and the community." Moreover, they "facilitated professional development days for teachers and school staff, organized parent information nights, nutrition program such as cooking clubs, after-school physical activity programs, weekend events and celebrations and circulated newsletters" (Fung, et al., 2012, p. 2).

A study conducted by Fung, et al., (2012) showed a decline in obesity in the APPLE school children in comparison to other schools in Alberta that were not a part of the program within the same time period. This suggests that early prevention in children by engaging in active living and healthy eating can be helpful in preventing obesity in adulthood (Tran, et al., 2014). This intervention was also seen to increase children's awareness of the importance of healthy eating and active living both in the school environment and outside of the school setting. As a result, many children were beginning to take an active role in wanting to lead a healthy lifestyle (Vander Ploeg, et al., 2014).

2.4 The Impact of the School System

The impact of schools in helping combat the rise of childhood obesity cannot be overemphasized since children usually spend a large part of their time at school (Mendelson, 2007; McIsaac, Mumtaz, Veugelers & Kirk, 2015). Schools are known as environments where learning takes place and children can be taught the importance of healthy eating and active living. Schools can also provide an environment where children can put what they have learned

into practice and be given feedback in the process (Lagarde & LeBlanc, 2010; WHO, 2008; Storey, Cunningham, Spitters, Schwartz, & Veugelers, 2012). It is important to know that both academic and non-academic staff; children and their parents/caregivers alike worked together to ensure a smooth running of the program (Miglioretta, Velasco, Celata & Vecchio, 2012). A strong working relationship between all the stakeholders and the school created a culture that promoted and supported the initiative was found to be effective in the implementation of the APPLE school program (Storey, et al., 2011; McIsaac, et al., 2015). Thus, creating a suitable and supportive environment has been seen to be helpful in learning and implementing new skills (McIsaac, et al., 2015).

For example, the “no junk” policy by Annapolis Valley Health Promoting Schools Project was put in place to discourage poor food choices and encourage healthy eating (Mendelson, 2007, p. 498). In the same vein, some of the participating schools removed vending machines where children could get junk foods and drinks that were high in fat, sugar, and salt from the school environment. Water was made accessible to encourage drinking more of it, fruits and vegetables were displayed more often and made available and accessible to children instead of fat saturated foods (Mendelson, 2007).

The school also provided encouragement to children to sample new fruit products as a way of exposing children to something different (Schwartz, et al., 2012). Some schools have also taken it further to have gardens where children learned how to garden and eat fresh fruits and vegetables that they produced themselves (“Apple School,” n. d.). Also, the time spent in the classrooms included options for movements throughout the day in addition to gym time. Studies have shown that having frequent intermittent time for exercise helps create an active environment in comparison to having a structured time (Government of Canada, 2018).

Furthermore, Storey, et al., (2011) noted that the “visibility of the APPLE brand was identified as an important mechanism to signify each school’s identity as an APPLE school and was viewed as a means to promote the school culture” (p. 11). The autonomy given to each school to tailor the program to the culture and need of the students has also be seen to enhance the success of the program.

2.5 The Impact of School Principals

The role of school principals in ensuring the success of active living and healthy eating program in all the participating schools cannot be overemphasized. School principals were active catalysts in ensuring that the APPLE School program remained an integral part of the school system, vision, and policy (McIsaac, Read, Veugelers, & Kirk, 2013; Deschesnes, Trudeau & Ke’be’, 2010). For example, the participating principals in the APPLE School program created a culture of active living and healthy eating throughout the school environment by making it a part of the discussion during their meetings, the hiring and orientation of new staff, training of new and existing staff, and any other formal and informal gatherings (Roberts, et al., 2016).

Roberts, et al., (2016), for example, conducted a grounded ethnography research and found out that school principals’ leadership, modeling, participation, enthusiasm, commitment, sustained interest, communication, flexibility, hard work, and support were key to motivating others and the successful implementation of the APPLE School project. It is hard to implement any policy if the school principals are not on board (Stolp, et al., 2014). Principals also engaged and became passionate spokespersons for the initiative to get the whole school community including the students and other non-academic staff, school boards, parents/caregivers, food

industries, health agencies, local grocery stores, individual donors, and philanthropists among others on board (Roberts, et al., 2016).

Another factor that makes the APPLE School project a success is that principals encouraged feedback from the various quarters. They also made some adjustments to the existing program based on the feedback so that it could suit the need of the children, parents and caregivers and the school community. They kept an open mind throughout the implementation stages and asked for suggestions as they developed working policies for the program. The school principals also looked for ways to celebrate innovation and participation by applauding every attempt made by both that teachers and students alike (Stolp, et al., 2014).

2.6 The Impact of Classroom Teachers

Children oftentimes listen to their teachers and see them as role models, especially at the early stages of life. That means that teachers are significant in communicating the importance of active living and healthy eating. Much more than talking about it, the teachers lived it themselves (Storey, et al., 2012).

The teachers were informed of the vision and the objectives of the program to get their support right from inception and their concerns were addressed (Stolp, et al., 2014). The teachers also knew that their participation in the program was crucial to its successful implementation and continuation (Storey, et al. 2012). For example, the concern about classroom teachers finding time out of their busy daily schedules was addressed by hiring full-time health facilitators to complement their work. Also, their apprehension over who will be the leader of the program was also addressed. Teachers knew that the delivery of APPLE program was going to be done by the health facilitators while they (the teachers) will be there as supports (Storey, et al., 2011). On

reminiscing on the relationship between the teachers and the health facilitators Storey, et al, (2011) asserted that “the presence of the SHF [School Health Facilitator] was considered a reminder for the teachers about integrating CSH model into daily practices, and this presence kept them focused on the project” (p. 10).

It is important to note that teachers bought into the program right from the beginning. They realized that it was a worthwhile cause and the program had the potential to improve the health conditions of their students (Storey, et al., 2011). Studies have shown that teachers tend to participate in a cause that might be above and beyond their workload if they seem to derive meaning from the cause (Miglioretta, Velasco, Celata & Vecchio, 2012). Thus, the teachers who participated in taking an active role in the delivery of the program wanted to and were not forced into doing so (Storey, et al., 2012). The attitude became a source of motivation for the long-term continuation of the program.

Teachers also reported that they were given freedom, flexibility, and autonomy to run and adapt the delivery of the program to the needs of their students in their respective classrooms, the weather conditions and the time available to them (Storey, et al., 2012; Schwartz, et al., 2012). This gave them a sense of ownership in the program.

One of the things that made the APPLE school successful was the way the program engaged the teachers. The health facilitators worked hand in hand with the teachers in the classroom, provided training, and encouraged input and feedback from the classroom teachers to improve the program and its delivery (Schwartz, et al., 2012). Providing ongoing training to teachers was found to increase teachers’ participation, sustained interest, and commitment over the long haul. Likewise, when teachers realize that their own wellbeing is equally important and that they will be supported as they make decisions, there is an increase in their participation

(Miglioretta, et al., 2012). This sustained interest has also been seen to be beneficial to the teachers, as they take an active role in leading a healthy lifestyle themselves.

2.7 The Impact of Parents/caregivers

The first set of education and training children receive about health and well-being is from their parents/caregivers (Birch, et al., 2007). Many children who are obese today might be as a result of their exposure to an unhealthy lifestyle at home. If childhood obesity will be addressed, it is pertinent that parents/caregivers are involved right from the beginning (Faught, et al., 2016). Parents/caregivers play a very important role in children's eating patterns and active living (Birch, et al., 2007). Mendelson (2007) asserted the importance of creating healthy eating and active living patterns first at home. That means if parents/caregivers are not on board, the efforts of the school in combatting childhood obesity will be null and void (Stolp, et al., 2014).

What has made the Comprehensive Health School program successful in some of the schools has been the joint effort of both the parents/caregivers and their children's respective schools (Storey, et al., 2011). For example, the success of the Annapolis Valley Health Promoting Schools Project was due to the joint efforts of both the teachers and the parents/caregivers (Edwards, et al., 2004).

Ongoing training and support need to be available to parents/caregivers. It is also important that they are given information on how to further encourage their children to live healthily and eat better outside the school environment. Parents/caregivers must take the lead in ensuring that time children spend at home after school hours further increase their active living and healthy eating the impact of whatever happens in the school environment can be felt at home (Schwartz, et al., 2012).

One of the key factors in the APPLE schools project was the way the parents/caregivers were carried along in the program. Information was readily available and was sometimes sent home with children to their parents and caregivers; training and education were provided on a continuous basis. Parents/caregivers' concerns were address as soon as possible (Schwartz, et al., 2012).

On the other hand, there is a correlation between low socioeconomic status and obesity (WHO, 2016). Studies have also revealed that accessibility to fruit and vegetables can influence children's choice. Also, how it is being displayed has been found to be a major contributor to children been able to choose fruit over unhealthy food (Eisenmann, et al., 2011; Lindqvist, Kostenius, Gard, & Rutberg, 2015).

Parents/caregivers' modeling and the encouragement of eating healthy and participating in regular exercise has been found to be a morale boost to increasing and sustaining children's interest and participation (Faught, et al., 2016). It is recommended that children get about 60 minutes of mild to vigorous physical activity per day (Eisenmann, et.al, 2011; Heitzler, Martin, Duke & Huhman, 2006; Boddy, et al., 2012; Slawta & DeNeui, 2010).

2.8 The Impact of Peers/friends

Children's interest and participation have been one of the keys to the success of the APPLE School program not only in the school environment but beyond it. Children have the ability to influence the healthy culture in the home based on what they learn at school. Children's beliefs and attitudes are crucial to dealing with obesity (Gosling, Stanistreet, & Swami, 2008). Therefore, it is imperative that students should be carried along every step of the way. In the

APPLE School project, for example, the Health School Facilitators sought buy-in, cooperation, and feedback from the students as they proceeded with the program (Storey, et al., 2012).

Studies have shown that if children are given clear leadership roles and responsibilities equivalent to their age and experience, if they are able to give to and receive feedback from teachers and their peers, if the atmosphere is safe enough for them to challenge themselves and others, there seems to be an increase in their participation and interest (Maturo, & Cunningham, 2013; Simovska, 2007). Since the program is primarily for them, it is important for them to be involved so that they can take and have a sense of ownership (Kostenius, 2013). Jensen & Simovska (2005) reflected that

If students are not drawn actively into the processes, there will be little chance that they would come to feel a sense of ‘ownership’ of the area of learning. If students do not develop ownership, there is very little likelihood that the activities will lead to changes in students’ practice, behaviour or action (p. 150-151).

Therefore, success happens when students understand how important they are, what they can do and are giving the opportunity and the encouragement to act accordingly. Likewise, success happens when children understand what they can do in collaboration with others in a respectful and safe atmosphere (Jensen & Simovska, 2005).

Several studies have revealed that children often learn from and listen to their peers more than they sometimes listen to their teachers or parents/caregivers (King & Ling, 2015; Maturo, & Cunningham, 2013). Children are known to influence each other’s behaviors either negatively or positively as well (Garcia, Sirard, Deutsch, & Weltman, 2016; Maturo, & Cunningham, 2013; Salvy, et al., 2008). Children with stronger ties with other children are known to engage more in active living both at school and outside the school environment; they also tend to be more intense

and enjoy activities in which they co-participate with their friends (Garcia, et al., 2016; Barkley, et al., 2014). They sometimes challenge, encourage and inspire each other to participate in active living or tend to try new activities (Jago, et al., 2009; Gosling, et al., 2008). Oftentimes, children inspire each other through their words and by modeling the behavior they want to see in each other (Garcia, et al., 2016).

Chapter Three

SO Active SO Healthy Program Overview

The SO Active SO Healthy (SASH) pilot health program was inspired by and modeled after the APPLE (Alberta Project Promoting active Living and healthy Eating) school program in the northern part of the province of Alberta and the city of Edmonton. The APPLE school project was a response to addressing the growing concerns of childhood obesity and children who are overweight (McAuley, et al., 2009).

With their commitment to promoting healthy eating and active living among school children and within the school environment to reduce childhood obesity, the Seven Oaks School Division in Winnipeg, Manitoba, Canada launched a campaign in 2016—the SASH pilot project. The goals of the SASH project are: to increase children’s capacity to identify, understand and articulate fitness through daily healthy active living within a range of individual and group movement strategies, to help children be well informed about food choices, and to take the knowledge home to their respective families.

Before the implementation of the SASH program, staff and school board member representatives from the Seven Oaks School Division toured four APPLE schools in Alberta to learn the intricacies of the APPLE school program. With the support and the leadership of the school Administrators (principals and vice-principals) in four schools in the Seven Oaks School Division, a pilot project was afterward developed. The pilot project was launched at the beginning of January 2016 in four elementary schools presented in the thesis as A, B, C, and D to maintain their anonymity. Schools A, K-Grade 8 (428 students); B, k-5 (128 students); C, K-Grade 5, (262 students); and D (K-5), (247 students). The pilot has now been in place for about twenty months.

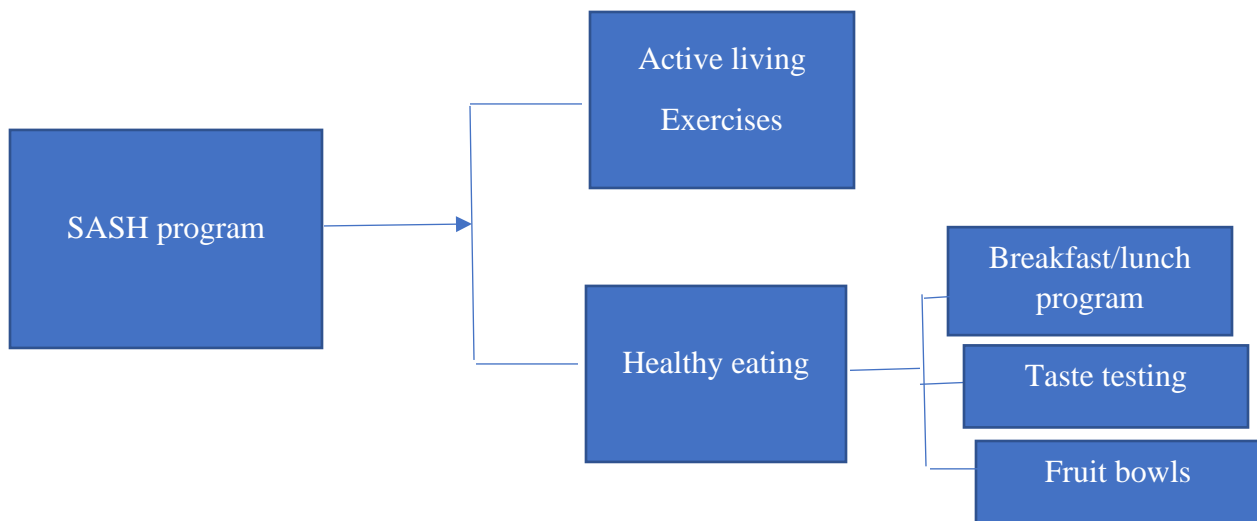
Part of the reason behind the APPLE program's success was the hiring of School Health Facilitators that were tasked with the responsibility of promoting the program among children and their caregivers. They provide initial training and ongoing support for the classroom teachers and parents as well (Apple School, n. d.; Stolp, Wilkins & Raine, 2014; Vander Ploeg, et al., 2014). Following suit, the Seven Oaks School Division through the school administrators in each of the four pilot schools identified staff who they felt were best suited and would be willing to engage in some leadership role and drive the program. The teachers were also given the options to decline if they felt that the request did not fit into their schedule. It is worth noting that taking on the obligation as a school champion for the SASH program was an additional responsibility to being a classroom teacher. The school division, recognizing that these people were key components to the success of the program, gave them time to meet and prepare for the launching of the program. Each school has at least one health champion.

The teachers/health champions at the time were physical education teachers, fitness instructors, and classroom teachers with backgrounds in fitness and health, education, and dance. Each of the four schools has their own school champions—dedicated and passionate staff who volunteered their time to be leaders of the SASH program in their respective schools. They demonstrated an interest in helping children engage in active living and healthy eating, apart from the regular time spend at the gym.

Upon agreeing to take on the additional responsibility, the champions from each of the four schools attended a two-day informational session and professional training on October 15th and October 16th 2015 facilitated by two health-promoting leaders from the APPLE Schools project. The training comprised of: the history of the APPLE school program and what has made them successful; how they can identify the needs of the students; develop action plans to

promote health; and effectively tailor and deliver the program to the needs of the students in their respective schools (Storey, Montemurro, Schwartz, Farmer & Veugelers, 2015). The SASH program officially launched in January 2016 and is being funded by the Seven Oaks School Division. Figure 4 describes the SASH program. The funds are allocated based on students' population within each of the participating schools.

Figure 4: SASH program



From the two-day training and several meetings afterward, the school champions developed the skills to enlist and encourage students' participation in the key activities of the SASH program. The key activities include but are not limited to: classroom energizer breaks, taste-testing/sampling of different fruits and vegetables; morning announcements promoting active healthy lifestyles; bulletin board with visual depictions; Go Noodle exercise breaks; BOKS (Build Our Kids Success); Good Life 4 Kids School Program; and the Art of Capoeira. Both the Good Life 4 Kids School Program and the Art of Capoeira are taught by outside qualified instructors in classrooms or dance studios. Each participating school displays a banner in the public areas to depict that they are part of the SASH school pilot project and each school

and teacher had the freedom to implement the activities they chose in their classrooms and schools.

The school champions also had the responsibility to train students. Some of the training given to the school children included how to properly handle food, how to prepare food in a safe environment, how to handle cutlery, proper hand washing techniques, and how to play safe among others. Students in each school were encouraged to take leadership roles and aid their teachers as needed, especially during the preparation of fruits and vegetables for taste-testing/sampling. In one of the schools, teachers signed up for a specific date that their classroom would go to the food preparation area/kitchen and assist the school champions with preparing the school-wide taste test and sampling of either fruits, vegetables, or any other healthy snack predetermined by the school champions. Once the healthy snacks were prepared, students were then sent out to various classrooms in the school to deliver the snack(s).

Three of the schools offered food taste-testing/sampling once a month while one school did it once a week. The classroom teachers were also given the autonomy and freedom to make decisions to tailor the activities to the needs of the students in their various classrooms. Depending on the day or how busy the teachers were, each classroom teacher took about 5-minute energizer breaks—non-routine and non-scheduled breaks—to engage the students in different physical activities and movements as needed. In one of the schools, every morning at 10:25 am, music was played for 5 minutes over the public announcement system where the entire school participated in their health hustle led by student leaders who were trained by a staff member to lead the routines.

In addition to the school champions, there was also a SASH committee in each of the four schools that made decisions on how the program should be run based on the needs of the

students and the capacity of the school in terms of staff availability. The SASH committee was responsible for the monthly theme and color and they passed this information to classroom teachers. The SASH program also had a coordinator who provided oversight, advocated for and promoted the program to get more buy-ins and supports from the teachers. The coordinator also attended SASH committee meetings once a month, offered suggestions, provided encouragement, and supports as deemed fit.

3.1 SASH Objectives

The SASH committee came up with the following objectives to guide their work and inform their decisions. Their aim was to see that their students understand what they are trying to do and communicate their understanding to their respective parents/caregivers.

1. To increase children's capacity to identify, understand and articulate fitness through daily healthy active living within a range of individual and group movement strategies
2. To help children be well informed about food choices and to take the knowledge home to their respective families

3.2 Evaluation Design for SASH Schools

Evaluation is important in determining the effectiveness, strengths, and weaknesses of any program (Patton, 2012). The purpose of the SASH program evaluation is to measure the school children's attitudes and behaviors, as it relates to making healthy food choices and living actively. The second purpose is to assess if the program is worth continuing in the four schools and worth expanding to other schools in the Seven Oaks School Division.

The evaluation considered the experiences of students, their parents/caregivers, the principals, vice principals, teachers, SASH program coordinator and the health champions from each of the four schools. The main evaluation design decisions were made by the SASH committee.

3.3 SASH Committee

The school division was interested in evaluating the SASH program. They organized an evaluation committee with the task of providing an oversight to the development of the evaluation plan, evaluation questions, data collection, as well as the interpretation and the utilization of the findings. The evaluation committee comprised of the following stakeholders and intended users: the SASH program coordinator, principals from the four schools A, B, C, and D and one the physical health education teacher from school D. A University of Manitoba graduate student (researcher) with his supervisor were also members of the evaluation committee.

As part of the preparation for the evaluation, the evaluation committee developed an evaluation plan over a period of several months. The committee met on April 27, May 24, October 23, 2017, and March 7, 2018, to discuss, choose, prioritize, and operationalize the evaluation questions that would be used for the evaluation. They also discussed the methodologies, developed and refined data collection tools and methods within the same time period. The actual evaluation began after the researcher's thesis proposal defense and the ethics approval was obtained from the Health Research Ethics Board (HREB) at the University of Manitoba in June 2018 (see appendix H).

The researcher collected the qualitative data and analyzed the qualitative and quantitative data and wrote the evaluation reports and presented the findings to the committee and the stakeholders.

Chapter Four

Thesis Objectives and Methodology

4.1 Thesis Objectives

This thesis objectives were:

1. To evaluate SASH program based on the interest of the SASH committee and using the evaluation questions that they developed
2. To use the adaptation of Mayne (2017) theory of change and based on the review of documents and findings of the evaluation to articulate and critique the program theory of change

4.2 Evaluation Questions

The following evaluation questions were determined by the evaluation committee:

1. What are the activities regarding healthy food choices and active living specific to SASH schools?
2. Are children talking to their families about: a) food choices b) active lifestyle based on SASH activities?
3. How is being in SASH school affecting children and the school culture?

4.3 Methodology of the Evaluation

This study utilized a concurrent mixed methods approach—quantitative and qualitative. The data collection methods included semi-structured in-person interviews, questionnaires, minutes review and analysis, online postings, review of Mayne’s theory of change document and data analysis. The mixed methods approach combined qualitative data from twenty-two semi-structured interviews with the staff from each of the four participating schools. The quantitative

survey included 348 parents/caregivers and 741 students (school A= 387, school B= 80, school C= 119, and school D= 155) from the four participating schools. A mixed methods approach was desirable for the evaluation of the SASH pilot project because it allowed for a thorough description of the entire program as well as detailed explanations of specific phenomena that cannot be easily quantified (Tariq & Woodman, 2010). It also enriched the analysis and the findings of the evaluation. A mixed method approach also helped capture data that each of the method alone was not able to capture. In other words, the strength of each approach made up for the weakness of the other. Another reason the mixed methods were utilized was to provide a rich and comprehensive understanding of the evaluation from the participants point of view so that study findings are grounded in participants' experiences (Dunning, Williams, Abonyi & Crooks, 2008). Both qualitative and quantitative data were collected independently and were later combined at the end for analysis, interpretation and conclusions.

4.3.1 Qualitative Data

The qualitative data came from semi-structured interviews of the staff from each school. A total of twenty-two staff member were interviewed through the process. After ethics approval was obtained through the University of Manitoba Research Ethics Board (Appendix H), an email to invite teachers, educational assistants, school administrators, and the program coordinator was sent to each person (Appendix G). The availability and convenience of each participant was paramount throughout the process. A copy of the informed consent form was sent via email to everyone who replied to the email invitation to participate. A hard copy of the informed consent was also made available for everyone to review and sign immediately before the actual interview (Appendix F).

In-person interviews were conducted with the twenty-two people who responded. Each participant was told that their participation was voluntary and that they could choose not to answer any question that was asked if they are not comfortable with it. Each respondent was reminded that the information shared would be kept confidential and there would not be any repercussion for withdrawing their participation. They were also told that their answer would remain anonymous unless they choose otherwise.

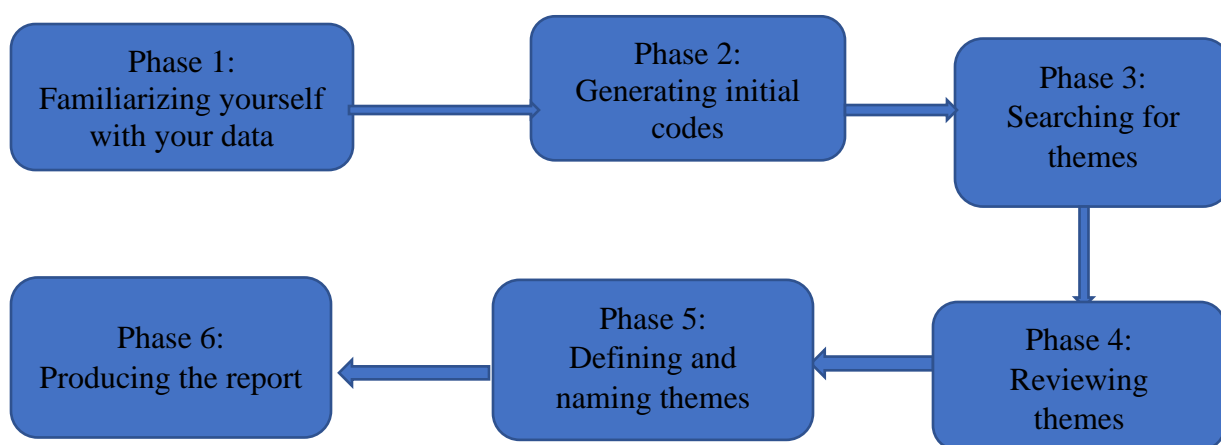
The participants were the staff from the four schools (Schools A, B, C and D) that were piloted for the Seven Oaks School Division SO Active SO Healthy program. The interviews were semi-structured and administered by the principal investigator. This method was chosen so that the staff could reflect on the program and their personal experiences within it. Permission to audio record was asked and obtained from all the interviewees.

To ensure accuracy, two digital devices were used during each interview. The interviews were approximately between seven and twenty-five minutes in length. At the beginning of each interview, the respondents were provided with a description of the purpose of the interview and were thanked for their willingness to participate and were also thanked at the end of the interview. Moreover, there was no financial compensation. However, the principal investigator sent a thank you email to each respondent at the end of the interview for their participation. There was no pressure to participate.

The principal investigator subsequently uploaded each interview to his locked computer and transcribed all the interviews verbatim. All interviews were transcribed using transcription program Express Scribe and a Speech to Text app. The researcher reviewed the transcripts several times for accuracy. The process also allowed the researcher to immerse and familiarize himself with the data for easy coding.

The principal investigator conducted thematic analysis using Braun and Clarke's model of thematic analysis (2006) where I familiarized myself with the data by reading it through several times, generating initial codes and matched the participants to the responses of the interview questions and questionnaires. Coding was done by hand on the hardcopy transcripts. From the initial codes, I searched for, reviewed, defined, named the themes and then proceeded to the final stage of writing the report.

Figure 4: Braun and Clarke's model of thematic analysis



4.3.2 Quantitative Data

Quantitative data was collected from the parents/caregivers during the parent teacher conference. The survey was made available in English and other languages represented in the schools (see appendix A-A(v) for the sample of the questionnaire). The questionnaire was made available in English and was professionally translated into different major ethnic languages (Punjabi, Spanish, Tagalog, Hindi, Arabic, Russian) represented in the different SASH schools. The arrangement was made by the SASH program coordinator as per Seven Oaks School Division policy on language translation. They were made available on site and online as well. 348 parents/caregivers participated in the survey 307 parents/caregivers completed the survey in

person while 41 parents/caregivers completed the survey online. The parents were told that their participation was voluntary, and they were to answer the questions to the best of their ability. Those who participated were thanked for their time and there was no monetary compensation. A three-point Likert scale was adopted for the survey. The data was stored at a secured location. The data was also manually input on SPSS by the principal investigator in a passworded computer.

The student survey was made available in English and was administered with help from the staff (Appendix B). Students were told that their participation was optional, and they would not be penalized should they choose not to participate. Data was collected according to Seven Oaks School Division data collection policies. A total of 741 students (school A= 387, school B= 80, school C= 119, and school D= 155) participated in the survey from all the schools. Approximately 90%, 63%, 45% and 63% of the students from schools A, B, C, and D respectively completed the survey. Staff provided assistants to students who needed some clarification and they were told they were responsible to choose the answer that they felt best described their experience. A three-point Likert scale was adopted for the survey. The data was stored at a secured location. The data was also manually recorded on SPSS by the researcher in a passworded computer. The quantitative data was analyzed using descriptive statistics, essentially means and percentages.

4.4 Methodology for the Theory of Change

I used Mayne's (2017) framework and adapted it to critically examined the theory behind the SASH program. In addition, I used the findings obtained from mixed methods—qualitative and quantitative to articulate and critique SASH program theory of change. These findings were

obtained through the analysis of information from documentations, APPLE program information, the SASH program minutes, and findings from the interviews with the educators as well as the parents/caregivers and students survey from each of the participating schools.

Chapter Five

Findings

I present the findings of the evaluation of the SASH program in this chapter. Each main section of the chapter addresses one evaluation question. The findings are presented in past tense because I am describing what has been done until now, however this does not imply that the program has concluded, as is still ongoing. To maintain confidentiality, the schools are identified by a letter (A, B, C or D), not by the actual names of the schools.

1) What are the activities regarding healthy food choices and active living specific to SASH schools?

The answer listed the activities that each SASH school engaged in from the inception of the program in January 2016 until the time of the evaluation in March 2018. It focused on the activities that each SASH school regularly and randomly did. The answer to the question also provided a description of each activity and how different schools implemented them.

2) To what extent are children talking to their parents/caregivers about a) food choices b) active lifestyle based on SASH activities?

The answer informed the principal investigator about whether parents/caregivers at home were aware of the type of fruits and vegetables the children sampled/taste-tested at school. It also provided information about whether children spoke to their parents/caregivers about healthy food choices and had influence in what the parents buy or whether children engaged in any kind of physical activities when they were with their parents/caregivers.

3) How is being in SASH school affecting children and the school culture?

The answer discussed whether the program has positively impacted SASH schools. It also provided information that determined if the SASH school environments changed regarding students' and staff's food choices as well as their lifestyles (active or inactive). It also discussed

staff's contributions to the program, what they did and how their interactions with their students impacted them. The answer also discussed children's responses in choosing to engage in active living outside the school environment.

5.1 Active Living and Healthy Food Choices Activities Specific to SASH

The findings related to question one are presented according to each component—active living and healthy eating—and school by school. Table 1 displays the list of active living and healthy eating activities that each school had.

5.1.1 Active Living

School A. School A had-a-once-in-a-6-day cycle (a school cycle is a six-day rotation) *brain breaks* activity—a short mental break for movement and exercise that students took at regular intervals during the day to generate mental energy. Students went to the gym or the outdoors as instructed by their gym teachers to participate in both structured and unstructured plays (exercises). Structured plays were regulated while unstructured *plays* provided students the opportunity to choose and direct their own *plays* while the staff monitored their safety. The students with their gym teachers planned and participated in different fitness breaks for about 15-20 minutes at a time to get their heart rates up. Students shared their ideas about what they would like to do with their peers and gym teachers.

However, as the classroom teachers' confidence grew, they decided that in addition to the once-in-a-6-day cycle break at the gym, each classroom would have their own *brain breaks* at different times throughout the day. Educator A6 explained that for the most part, the students suggested the kind of movements and exercises they wanted to do and everyone participated: "I

have my kids all morning like every 45 minutes or every hour, we'll pick one and we'll get up and find our own space and then do something active [to] kind of refresh our brains" (A6).

Activities for the brain breaks included squats, lunges, jumping jacks or push-ups among others.

In addition, 57% of the students who took part in the survey mentioned that they usually exercised or participated daily in activities that made their hearts beat fast. Educators explained to their students that being physically active should not only be limited to the gym but a lifestyle that they could do at any time and anywhere. Educator A2 mentioned that more students became more active and there was an increase in their confidence level and self-esteem as a result of the different activities they participated in.

In 2018 the school purchased heart rate monitors for students to individually monitor their heart rates in the gym in a supervised environment. Each student was connected to the monitor for a period of time as they engaged in different plays. Educator A1 explained that they invested in the monitors because they wanted to educate their students about what it meant and what it would take to be physically fit. They also wanted to teach each student how to take ownership of their own health and be responsible for making choices that would improve their well-being whether at school or at home.

In addition, school A had an outdoor playground activity that they did for about 30 minutes for at least three days within the school cycle. This activity, as the name suggested, was done on the playground. Students were encouraged and expected to participate in different activities which included soccer, three-legged race, potato sack race, bean bag, skipping ropes etc. They were easy to set-up and clean-up; self-directed and did not require lots of equipment or much preparation. The activities were spread across the stations and students started anywhere they wanted, used the equipment that was available for a few minutes and then went to another

station. Educator A7 explained that they wanted to make sure that students “have a place out there to get active...” They also believed that each student would have the opportunity to experience all the activities at some point.

This outdoor activity was led by playground activity leaders (PALs), grades 5 and 6 students who volunteered to be leaders. The PALs were trained by the staff to set-up and clean equipment before and after use. They went out 10 minutes early before the other students and each wore a red penny on top of their clothes to differentiate them from others. They were given further training when a new activity was added to the list. They were on a rotational schedule and they took turns to manage an assigned area and each one knew when it was their turn. They ran four different activities in different stations at a time. About five to ten PALs usually ran a station to ensure efficiency and effectiveness. Each station had a different activity set-up for students to engage in whether by themselves or in conjunction with others. Each station could have about five to twenty students participating at one time depending on the activities and their interest. Depending on the number of students participating at one time, the PALs could have one-on-one play with the other students.

The PALs provided oversight, direction, and assistance to other students. They kept an eye on anyone who struggled with any activity or felt left out. They found ways to integrate and encourage them to try different activities based on their interest(s). Educator A2 noticed that some students seemed to have developed the courage to try new activities and more students seemed to be socially integrated and connected as well.

Educator A1 explained that the PALs were not only active but they had the opportunity to learn how to develop their social, leadership, problem-solving, management and conflict resolutions skills along the way. Besides, they saw that their confidence level grew. Also, some

of the interviewees in school A mentioned that the activity seemed to be well received. However, they were still looking for ways to keep improving.

School B. During the early stages of the SASH program, school B obtained funding from Good Life Canada to engage the services of a fitness instructor, who for about 15 minutes at a time, taught active movements within each classroom. The instructor also trained the staff on how they could make dance styles/movements/exercises something interactive, fun and doable for their students. They were told that active movements could be random and unstructured, as long as they engaged students. Educator B1 reported that this knowledge helped the staff to find creative ways to help their students to be more active during the day. As time went by, staff began to use the skills learned to lead their classes in different activities such as push-ups and jumping jacks among others.

They also had a-once-in-a-6-day cycle school-wide movement after the first recess break at about 10:50 am. The school-wide movement was a simple, fun, engaging, energizing and active dance style/movement/exercise that the whole school—teachers, administrators, students—participated in for about 3-4 minutes when music was played on the PA. The health champion (staff responsible for leading the SASH program in the school) and/or the SASH committee in collaboration with the dance teacher and student leaders were the ones who chose the kind of music to dance/move to for the whole school.

The student leaders and the dance teacher decided together on the dance style/movement/exercise for that cycle, practiced it until they mastered it, and were paired up to lead different classrooms in that move. Usually, everyone in the school stopped whatever they were doing when the music came on over the PA system to participate. They wanted to be “very intentional as part of the SO Active SO Healthy program” asserted educator B1. The student

leaders also led a 3-4-minutes dance style/movement/exercise during assemblies and whenever they had community events. This led to the establishment of a dance club for grade 1 to 5 students.

In addition, each classroom had its own movement breaks based on the initiative of their teachers. They took part in Go Noodle—a program on the computer that was projected on the smart board which students moved to. The students followed the actions that they saw on the videos or did what the instructors asked them to do. Moreover, because of the inspiration from watching the videos, some classrooms came up with creative ways to keep moving such as skip counting with movements, sit-ups, squats, yoga, toe touching, and jumping jacks. Some even walked and/or ran around the schoolyard whenever they got antsy, became unfocused or had been sedentary for an extended period of time. Meanwhile, 69% of the students mentioned that they usually exercised or participated daily in activities that made their hearts beat fast. There was also a free one-hour monthly open gym which averaged about 30 people per time for students' families to encourage active movements and exercise.

School C. School C had a student-led “health hustle” for about five minutes every day where the whole school community—staff, educational assistants, administrators, and students made active movements to a piece of music that was played through the PA. The whole school was expected to dance or move to a routine at the same time. Educators C1 and C4 explained that at about 10:45/50 am every day before recess, the student leaders went to different classrooms and led them in a specific movement. When the music came on the PA system, everybody around the school was expected to follow the directives of the student leaders. It is worth noting that at the time of the interview the SASH committee was working on modifying this activity.

In addition, they had a weekly fit club for students. At the time of the interview, educator C5 reported that they saw an increase in the number of students who seemed to have learned how to regulate their emotions, calm their bodies, become more focused in the classroom. Meanwhile, 47% of the students mentioned that they usually exercised or participated daily in activities that made their hearts beat fast. They explained that being actively involved fostered independence and teamwork among the students. Activities that the school did to encourage active living are listed in Table 1.

Educator C2 also discussed their plan to have fitness trails around the school where children could take part in different activities like running, jumping, walking and if they were to take a break they could sit in the shade, stop to play in the sandbox or build something with woods and sticks that will be provided. They did not yet know when they would start because of financial constraints.

School D. School D incorporated various activities for active living in addition to their regular gym time. Since the inception of the SASH program, they made some improvements to their outdoor space and re-designed some parts of their playground so that students could be more active. They had a school-wide movement where they moved when music was played over the PA system. Educator D1 reported that they had a *Walk Wednesday* where each classroom took turns to go for a walk and they tracked how far they walked from time to time (they did not keep any formal records).

In addition, they had an 8-week gymnastics program for Grade 2 students at no cost to parents. Also, they took school-wide mindfulness breaks every day and each classroom took time for active movements as needed. Activities that the school did to encourage active living are listed in Table 1.

Lastly, each classroom teacher creatively came up with activities that would benefit and encourage active living among their students. Educator D3 reflected on what they did in their own class: “in our classroom when we count on the number chart, they get up every from 1 to 10 it's a certain type of action from 11 to 20 different set of actions... This is daily.” Educators noticed that as a result of their participation, students felt good about themselves and there seemed to be an increase in their social interaction with others. Consequently, 68% of the students mentioned that they usually exercised or participated daily in activities that made their hearts beat fast.

5.1.2 Active Living Comparison across Schools. It is important to note that all four schools were each given autonomy from inception to run the program based on their school’s culture and the needs of their students. The educators who were interviewed explained that having autonomy contributed to the progress of the program in their respective schools. Educators A1, B1, and D1 mentioned that being autonomous helped them become more creative in meeting the needs of their students; thus, increasing the buy-in from and participation among the students. 61%, 61%, 59% and 69% of the students from schools A, B, C, and D respectively reported that they spent their time being physically active with their friends and participated in different activities such as building forts, playing tags, having race, taking a walk and riding a bike among others.

All four schools had a school-wide simple, active and fun movement to encourage active living, they had music played over the PA system. However, schools A, B, and D had their active school-wide movement once in a 6-day cycle, whereas school C had theirs every day.

All the schools also did extra movements in their classrooms from moderate to high activities. The classroom teachers were responsible for those activities and encouraged contributions from and participation of their students.

School A however, partook in a student-led outdoor activity (PALs) unlike the other schools. They also had heart monitors that they recently purchased to help individual student monitored their own heart rates. School B had a free one-hour monthly gym for their community.

School C started a fitness club for their students as well. School D had free 8-week gymnastic lessons for their grade 2 students and established a dance club for their Grade 1 to 5 students. In all the schools, students were involved in different capacities in running the activities in the classrooms, gyms and on the playgrounds.

Table 1: List of activities by the SASH schools

Schools	Physical Activities	Healthy Eating
School A	Once a cycle half day brain breaks at the gym, heart rate monitor, fitness club, outdoor active centers, three-legged race, potato sack races, bean bag, skipping rope jump, lunges, jumping jacks, squats, push-ups, walking, biking, rollerblading, soccer, basketball, potato sack, relay, three-legged races, gardening, active movements	Cooking, food sampling every school cycle, menu planning and food/snack preparation, cooking club, breakfast program, educating about the nutrients in fruits/vegetables, food/fruit/healthy snacks available throughout the school, fruits and vegetables, muffins, soups and sandwiches, Caesar salad, wraps, recipe sharing online, cooking club,
School B	Go Noodles, classroom movement breaks, push-ups, jumping jacks, once a cycle school-wide active movement, community outreach/ education, walking, squats, toe touching, running, gardening,	Monthly taste tasting, breakfast program (scrambled eggs, pancakes, lunches, fruits, all day snacks, special health booklets, education, printing of recipe for children to take home
School C	Yoga, jump rope for heart, student-led daily health hustle, deep breathing, gardening, bike club, full square, simple square, alphabet trees, Hopscotch, running club, intramural track, fit club, pow wow dancing, boot camps, handball, volleyball, walking, running	Breakfast program, all day snack bowl, smoothie monthly food tasting, available of fruits all day, candy exchange, newsletter, online publications on recipe sharing
School D	Sledding, Grade 2 gymnastic program, Walk Wednesday, mindfulness, badminton, daily classroom active movements, gardening, recreational golf, curling, ice skating/hockey, learn to swim, learn to skate	Monthly school-wide taste testing, online recipe sharing, pictures of events, newsletter, fruit bowls, fruits and vegetables, class made pretzels, parfaits

5.1.3 Healthy Eating

School A. School A had breakfast and lunch programs that were partly funded by the Child Nutrition Council Manitoba and Seven Oaks School Division. The program was for all students especially those who did not have access to proper nutritious foods, no food to eat at home, or those who did not have enough food. They all came to the school in the morning to have a healthy breakfast.

The breakfast program was an integral part of the school and its impact cannot be overemphasized. Educator A6 reflected: “the breakfast program is huge, I find out [that] a lot of my kids are coming to school hungry, so they have breakfast here...” Meanwhile, survey findings revealed that 69% of the students mentioned that they usually ate breakfast before coming to school, 21% said that they sometimes eat breakfast and 11% said that they rarely eat breakfast.

The program provided an avenue for students to eat something healthy at the start of their day. The breakfast meals included soups, sandwiches, fruits and vegetables. Foods that were high in fiber, nutrients, and protein and low in sugar content were also made available. The lunch program also was for students who either did not have food to eat during lunchtime, forgot their lunch at home, did not like what they brought to school, did not bring nutritious food or did not have enough food for the day.

The breakfast program led to the creation of a cooking club for Grades 5-8 students in the school. The members of the cooking club were responsible for food preparation for breakfast and lunch and helped with preparing food/snack for taste testing. Staff advised that they transferred important knowledge to the students through the cooking program. For instance, students learned about the benefits of different foods/fruits that they made and the importance of teamwork. They

helped their students to form healthy eating habits and practices so that they could make healthy choices.

Moreover, students were taught about kitchen etiquette, food safety principles, general kitchen safety in regard to handling kitchen equipment competently and how to prepare different types of foods/snacks on a large scale. Furthermore, educator A7 reflected on the importance of teaching the students about kitchen safety:

I think often we've shifted a little bit where kids don't prepare food as much, and we don't realize how much they can do. I think sometimes in our overly cautious safe world brains, we don't let kids use knives at school... but we do let kids use knives here in a safe way and cut up vegetables and knock on wood, no one has been hurt to this point...

They hoped that students would transfer what they learned in the kitchen to their respective homes.

In addition, school A had a taste testing activity where every student had the opportunity to sample or taste fruits/vegetables/snacks and reflect on their experience to their classroom teachers. Each classroom with their teacher would take turns to prepare fruits/snacks/vegetables that were suggested by the Health Champions for the whole school once in a 6-day cycle for about half day in the school mini kitchen. They were also responsible to deliver what they had prepared to all the classrooms throughout the school for taste testing. At the end of the school year, each classroom had the opportunity to prepare it for the whole school at least once.

It is important to mention that most of the food/snacks/fruits were organic and were made from scratch. For example, they cut their apples, sliced their carrots, and followed recipes so that it was easier for students to see and follow the steps.

The activity also provided students with the opportunity to ask questions and engage in conversation about what was healthy versus unhealthy during the preparation and taste testing. Students also had the opportunity to learn the ingredients of the foods/snacks they prepared. Staff wrote out a little explanation about what they did and why it was important to their overall health to help the students make healthy choices whether at home or school. Moreover, because the activity was hands-on, they hoped that there would be a transfer of knowledge to their respective homes. Educator A2 reported that they saw changes as some students told them that they had what they tested at school at home: “I’ve had kids come to me and say hey [name of the interviewee]! You know that snack we made a few weeks ago, I tried it again at home and it was great...” (A2). However, 27% of the students indicated that they usually tried what they prepared at school at home, 48% said they sometimes tried and 27% said that they rarely tried it at home.

School A also had a community garden at the back of the school where they planted vegetables. Students were a part of the process of planting, weeding, watering, and harvesting. They got to see how plants grew. In addition, they involved the community (parents/caregivers) to care for the garden during the summer holidays.

School B. School B also had a breakfast program which is partly funded by Child Nutrition and the Seven Oaks School Division. So, every morning, the school prepared a nutritious breakfast for the students. Although 72% of the students reported that they usually ate breakfast at home, it was not certain whether what they usually had was nutritious. They also worked together with a dietitian who taught the staff that it was alright to use vegetables for breakfast as well. Educator B1 reflected that it was an eye-opener for them, and based on the

advice they received, they used vegetables instead of only scrambled eggs or sandwiches. They mentioned that they used peanut-free wow butter, hummus or yogurt as dips for the vegetables.

In addition, they worked diligently to discourage parents/caregivers sending their children to school with fast foods/snacks. At the beginning of the school year, they engaged the services of a dietitian who educated parents/caregivers about the importance of healthy eating and how they could make cheaper lunches. Educator B1 said one of the things they did was to show parents/caregivers how to spend “about \$3 or \$2 or \$1.50 for the whole lunch if [they] bought [their] own fresh things, go home, cut them and give them to [their] kids...” They also put out a menu of what they expected students to bring to school daily and they posted it online as well. They encouraged students and parents/caregivers to bring fruits and vegetables for their celebrations and on special occasions instead of sugary products.

School B had taste testing where they prepared different fruits/vegetables/snacks for students to taste once a month. Each classroom’s teacher purchased the fruits/vegetables/snack they wanted to sample, prepared and served them to their students. They found ways to make it a fun activity for everyone. They also brought fruits grown from other countries and cultures to the classrooms for taste testing so that their students could learn from them. They educated their students on the benefits of what they had tasted. At the time when the interview was conducted, they were planning on making some changes to this activity because they found the process tedious for the staff.

Moreover, school B had fruit available and accessible to students throughout the day, some of which were donated by Save-on Food. Staff usually cut the apples into slices and put them inside reusable containers for students to snack on them throughout the day and as much as they needed. Initially, they made a whole apple available to students until they noticed that the

students usually threw them away after two to three bites. So, they decided to slice the apples and put three slices inside reusable containers. Educator B1 mentioned that for the most part, they usually had about 50 reusable containers per day and they noticed that there were no leftovers. 62% of the students affirmed that they usually enjoyed eating fruits at school while 32% said that they usually enjoyed eating veggies.

Like school A, school B also had a garden where they planted vegetables and allowed their community to care for it during their summer holidays. At the inception of the SASH program, they engaged the services of a gardening expert to teach them how to garden. They planted carrots, beets, potatoes, and they used the produce for their *Fall Fest*—a gathering where they invited their community for Thanksgiving like dinner. One year, they prepared potato soup using the potatoes harvested from their garden. The message they passed across to the students and their parents/caregivers was that “you can grow, you can prepare it, you can cook and eat it” commented educator B1. They also distributed the remaining produce to parents/caregivers during their parent/teachers’ council that year.

School B held a food station event where they prepared different types of food/snacks and put them in different locations/station in the gym so that students could taste them.

School C. School C also had a breakfast program where students came to eat breakfast for free every day. It was partly funded by Nutritious Council and the Seven Oaks School Division. Although the breakfast program had been in existence before the SASH program, the SASH committee made some changes to the kinds of foods they usually prepared and made it more nutritious. Before the SASH program, they usually sent bowls of cheese sticks or granola bars and/or other highly processed food to the classrooms for breakfast. The SASH committee, however, sat together and changed the format and served their breakfast as a meal which

included three food groups every morning. On Fridays, they prepared scrambled eggs, egg sandwiches, pancakes with blueberries or smoothies for the students to enjoy. They also prepared beets harvested from their garden for the students to eat.

The breakfast program had become an integral part of the school community because it catered to the needs of the students. Educator C1 mentioned that

half of my kids don't eat breakfast in the morning; they come here for breakfast at least we know they're getting healthy food... we are very lucky, a lot of schools don't have that so I'm very, very happy that we get to do that.

That means that without the breakfast program, some students would go through the morning hungry and without proper nutrition. However, 60% of the students reported that they usually ate breakfast at home before coming school. Although it is not known if the foods were nutritious. It was also a relief for some parents/caregivers because they knew that their children would have food to eat once they get to school. This is a motivation to send their children to school regularly and early. Educator C2 reflected on their experience: "it has actually changed a lot of kids around, lots of kids come early now to school who normally don't want to be here because now they get breakfast."

In addition, educator C2 observed that having breakfast in the school seemed to have fostered community engagement and helped children develop social skills. They observed that students sat and played together, made new friends, and learned from one another. They commented on the social benefits of the program:

the breakfast program had brought kids together that normally wouldn't talk together, but they sit at their tables, [they] have the option to be outside or to be inside eating. It has

built a nice community there; meeting new people, conversations, starting your day off with some fuel.

The school also printed materials which students took home with them to their parents/caregivers so that they would be carried along. In addition, they discouraged parents/caregivers from sending sugary products to school. They also had *Healtharama*—an information session where students and parents/caregivers learned about heart health and participated in different simple and active exercises. They also established a cooking club and remodeled their kitchen space to make it bigger.

School C had their taste testing once a month where students could taste different fruits and vegetables inside their classrooms. Each classroom was responsible to prepare fruits/vegetables for themselves and ensured that every student sampled what they prepared, even if it was with the tip of their tongues. Some of the educators interviewed stated that they discussed the benefits of fruits/vegetables they tasted and sent a booklet home to their parents/caregivers. Although not every staff member was sending home a printout of what they sampled at school at the time of the interview, they were looking at making it school-wide.

School C observed that students were not bringing nutritious snacks to school so they tried to promote healthy snacks that students should eat regularly. They had fruit bowls situated in their kitchen where students could get fruits such as apples, oranges, or carrots, kiwi, cabbage, even bags of cereals for a snack when they were hungry instead of having unhealthy snacks such as pop tarts and granola bars. Students were always encouraged to take the fruits back to their classroom as well. 49% of the students reported that they usually enjoyed the fruits they ate at school. However, 28% said that they usually enjoyed the veggies.

School C also had a community garden where they grew fruits and vegetables such as sugar pumpkins, tomatoes, carrots, beets and they used part of the produce for their fruit bowls. School C had a candies-fruits exchange where students exchanged candies for fruits.

School D. School D also provided nutritional breakfast to support some of their students who showed up at school hungry and tired because they did not have breakfast. Students were involved in setting up tables, washing dishes, serving and other duties as assigned. Educator D4 advised that having breakfast readily available helped their students to perform better and gave them a positive experience. They also noticed an increase in attendance and punctuality.

Although the breakfast program had been in existence before the commencement of the SASH program, they made some changes to it. For example, they added fruits and vegetables to the list of what students could eat when they came for their breakfast, they added toast and eggs and a variety of cereals to give the students a great experience and options. The findings from the students showed that 80.4% usually have breakfast before coming to school. It received financial support from The Seven Oaks School Division, Canadian Living Breakfast for Learning Program, the Royal Bank, Parent Advisory Council, local businesses and SASH as well.

School D had a monthly taste testing and they tried a variety of things to encourage their students to participate. At the time of the interview, they were reviewing what they had done so far which is preparing the fruits at one location and visiting each classroom. They discussed that what they were doing had not been as effective as they wanted. Some of the snacks that were made available for taste testing included: homemade salsa, naan bread pizza, oatmeal muffins, apple fritters, spinach and cranberry pin wheels, and banana chips.

School D had a fruit bowl where students could go from time to time to pick up fruits. Educator D1 mentioned an increase in the number of students returning for more fruits on a

regular basis. They concluded that having the fruit bowl helped them to make some dents in their students' food choices. They discussed that they had changed the perception of their students about eating fruits and vegetables. 59.9% and 46% of the students reported that they usually enjoyed the fruits and veggies they tried at school.

School D also had an event where they prepared different dishes and snacks with corn and set different stations in their gym where students were invited to try some foods. They reported that it was a success. They provided information daily over the PA system about the benefits of different fruits and vegetables. The School also incorporated the SASH theme into their spirit weeks and made pizza dough out of bread and used fruits for the toppings.

5.1.4 Healthy Eating Comparison across Schools. All four schools had breakfast programs where students ate in the morning before they went into the classrooms. They developed the breakfast program for students who came to school hungry for a variety of reasons because they did not have any food to eat at home; did not have enough food to eat at home; did not have nutritious food at home; or did not have the time in the morning to eat at home. The foods offered in the breakfast program were food rich in fiber and high in nutrients, scrambled eggs, pancakes, smoothies, soups, sandwiches, etc.

In addition to the breakfast program, all four schools had fruit bowls where students could go for fruits as needed. Fruit bowls were made available and accessible to the students at no cost to them. Examples of fruits included sliced apples, carrots, beets, kiwis, tomatoes, etc.

All the schools also had a taste-testing activity where students could taste fruits/vegetables/snacks. Educators A5, B3, and E1 observed that more often than not, many students had never tried before some of those fruits they tasted. They noticed that there was an

increase in students' curiosity and courage to at least try new fruits/vegetables. Educators B2 reflected that the taste testing modelled good behavior among the students especially when the staff was involved. For example, educator E1 said that one of the students told them that they had not eaten watermelon before and that they loved it and that it had become one of their favorite fruits. Some of the educators interviewed also mentioned that many of the children told them that they liked some of the fruits/vegetables they tasted. School D tried dipping tangerine in yogurt which some had never done before. Some students also tried seaweed and hummus for the first time. Students seemed to enjoy eating fruits more than veggies. As shown in Table 2 the percentages of students who enjoyed fruits almost double the number of students who enjoyed eating veggies.

Educator C1 mentioned that they set up their taste testing activity in the classroom to make it easier for their students to participate. They told their students that they did not have to eat everything that was presented to them, but just to have a bite or taste it with the tip of their tongues. The choice provided them the freedom to try. Moreover, educator B2 reported that they made the taste testing a fun exercise for everyone. Each school ran this activity based on what worked for them. School A had their school-wide taste testing once in a school cycle. Schools B, C, and D, on the other hand, had theirs once a month.

In schools B and C, the SASH committee was responsible for choosing and preparing what the whole school would taste. In school A, the student leaders or the cooking club under the supervision of the SASH committee or the Health Champion was responsible for preparing and serving. Educator D1 from school D explained that in the first year of the SASH program, the staff was responsible for preparing all the fruits/snacks for the whole school but in the second

year, however, student leaders joined in and began to take an active role in both the preparation and the distribution.

In school A, the whole classroom prepped and served the chosen fruits/snacks to the whole school. It was on a rotational basis. At the end of the school year, each classroom was involved in the prepping and the serving at least once.

Moreover, all four schools had gardens. Educator B1 mentioned that their school once engaged the services of a master gardener who taught them how to garden effectively and they transferred the learning to their students. The schools engaged their community—parents/caregivers—to care for the plants during the summer holidays.

It is also important to note that part of the produce from the garden was used as snacks for the students. Some of the produce was also used for the school community events like fall feast/thanksgiving while some are given to any interested parents/caregivers during the parents/teachers meeting in the Fall in school B.

Educator C2 explained that they helped their students connect with nature through gardening. Educator C4 also noticed that their students preferred to eat the fruits they planted more than the ones they bought. For example, they mentioned a situation where students had an option between the carrots that were purchased from the store and the ones that they harvested from their garden; they noticed that the ones from their garden were eaten first and fast.

Educator D5 mentioned that they taught their students how to garden in their classroom especially during the winter months. They ingrained in their students the connection between growing their own food and making healthier choices. They also exposed them to different types of fruits and vegetables which they might not have tried before. They ate whatever they harvested and encouraged the students to take the leftovers home. They concluded that students' exposure

to trying different foods or fruits in the school could increase their likelihood of eating healthy when they grow up. Please see table 1 for the summary of healthy eating activities of all the participating schools.

5.1.5 Online Communication. All the schools had their own newsletter tab on their websites. They all had a section dedicated to SASH announcements in the newsletter to keep parents/caregivers informed and updated about what happened at the school. Some of the information published included: a brief report of completed SASH related events, instruction as to how parents/caregivers could protect themselves from dehydration during the summer season; dental hygiene; gardening and the benefits of healthy eating; recipes of food/snacks that the children had tried at school; examples of more often, less often and sometimes food; stress reduction tips; the importance of sleep and suggestions as to how to ensure quality sleep; tips for preventing sedentary lifestyle; and how parents could connect with their children to build stronger family dynamics among others.

It is worth noting that School A posted three months of SASH activities in their newsletter before they started blogging. Some of the activities listed in the newsletter included recipes and directions for making vegetable tortilla roll up, apple cookies, zucchini pizza bites and students' reflections.

The blogging information included pictures of students' skip counting with skipping ropes, skating, preparing snacks and fruit with recipes—spinach dip and veggies, hummus with bean crisps, fresh fruit bruschetta, homemade cold/hot chocolate powder.

The SASH program was done in collaboration with some of the existing programs in the schools and they found a way to properly integrate the program to fit and complement those programs. For example, school C had a bike program where they encouraged students to ride a

bike to school during the summer days and they taught them how to fix their bike as well. They had a *walk to school* program where the staff always asked their students how they got to school in the morning.

Some schools also received funding from the Seven Oaks School Division and Nutrition Canada, and Good Life Canada. Some schools applied for more funding to address the needs of their students. For example, school C received funding to upgrade their kitchen so as to increase the number of students that could participate in the cooking lesson at a time and it had also led to the establishment of a cooking club. The expanded kitchen gave them more flexibility to get their community involved.

Moreover, school D received some funding from the Canadian Producers Association to help their students further develop their healthy eating habits. Some of the staff also used their influence in their community to obtain produce that could be beneficial to the students. For example, educator D5 explained that they received a donation of a large amount of corn from their contacts, which they used to make different dishes for students to see multiple healthy food options that could be made from corns. School B also partnered with Save on Foods to get free fruits for the fruit bowls.

In summary, all the four schools organized both moderate and rigorous activities ranging from going for a walk, running, mindfulness, student led school wide health hustles, indoor and outdoor activities, fitness club, potato sack races, skipping rope jump, jumping jacks, squats, push-ups, gardening, active movements, to classroom movement breaks. They also had healthy eating related activities such as breakfast and lunch program, fruit bowls, menu planning and food/snack preparation, educational programs on the benefits of different fruits and vegetables, and school wide food sampling/taste testing.

5.2 Children talking to their families about a) food choices b) active lifestyle based on SASH activities

There were mixed responses as to whether students talked to their parents/caregivers about food choices and active living. Some of the educators who were interviewed (A2, A4, A5, A6, B1, B3, C1, and C2) reported that they received feedback from some parents/caregivers that children sometimes spoke to them about what they did at school regarding the SASH program. Educator C1 mentioned that a parent informed them that their child had come to like a certain fruit as a result of what they tested in their classroom: “parents have commented to me, they’ve said oh [name of student] loves cucumbers now, he didn’t like cucumbers before...” (C1).

On average, in schools A, B, C and D 35%, 35%, 43% and 30% respectively of parents/caregivers reported that they often talked to their child/children about healthy foods. Whereas, 53%, 60%, 54% and 61% of parents/caregivers from schools A, B, C and D mentioned that they sometimes talked to their children (see Table 2). Meanwhile, the percentages of students who reported that they usually talked to their parents/caregivers seemed to be lower: 28%, 20%, 20% from schools A, B and C when compared with the result from their parents/caregivers. School D was somewhat higher given that 34% of the students reported that they usually talked to their parents about healthy food and what they tasted at school.

However, some interviewees assumed that since they saw some changes in what the students brought to school; the parents/caregivers must have gotten the message. For example, educators B1 and E1 reflected that some of the students who brought unhealthy food, sugary snacks, and packaged food to school initially had started bringing healthy food and fruits. Some of the interviewees mentioned that they knew that what they did at school made some dents to how the students thought about active living and healthy eating. They mentioned that although

they still had a long way to go, they were encouraged by the small changes they saw. This finding supported what the parents/caregivers reported about having fruits and vegetables available at home. Supposedly, the availability of fruits and vegetables could mean that more children brought them to school on regular basis. For instance, 78%, 92%, 89% and 92% of parents/caregivers in schools A, B, C and D respectively reported that they usually have fruits available in their homes. Also, 78%, 84%, 84% and 82% of parents/caregivers reported that they usually make veggies available in their respective homes for their children.

Moreover, 23%, 20%, 28% and 25% of the parents/caregivers from schools A, B, C, D reported that they found it difficult to get their child/children to eat their vegetables even though they were made available and offered them to their children. Whereas, 53%, 56%, 43% and 43% of the parents/caregivers sometimes found it difficult to get their children to eat their vegetables.

On the other hand, educators A1, A3, A7, C4, and D1 said that they could not ascertain whether such a conversation took place because there was no way to find out. For example, educator A3 said that only the classroom teachers could say whether their students had conversations with their parents/caregivers because they spent more time with them daily. Meanwhile, 20%, 13%, 20% and 32% of the students from schools A, B, C, and D reported that they usually talked to their parents/caregivers about healthy food choices while 50%, 53%, 43% and 37% reported that they sometimes talked to their parents about the same. This seemed to show that some of the students were transferring whatever they learned at school to their respective homes.

Almost all the interviewees mentioned that they wanted to see more involvement from parents/caregivers. They said that they did not know if parents/caregivers responded to the children's excitement about the SASH program. Educators A6, C2, and D1 mentioned that

whenever they taste-tested food/snack/fruit at the school, a printout of the information detailing what they had, the benefits, the recipes, and the direction to prepare them were sent to parents/caregivers. However, they did not know whether the parents/caregivers used the information.

The percentage of parents/caregivers who reported that they tried any of the SASH recipes featured by the school at home was low across the board. 15%, 3%, 6% and 9% of parents/caregivers from schools A, B, C and D respectively mentioned that they usually tried the recipes sent home from the school.

However, the percentage of parents/caregivers who stated that they offered fruits and vegetables to their children at home was high. For example, 66%, 74%, 72% and 71% of the parents/caregivers from schools A, B, C and D reported that they offered fruits to their children. In addition, 57%, 65%, 59% and 62% of parents/caregivers reported that they offered more vegetables to their children from.

C5 mentioned that some students came to them advising that they did not know how to initiate conversations about active living and healthy eating with their parents/caregivers. The staff mentioned that they provided guidance to the students on how to get their message across. On the other hand, A4 said that on different occasions some students confided in them that their parents could not afford to prepare the recipe they were given. In one instance, they commented: “I really like those tuna sandwiches that you made, or I really like those muffins that you made whatever it is, and my mom says she can't make them at home, we can't afford them...” However, when asked if parents/caregivers could afford buying fruits and vegetables for their children, a large percentage of them reported that they could. For example, in school A 83% and 86% of parents/caregivers reported that they could afford to buy fruits and vegetables respectively. This

was different from the observations of some staff. 11% of students respectively reported that they could not afford to buy fruits and vegetables. The percentages seemed to be the same in all the schools (see Table 2). The difference between staff observations and parent reporting could also be partly because of social desirability bias where people tend to think better of themselves and want others to think well of them as well.

Some of the educators interviewed realized that if what they taught and did at school were to find its way to the parents/caregivers they would have to be very intentional in taking a leading role to facilitate that. They knew that they must encourage their students to speak to their parents/caregivers about what they were doing regarding the SASH program. Educators A1 and D5 mentioned that they wanted to establish ongoing information sessions about the benefits of active living and healthy eating for parents/caregivers beyond the ones they usually shared during the first week of school and at parents/teachers' meetings. Since some of the students were newcomers to Canada, they wanted to educate themselves first and then start the conversation of how food from other cultures could fit and be adapted to the Canadian Food Guide.

In summary, there were mixed responses from the educators as to whether students talked to their parents/caregivers about active living and healthy living. Some educators mentioned that they noticed that some students talked to their parents/caregivers about active living and healthy food choices whereas others said they were not sure if such discussions took place. Some educators reported that there was no way to measure the impact in the home what they did at school. Some educators explained that they saw changes in what the students brought to school for their lunch and snacks and they traced the changes back to different discussions they had at times with the parents/caregivers and the students. However, 28%, 20%, 20% and 34% of

students from schools A, B, C, and D reported that they usually talked to their parents/caregivers about healthy foods. Some students also mentioned that they tried at home the fruits and foods they had at school.

5.3 Impact of SASH on Children and School Culture

Interviewees suggested that the SASH program positively impacted the school's culture from the classrooms to the playgrounds. The educators who were interviewed spoke about how staff's involvement, engagement, enthusiasm, passion, willingness, and commitment had been the driving force behind the success of the program. They also mentioned the rise in students' excitement and buy-ins.

Some of them, however, admitted that they still needed to do a lot of work if they wanted to be more successful. Educator B2, for example, reflected that it was too early to draw a conclusion at the time of the interview since the program was just in its early stages and no evaluation was conducted yet to establish the impact of the program. They reflected:

I can't say that I have seen changes, but I can see where we are going, I can see the change that we are anticipating... but we're not there yet. I still see lunch kits packages of rice crispy cakes, fruit roll-ups, granola bars and all of those things and so there's a long way to go in terms of instructing kids, teaching kids and showing kids (B2).

They said that they were confident that if they continue to intensify their efforts, it would drastically change the dynamics of the school and they would have more positive results.

Conversely, other interviewees mentioned that there were some changes and improvements regarding what some of the students brought to school. They noticed that children were more inclined to have at least one healthy snack in their lunch bag as a testament to what

they did. They explained how they helped their students make a list of healthy foods/snacks that they could give to their parents/caregivers for them to use as a guide to what their children should bring to school. Some interviewees saw a reduction in processed and packaged food around the school. Educator B1 said: “I think if I walk into classrooms... people are packing fruit and vegetable...” Educator A5 for instance said:

I definitely did notice that we are drifting away from some of the easiest snacks to pack some healthy choices and I think that [has] contributed a lot to the fact that we are talking and demonstrating what those look like.

They also noticed that even the types of foods/snacks that students brought to the school for special occasions such as birthday parties had begun to change. Unlike before the program, some students came to school with sugary products like cakes and candy for their birthdays, they saw them now bringing fruit trays and other nutritious foods/snacks. Meanwhile, as shown in Table 2, 29%, 21%, 24% and 34% of students across schools A, B, C, and D respectively reported that they usually ate food that were least healthy. Whereas, 60%, 67%, 69% and 55% of students reported that they sometimes ate least healthy foods. Moreover, 21%, 23%, 29% and 31% of students from school A, B, C, and D respectively reported that if given the choice, they would play video games instead of being physically active. Likewise, 20%, 9%, 27% and 26% of students in schools A, B, C and D respectively reported that if they had the choice, they would spend their time watching TV instead of being physically active. It is interesting to note that only 9% of the students from school B reported that they will chose to watch TV over physical activities, the reason for this is not known.

Some interviewees from school C found out that even though they encouraged parents/caregivers to send their children to school with healthy food/snacks regularly and on

special occasions, some of them struggled because they could not afford to do so. For example, educator C3 mentioned the struggles associated with parents/caregivers buying fruit platters or vegetables for about 20 kids when their children wanted to celebrate their children's birthday. They noticed that since the parent was unable to afford healthy food for their child's birthday, they just did not listen to them. They shared what they experienced on one of those occasions when they tried to enforce that parents/caregivers should not send cake to the class for their child's birthday: "people didn't listen to me; it was cakes and cookies and literally pizzas, like, there's nothing I said that changed their mind...they told me: this was their kids' birthday, this was the venue for it [speaking about the classroom]" (C3).

Table 2: Percentage of students' active living and healthy eating results

N=741

R: Rarely

S: Sometimes

U: Usually

Schools/ Questions		Ate breakfast at home N= 709	Enjoyed eating fruits at school N= 699	Enjoyed eating veggies at school N= 686	Ate same fruits/ veggies tasted at school at home N= 686	Talked to parents N= 689	Knew what to choose N= 707	Chose healthy over unhealthy food N= 695	Participated in rigorous activities N= 703	Tried new activiti es N= 700	Enjoyed being physicall y active N= 704	Played actively with friends N= 700	Chose physical activities Instead of video games N= 708	Chose TV over physical activities N= 709
A	R	11	7	21	25	31	6	11	6	10	6	6	29	29
	S	21	44	52	48	42	47	58	37	51	32	33	51	51
	U	69	49	27	27	28	48	32	57	40	62	61	21	20
B	R	7	3	41	18	28	7	12	3	9	1	3	3	28
	S	21	35	27	42	52	47	53	28	53	28	36	36	63
	U	72	62	32	40	20	47	35	69	37	71	61	61	9
C	R	17	14	29	26	40	13	13	4	20	4	7	7	25
	S	23	37	43	46	40	45	55	49	47	39	34	34	48
	U	60	49	28	28	20	43	33	47	32	58	59	59	27
D	R	7	11	23	25	34	8	10	9	11	7	6	6	28
	S	12	29	31	47	32	32	44	23	29	25	25	25	46
	U	80	60	46	29	34	61	46	68	60	68	69	69	26

Table 3: Result from parents/caregivers' evaluation in percentages

N=348

R= Rarely

S= Sometimes

U= Usually

Schools/ Questions		Talked to children	Offered more fruits to children	Offered more veggies to children	Tried SASH recipes at home	Found it easy to get children to eat fruits	Found it difficult to get children to eat veggies	Had fruits available at home	Had veggies available at home	Could afford fruits	Could afford veggies
		N= 335	N=336	N=284	N=327	N=333	N=330	N=332	N=334	N= 327	N=325
A	R	12	6	7	59	12	25	7	10	83	86
	S	53	28	36	26	39	53	15	12	7	3
	U	35	66	57	15	49	23	78	78	11	11
B	R	4		3	77	9	24			85	85
	S	60	27	32	20	43	56	8	16	12	12
	U	35	74	65	3	48	20	92	84	3	3
C	R	3			75	13	30	2	2	79	79
	S	54	28	41	20	45	43	9	14	16	16
	U	43	72	59	6	43	28	89	84	4	4
D	R	9	4	3	67	8	33	4	4	85	84
	S	61	25	35	24	31	43	4	15	9	11
	U	30	71	62	9	61	25	92	82	5	5

Moreover, some of the interviewees observed changes in the language being used around the schools. There were dialogs around what was healthy and unhealthy; what the children should eat more of, less of, or only rarely. They had conversations about active living and healthy eating in the classrooms, staff rooms, kitchens, gyms as well as the playing grounds. These conversations contributed to the changes they saw in students' behaviors and attitudes. As a result of this, students were versed in identifying healthy foods and they could differentiate between what was healthy and unhealthy. Educator B3 also said some of their students reported that they advised that parents/caregivers on what they should not take to school. The conversation included online, newsletter, and bulletin boards postings.

As shown in Table 2, 48%, 47%, 43% and 61% of students across schools A, B, C, and D respectively reported that they knew to choose most healthy foods over least healthy foods. Whereas when it come to actually choosing the most healthy foods over the least healthy foods, 32%, 35%, 33% and 46% of students across schools A, B, C and D reported that they chose most healthy foods over least healthy foods when presented or faced with the options.

In addition to this, students participated in brainstorming exercises, food preparation and led some of the activities in the classrooms and/or the gym. They provided information and discussed the benefits of different foods/snacks/fruits/vegetables in the kitchen, classrooms or over the PA system. Educator A6 reflected on their experience about the language around the school:

[when] I came here I was really surprised at how much went on in terms of physical activity and healthy food options and eating and even just the language that we use... All the kids in the whole school are able to use the same language in terms of being active outside or healthy snack... (A6).

Some staff also reported on the difficult discussions they sometimes had with parents/caregivers to discourage them from bringing unhealthy foods/snacks to school. For instance, in the first two years of the program, School B provided a list of what parents/caregivers could send with their children to school for lunch and during special occasions such as birthdays or Valentine's day on the first day of school to state their expectations and eradicate any confusion. Educator B1 recalled their experience in one of the classrooms where a student was singled out by their peers because of the type of lunch they brought to school: "this year we had some new families, they brought McDonald's as soon as the bag arrives, I was in the class right there all the kids were [asking]: 'can you eat that?'" They also discussed another incident where they prohibited a parent who brought cake for their child's birthday from giving it to the class. They encouraged them to bring fruits and vegetables as an alternative.

Apart from the conversation that happened in the classrooms, kitchen, the gym, the outdoor, at recess and during lunch, staff also had those conversations in their staff room among themselves. They spoke about active living and healthy eating among themselves and how they too could keep themselves motivated to continue to inspire their students. Staff from schools A and D used a larger percentage of their staff professional development day to engage in active movement. School B set apart time for staff to work out. It is interesting that the researcher interviewed a staff member who had just finished their routine exercise with another staff. School C staff participated in boot camp once a week for staff. This also affected the books they read. Educator A1, for example, mentioned that their staff studied a book on healthy lifestyle and the impact of physical fitness and activities on the brain and used what they learned to further inform the program.

As a result of those conversations around the school, staff noticed that transfer of learning took place and it changed and shaped the dynamics of the way children thought of active living and healthy eating. The culture on the playground also shifted as they noticed that students transferred what they learned in the classrooms to the playground. Educator B1 observed that their persistence paid off as students used what they learned in the classroom on the playground:

during recess, it became very clear that whatever the kids have learned they are actually doing it outside... we [don't] give them soccer balls or skipping ropes or things like that, we found out they were just out there dancing or moving... I think if this continues and we continue to do it, it [will] become engraved in [their] system.

In addition, 48%, 53%, 56% and 62% of students from schools A to D reported that they spent time playing actively outside. Meanwhile, 61%, 61%, 59% and 69% of students said that when they played with their friends, they usually chose to be physically active (see Table 2).

The discussion facilitated an environment where children confided in staff about some of the difficulties their parents/caregivers faced about the inability to provide healthy foods/snack. Educator A4 discussed several situations where students had told them that their parents could not afford some types of food/snacks which they had prepared in the school kitchen or taste tested in the classroom even though they liked them. The students were also taught about the implication of what they put into their body, and how to prepare food in a safe environment with the hope that what they had learned would be replicated at home.

The interviewees observed that the availability of and accessibility to foods/fruits/snacks on a regular basis had increased the students' chances of trying them and made them go for more. They believed that students' constant exposure to various healthy food/snacks, had helped to make some dents in their lifestyle. Educator C4 commented: "I'll say for sure I know that kids

are more willing to try something new and different...” Educators B3, C4, and D5 among others advised that once the fruits were put out where the children could see it, they usually try it, even fruit such as beets. Increasing students’ willingness to try something is helping them to see what they might like. At the end of the day, what they did helped the students “to get rid of the bad stuff and replaced it with good stuff commented educator” (C4). On the same note, 40%, 37%, 32% and 60% of students across schools A, B, C and D reported they participated in activities that they have never tried before (see Table 2). It is interesting to note that school D seemed to have higher percentage (60%) of students who reported that they participated in activities that they have never tried before unlike students from other schools.

In addition to the students’ courage and willingness to trying new things, there was also an increase in their social engagement throughout the school especially during the breakfast program and playground activities. For example, educator C4 noticed that students were more socially engaged, and they integrated well with their peers during the structured and unstructured activities and/or at breakfast. Staff also took it upon themselves to help some reserved students to find buddies at recess.

Educators also reported an increase in students’ interests and motivation. They commented on the positive changes that they saw in those students. They stated that students from different grade levels came forward to volunteer to be trained as leaders. They joined groups such as cooking clubs, dance club, and fitness club. They also reported an increase in the students’ self-esteem. For example, educator C2 was impressed when they saw how well one of their student leaders managed their emotions when they had a bad day because they participated in the active movement.

Interviewees reported that they noticed that students were constantly moving their body in their classrooms in addition to the school-wide movements. Educators B3 and C5 explained that their students understood their bodies' needs for movements and they did not feel intimidated to ask their teachers to move their bodies inside the classrooms. Activities such as yoga, Go Noodle, jumping jacks, were part of what they did in some of the classrooms. They reflected on how their students took the initiative to request for breaks to move their bodies at different times of the day whenever they felt that they have been sedentary for too long:

“I feel like I need to move around,” like “can we do some yoga?” “I need to go for a run, like can we go for a run?” So, they’re really starting to understand their bodies’ responses to sitting and their body's responses to being active and they understand that [when] they feel better they can focus better if they have some activity throughout the day... (C5).

For instance, 61%, 71%, 58% and 68% of students reported that they enjoyed exercising or being physically active (see Table 2). Educator A5 also commented on their surprise when they saw that their students were actively engaged after school hours as a result of the discussion they had in class. They said they were delighted by what they saw because it showed them that what they talked about in class has taken root in their students' mind. They reflected on a particular experience during their summer holiday:

last year we talked [and] brainstormed a lot of ways in which we can be so active so healthy and one of the things we talked about was how we’re getting off our technology and our phones and stimulating our mind in another way... I would drive by here some mornings in the summer and I would see six or seven of my own students that I taught playing soccer at 9 or 10... so they are absolutely listening, and they are recognizing the importance of a healthy lifestyle... (A5)

In the same vein, there was variation in percentages of students who participated daily in vigorous activities across the schools. For instance, 57%, 69%, 47% and 68% of students from schools A, B, C, and D reported that they participated daily in activities that made their hearts beat fast.

In addition, some of the interviewees advised that staff took the initiative to involve the parents/caregivers in an ongoing discussion although this was not frequent. They realized the more involved the parents/caregivers were, the more positive the impact the program would have on the students. For example, there was a time school B engaged the services of a dietitian at the beginning of the school year to show the parents how to make cost-effective healthy foods/snacks. They noticed that it made some impact.

Some educators said they had a one-on-one discussion with the parents/caregivers to educate them about what the SASH program was about and the advantages of being on board with what they were trying to do. Educator B1 reflected on how one of those discussions with a parent helped them see how they could save money:

I've had students in the past who when [they] first come in, the only things that would be in their lunch kit would be sweets, candies, chocolate cookies, and potato chips for example; we sit down and we work with those parents and those students to help them find cost-effective and healthy ways of eating and really showing them how much money [they] can save with purchasing fruits rather than packaged food (B2).

Continuous education could help both students the parents/caregivers make some lifestyle changes as this will benefit the students as well.

The themes that follow show how the SASH program appeared to have impacted the schools' culture.

5.3.1 Commitment. Staff's commitment was the driving force that propelled the program. A large percentage of the staff—teachers, educational assistants, and the administrative personnel were committed to the cause. For example, each classroom teacher took advantage of their autonomy to increase active movements in their classroom and they tailored it to the needs of their students. The commitment led to the teachers wanting to participate in the activities themselves.

In other words, they both talked the talk and walked the walk. They actively participated in the classrooms, the gym, outdoor playgrounds, and the staff room. Some staff committed themselves to eating healthy and living actively. For example, staff in school C started a boot camp as a response to what the school was trying to accomplish.

Educator B1 discussed how even staff became more intentional about what they brought to school and ate in the staff room. They committed themselves to bringing healthier snacks/food. They reflected: "...so now when we sat as a committee, we say guys we need to be mindful to make sure we are not doing what we're saying we're not encouraging..."

Staff's commitment to living actively and eating healthy had helped to establish informed conversations with the students. Educator D2 mentioned their students' excitement whenever they saw that staff also participated in different activities either in the gym, classroom, kitchen and during taste testing with them.

5.3.1.1 Health champions. The role of health champions was a testament to the staff's commitment. Being a health champion was an additional responsibility which required a lot of work. Their dedication was key to the sustenance of the program. A health champion is that "one person who really sees it as their responsibility to make sure that there is a culture of fitness at the school" commented educator C4.

Educators A1 and D4 reflected that if there were no health champions in their schools, the program might not have gone beyond its initial stages. The health champions were responsible for planning taste-testing activities and worked to ensure that every classroom was actively involved. They also served as motivators to other staff. Educator C4 went further to say: “it’s like a having a baby you’ve got to nurture that baby in the first couple of years really, really feed it and that person has to be there to do it...” That means their role cannot be overemphasized.

Apart from health champions, the schools also had SASH committees—a group of staff—administrator, teachers, educational assistants—who met regularly sometimes with or without the program coordinator to make decisions and oversee the program. They discussed the direction where the program should go, took charge of preparing fruits/snacks for taste testing and planned other activities as well. Educator D1 from school D explained that they had a committee of about eight to ten staff in their school who were actively involved in organizing different activities, they provided leadership, gave directions and asked for support from other staff members who were not part of the committee as needed. Their commitment was a driving force for the success of the program in their school.

5.3.1.2 Classroom teachers. The contributions of classroom teachers were also found to be an essential part of the success of the SASH program in all four schools. Some of them engaged in menu planning and foods/snacks preparation (most of the food preparations were done from scratch), gardening, and led active movements in addition to the school-wide movements. They looked for different ways to motivate students to taste test.

In addition, they taught their students about different food groups, discussed the benefits of active living and healthy eating, and facilitated discussions with the parents/caregivers to

discourage unhealthy food choices without upsetting them. For example, educator B1 reflected on how they went above and beyond the call of duty to get a student to eat healthy: "...I sat here with the kid and ate with the kid and said we just have to keep trying you know he can eat a little tiny bit... right now that's history..." This showed how an individual staff member took their time to help one student to start eating better.

5.3.2 Creativity. Staff's creativity was also key in generating, engaging and sustaining students' interests and excitements. Staff used their creativity to help students who were picky eaters to try something new or different. They also encouraged those who were timid to try new activities.

In school B, for example, instead of giving the students a whole apple to eat, staff cut them into slices and put them in reusable containers so that the students could snack on them throughout the day. This action helped stop fruit wastage; before this idea was initiated, staff noticed that many students were throwing apples away after one or two bites. It is also important to know that the staff ensured that fruits were available and accessible.

In addition, through creativity, school D made different edible food/snacks from fresh corn in one of their activities. They experimented with dipping mandarin oranges in yogurt because not many people would have thought of it observed educator D5. Creativity has also led to the creation of healtharama—an information session for families where they could learn the importance of healthy eating and active living explained educator C2.

Creativity was also expressed when staff made the outdoor activities self-directed, easy to follow, easy to use and less time consuming so that children could participate and play with something that would raise their curiosity, sustain their attention and still keep them active at the same time. Educator A7 explained how they promoted students' participation by designing

“games with little equipment so it's easy for the students to set the games up, doesn't require much explanation so that kids can kind of pick a piece of equipment up use it, drop it and go somewhere else.”

Staff also capitalized on their creative ideas to generate other creative ideas. For example, educator C3 commented on how they used their creativity to bring cultural integration by involving their community because most of their students were newcomers to Canada. They organized potlucks at different times so that students could be exposed to and try a variety of foods and fruits. This also helped parents/caregivers to be regularly informed about what happened in the school.

Educator C4 stated that they found different ways to motivate their students to at least try a new food/fruit. Staff told their students that if they (students) would at least take a bite, they (staff) would, in turn, take two bites. They noticed that this fun, simple and unique approach made students wanted to try fruits/vegetables/snacks that they had not eaten before and would not have otherwise tasted if they had not made the process fun.

5.3.3 Connection. The program also increased the staff/students' connection. Without connection, staff would just be dispensing their energy for nothing because the students would likely not be effectively engaged as they ought to. Staff/students' connection brought everyone on board and increased their awareness of the program. It also increased participation from other staff who were not part of the SASH committee, engaged the students and some parents/caregivers as well.

Educator A5 mentioned how their participation in their classroom's active movement had allowed them to better get acquainted with their students. Staff/students led to an increase in mutual learning, understanding, and respect between them. They reflected:

as a new teacher, it's awesome because I partake in the movement breaks, I'm learning with the students what good healthy food choices can be through our lunch programs in our day six active or healthy snacks that we do for the whole school I'm learning a lot about nutritious foods as well... (A5).

In addition, the staff/students' connection increased the freedom of expression as students expressed their need to take a break and exercise their body as needed. The staff created an environment where students knew that they would be listened to whenever they had a concern. This connection also allowed the students to have a say in the type of atmosphere they preferred in their classroom that would enhance their quality of learning and improve their well-being. Educator C3 reported that students learned about their bodies and expressed their need for active movements, for example, they found that students usually say things like: "I feel like I need to move around, like can we do some yoga? I need to go for a run, like can we go for a run?" whenever they got antsy.

5.3.4 Conversation. Another theme that emerged from the interviews was how staff were engaged in conversations with students and parents/caregivers. The continuous conversations around active living and healthy eating in the classroom, assembly, at recess, and the playground gradually changed the language of the entire school as well as students' habits. Educators A4, B2, C4, and E1 all reflected on how the entire school community used the same language about

active living and healthy eating. They knew what SASH stood for. For example, both staff and students knew what most often, less often and sometimes food meant. Educator D1 explained:

One of the things I noticed at the beginning was that kids didn't know what we were talking about with SO Active SO Healthy. So, we had to make sure they understood that we were trying to do something different. I think once they understood that, it became really common that we're SO Active SO Healthy school.

The conversation made it possible for students to freely talk about what they brought to school. For example, the healthy conversation that staff had with the students changed what they brought to school and has increased students' awareness about what was important to their well-being. Educator A3 reflected on the outcome of such discussion:

last year I remember with a few students that were bringing some of the processed food after we had those healthy conversations about what healthy benefits or what healthy food choices are, I did see more and more students bringing apples, cut up apples, cut up oranges, grapes... (A3).

So, it is not only what they talked about in the classrooms, but students also went home with some information to keep the line of communication with their respective families. As a result, some parents/caregivers changed the type of food/snacks/fruits they sent to school with their children. Educator C3 reflected on one of their experiences when they had a conversation that helped their students figure out the kind of food/snack to eat:

I really find that if you sit down with the student and a list of all of the vegetables they like and all the fruit they like and you can go to mum and dad and say these are the ones the students have indicated they are willing to eat you send this in the lunches... and have seen a lot of really positive reactions from parents.

The conversation has also shown parents/caregivers how to cut costs as it relates to food preparation and help them see that they can send students to school with leftover food.

The SASH program opened the lines of communication among staff as well. Staff shared what worked and did not work in their classrooms with each other. On several occasions, staff even shared recipes among themselves explained educator D2. Educator D3 mentioned that anytime they saw that a colleague did an activity successfully with their students, they would usually ask what they did and how they did it.

They reflected about a time when they saw their colleague make a quick healthy snack in the classroom, they asked for ideas on how to go about it. They found out that when they brought the same idea to their own classroom, their students had fun taking part in making a healthy snack. They concluded that “some children who were hesitant to try new foods would actually give it a try [and] if they put the effort into making it, they are more willing to give it a try” (D3).

5.3.5 Charisma. Staff’s energy and excitement were also seen as a motivation for the growth of the SASH program. The enthusiasm of the staff really got the students pumped up to participate in the activities. Staff’s commitment, connection, and creativity informed their charisma and showed that they wanted the program to succeed.

Educators B1, C4, and D1 among others explained that whenever things needed to be done, staff would rise to the occasion and find ways to do them even though they were not a member of the SASH committee. The staff members explained that they saw everything they did as an investment towards helping their students look at life differently and they believed that any help they rendered would go a long way.

5.3.6 Challenges. Despite the SASH program being school-wide, not all staff were on board with the program according to some of the educators. Some interviewees spoke of their frustration and disclosed that they believed some staff did not care or did not seem interested in the whole idea.

However, some interviewees who spoke about their frustrations could not pinpoint why other staff member did not seem to be interested in participating in the program. Some educators said because it required a lot of commitment, some of the teachers might have seen it as an added responsibility on top of their teaching jobs. These interviewees believed that if everyone was on board, they would have achieved more, not only in the school but also in their respective classrooms.

A challenge that educator C4 noticed that could hamper the continuity of the program was staff turnover. They considered that continuity is key for the program to be more successful and having the same set of staff who were interested in doing and maintaining the intensity of the program for a long period of time would help with the sustenance of the energy and in the long run, the program. The interviewee was worried about what would happen if the person who seemed to be holding the program together gets transferred:

I was looking at it what if they get transferred and then you have to look for another person who want to lead and become a champion... that would be the test: is the initiative embedded enough that if that person leaves the initiative would maintain itself? I don't know because our person is still here, I'm very grateful but would it would it survive if that person left that would be a very good test... so it will be interesting to find out (C4).

In addition, some schools revealed that lack of continuous funding was a challenge as some of what they intended to do required money. Educator C2 among others reflected that they

have some plans to expand their outdoor activities by building more play structures and getting more equipment to get more students involved in doing more activities. However, because of limited funding, they have not been able to do that.

5.3.7 Collaboration. Almost all the interviewees saw the need to obtain their buy-in from parents/caregivers for the program to be fully successful. They mentioned that although some parents/caregivers were coming on board, some of them would require extra motivation to have them to collaborate with what the schools want to achieve. They mentioned that some parents/caregivers were still sending their children to school with unhealthy food and they doubted they were making any changes to what they ate at home. The staff also said that they were unsure if parents/caregivers were engaging or encouraging their children to participate in active movements after school hours.

The solution that almost all the interviewees suggested was to organize more regular information sessions for the parents/caregivers where they could learn about the importance of active lifestyle and show them how inexpensive it can be to eat healthy. The educators want to see that as the next step for the SASH program. Educator D5 spoke about wanting to be more involved in seeing that parents/caregivers get more education:

I would love to see one extra step which is bring in the family a little bit more so that they can be exposed to how can I make nutritious snacks for my children that I can send in a lunch kit that is not going to be overly difficult to prepare...I like to see that link happening.

There is that confidence and understanding that when parents/caregivers are educated on the importance of active living and healthy eating, it would increase their level of participation and empower them to make decisions that would help their children.

The findings suggest that the SASH program seems to be well received, and it is positively impacting the school culture. The fact that all the schools were given the autonomy to run the activities as they deemed fit has also made a difference. Staff's input has also been a plus to the program.

Although not all the teachers were on board, the ones who were helping seemed to see some changes in how the students were getting more active and eating healthy. However, not all the interviewees have seen much difference, but all agreed that the program is work in progress. They also noticed that getting buy-in from the parents/caregivers would also enhance the success of the program.

In summary, the study suggested a positive impact of the SASH program on the school culture. The program was well accepted at the four schools. Most of the staff and the students were onboard and took active roles in the program. Students as well as staff volunteered from time to time to do different activities. For example, all schools had health champions and student leaders who were trained by the staff to lead schoolwide active movements and participated in foods/snacks preparation and distribution. There was also the provision of healthy snacks and breakfast/lunch program. There was the availability of and the accessibility to fruits for students to snack on throughout the day. In addition, educators' commitment, creativity, connection, conversation, charisma, and collaboration, were seen to have contributed to the success of the program (see Table 4). However, there were other challenges such as getting more staff involved and more buy-ins from the parents/caregivers.

Activities	Students	Classrooms	Staff	Schools	Parents/caregivers
Active Living	<ul style="list-style-type: none"> Increased excitement for physical activity during recess Engagement of more students in continuing with the school wide activities on the playground 	<ul style="list-style-type: none"> Increased daily physical activities Children taking more responsibility to ask teachers for time out to engage in physical activities. Paid more attention more in the classroom 	<ul style="list-style-type: none"> Increased motivation to be more physically active Increase in engaging in physical activities with their students More discussions on how to stay physically active and the benefits Increase in exercises outside the classroom 	<ul style="list-style-type: none"> Environment well suited to encourage active movement throughout the day Display of banner to remind everyone that the schools were a part of SASH program Easy to use equipment schools Accessibility to equipment More time allotted for physical activities 	
Healthy Eating	<ul style="list-style-type: none"> Increased excitement and courage to try new foods/snacks/vegetables Increased number of students bringing Healthy lunches and snacks to school <p>Increased participation in food preparation</p>	<ul style="list-style-type: none"> Increased conversation around healthy eating More discussion on the need to eat healthy Discussion about the differences between what is healthy and unhealthy 	<ul style="list-style-type: none"> Actively participating in taste testing with their students More discussion about healthy eating in the classroom and staff room items More nutritious food for lunches More excitement 	<ul style="list-style-type: none"> Students and teachers were more willing to try new foods Healthier lunches provided for children Lots of ongoing conversation about what is healthy and unhealthy 	<ul style="list-style-type: none"> Some parents/caregivers sent their children to school early Some parents tasted what their children prepared at home based on what they learned at school Some parents sent their children to school with healthy food snacks Parents became involved in gardening activities

		Some gardening activities in the classroom		<ul style="list-style-type: none"> ▪ Public announcement about the benefits of healthy food ▪ Breakfast program has led to an increase in attendance and punctuation ▪ Increase in the number of students going for fruits throughout the day ▪ Increase in the number of students participating in and excitement about gardening 	<ul style="list-style-type: none"> ▪ Tried the healthy foods/snacks that the school provided and sent their children to school with healthy snacks during special activities
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Table 4: Summary of changes related to healthy eating and active living reported by the staff

Chapter Six

Program Theory of Change

This chapter articulates and critiques the SASH program based on an adaptation of Mayne's (2017) *Criteria for Theory of Change Analysis*. Theory of change is becoming a key part of program evaluation (Mayne, 2017). In this thesis, the program theory of change partially illustrated by a logic model (figure 3) is an approach to clarify the assumptions around and the implications of the SASH program with the focus on active living and healthy eating. Patton (2012) defined a logic model as "a way of depicting the program intervention by specifying inputs, activities, output, outcomes, and impacts in a sequential series" (p. 232). If the theory of change is "well understood, articulated, credible, plausible, defensible and logical" (Mayne, 2017, p. 158), it can help determine how the program became successful, identify the gaps in the implementation of the program, and to explore where more attention should be given and resources should be channeled to get the best result.

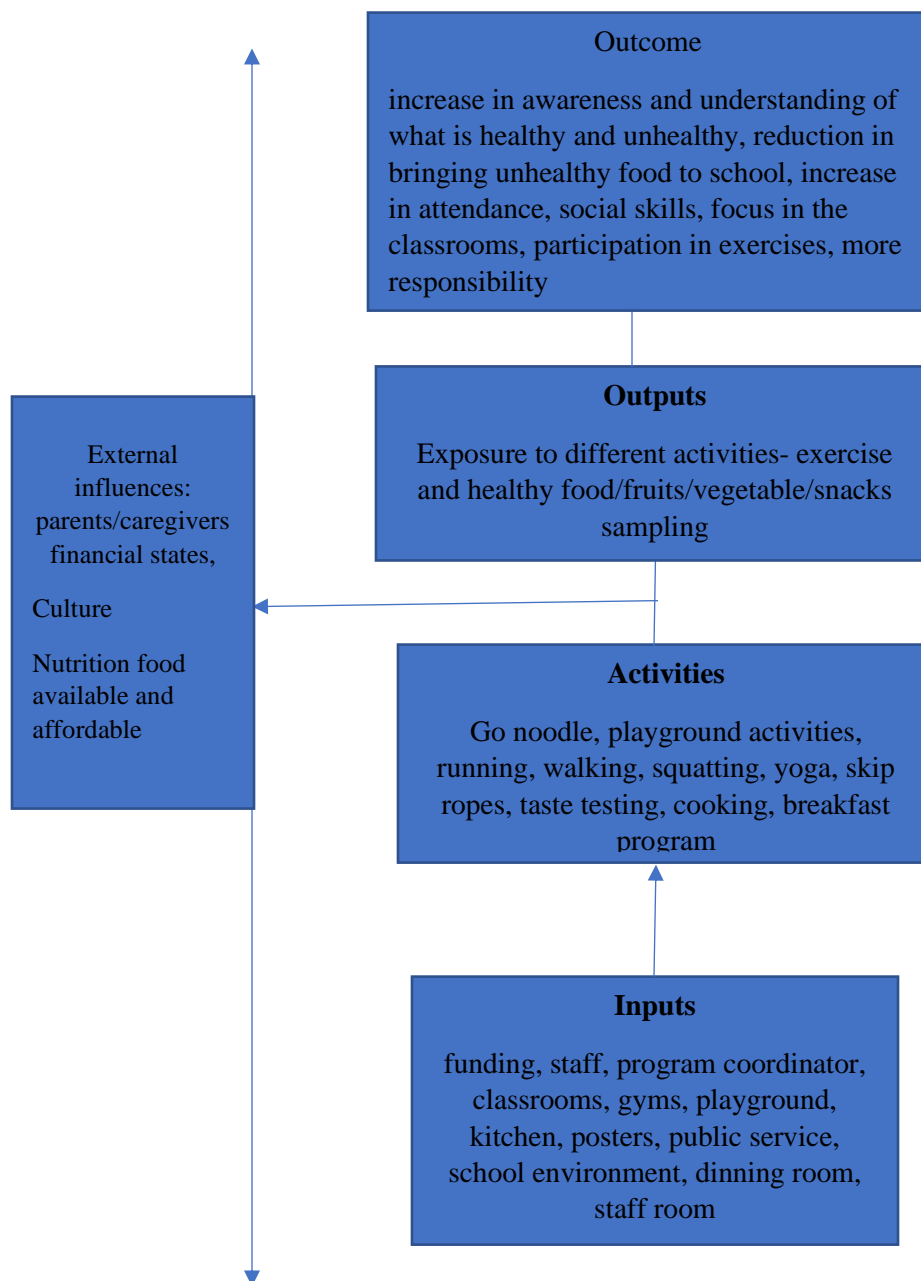
A comprehensive articulation of the theory of change can help stakeholders and the intended users to understand the link between the problem and the intervention(s) and analyze different areas to be strengthened so that the best outcome can be achieved. In other words, the theory of change describes how change should happen when certain procedures, processes and interventions are followed (Mayne, 2017). The underlining assumption that the SASH program had was that by educating, informing, exposing and encouraging students to participate in various active living and healthy eating activities and by clearly stating the importance of these activities it would positively change, their behaviors, attitudes, orientation and perception about making healthy choices so that they can experience positive health outcomes in the moment and later in life. In other words, they believed that if they create an environment in the school where students can choose fruits and vegetables over junk foods and drink water instead of sugary

products, they could impact them and thereby change their attitude, behavior and perception about active living and healthy eating.

Staff's rationale was that if they target the students and encourage positive changes, the students could in turn take the changes to their respective homes and influence the type of foods their parents/caregivers purchase and eat and the physical activities that they engage in at home. Then, they will become agents of positive change in their respective homes. However, it is not a linear process of cause-effect.

The assumption that once the factors contributing to an outcome are known, program success or lack of success in achieving those outcomes can be explained might not be that straightforward (Mayne, 2017). There are many factors (socioeconomic status, health conditions, culture and the environment in which the students live) that come into play that could affect students' choices. Effective programming needs to put all these factors into context as they seek the well-being of the participants. These factors according to Mayne (2017) are causal link assumptions "the salient events or conditions necessary (or likely necessary) for a particular causal link in a theory of change to be realized" (p. 157). Without considering these assumptions and properly addressing them, the outcome at the end of the day could be unfavorable. These factors need to be accounted for and put into proper context for SASH program to achieve its objective. For example, one of the findings showed that even though some students liked what they tasted at school, their parents/caregivers could not afford them.

Figure 3: Logic model of the program theory of change for SASH program



The SASH program is a prototype of the APPLE program from Alberta. The APPLE program held the assumption that early intervention through active living and healthy eating is crucial to helping children maintaining healthy lifestyle and make healthy choices and change their attitude about what to choose (Ofosu, et al., 2018).

The findings suggested that students have started justifying these assumptions through their candy-fruits exchange activities where students exchanged candies for fruits. Students have also begun to bring healthy foods for lunch instead of junk foods. For example, before the inception of the SASH program, teachers reported that many students brought sugary products and chips to school for their breakfast and lunch. However, after they had several discussions on the importance of eating healthy, they saw some positive changes. Some students brought fruits and vegetables to school daily and there was a reduction in the amount of fast foods and packaged foods that they saw in the classrooms. An example was given about a classroom where the students spoke up when they saw a new student eating McDonald for lunch. The students asked their teacher if they could eat that. The staff also reported an increase in the number of students taking part in active lifestyle.

The school environment had also benefited from the ideology behind the SASH program. For example, students were exposed to different activities in the school environment as a reminder to keep them making healthy choices. Regular active movements were encouraged in the classrooms and the outdoors apart from the gym time. Students replicated the exercises that they did in the classroom on the playground during the recess. Students also asked for time out to move their bodies whenever they felt that they had sat for a long time.

The availability and accessibility of fruit bowls and taste testing had helped students to choose eating fruits, vegetables and other healthy snacks over chips and other junk foods. The cooking programs also have helped because students took some of the recipes home to their parents/caregivers to try them out. The breakfast and lunch programs gave students access to healthy breakfast during the day.

In addition, staff's participation in the program was also a boost as they modeled healthy behaviors of active living and healthy eating. The program has also affected the languages that were used around the schools. Students were able to differentiate between healthy and unhealthy foods.

6.1 Is the Logic and Structure of the Theory of Change Clear?

The logic and structure of the theory of change was based on the underlying assumption that when students take part in active living and healthy eating related activities there would be improvements on the students' state of well-being was clear. This is the reason the school engaged in the SASH program to help students learn and participate in different moderate to rigorous physical activities in the classroom and on the playground in addition to their regular gym time. For example, 57%, 69%, 47% and 68% of students from Schools A, B, C, and D respectively reported that they usually participated in rigorous physical activities. In addition, 62%, 71%, 58% and 68% of students from Schools A, B, C, and D respectively reported that they enjoyed being physically active. Secondly, they exposed the students to try out different fruits/vegetables and healthy snacks. In fact, 49%, 62%, 49% and 60% of students from schools A, B, C and D respectively reported that they enjoyed eating fruits at schools. They also sent recipes to their parents/caregivers.

6.2 To what extent is the theory of change agreed or contestable?

There seemed to be an implicit agreement among the staff because they believed that what they did made positive changes in the students. This agreement informed the staff's dedication and commitment to the program. The staff took leadership roles, gave students

relevant training(s), and modelled the type of attitude they wanted to see in the students. They also took the time out of their busy schedules to plan different activities that were beneficial to the students and their families. They went as far as providing information that the students took home to their parents/caregivers. They also posted regular monthly information online to educate parents/caregivers and to keep them updated about what was happening at school. Staff also ensured that students were able participate in the taste testing activities by using different strategies to enlist their attention and interest.

In addition, staff also made the commitment to bring healthy food for lunch, participated in different activities with the students and also had their own boot camp to show the students that they believed in the SASH program.

6.3 Are the activities and outputs of the intervention commensurate with the expected results?

To some extent the activities and outputs of the interventions commensurate with the expected results because of the way they were set up. For example, it is easier to get students' attention and to influence them to try something new because of peer pressure and the admiration they have for their teachers. Children are naturally curious and because of this, they will try something new especially when they see everyone around them trying it. Findings from the research showed that children were more willing to try something new and different because of the excitement and the creativity of the staff. For instance, 40%, 37%, 32% and 60% of students from schools A, B, C, and D respectively reported that they participated in activities that they had never tried before. Also, because they were given the freedom to plan, lead and make

suggestions about what they wanted to do. The accessibility to where the fruits were located was also a factor that influenced students' behaviors.

However, one of the draw backs from the program was that the expectation of having the parents/caregivers on board was high. Some of the staff believed that it was going to be easier to have the parents/caregivers onboard and for the students to influence them and get them to prepare the recipes they sent home with them. In other words, the program believed that if they could get the attention of the students' buy-in it would be easier to influence what happens at home. While this might be the logic, it is asking for too much because there were other factors that were at play that affected the expected result. For example, the assumption that students could influence what their parents/caregivers prepared for them at home is difficult to conclude based on the findings. It is interesting to note that although 78%, 84%, 84% and 82% of parents/caregivers across the four schools reported that they had vegetables available at home, 53%, 56%, 43%, and 43% of them reported that they sometimes found it difficult to get their children to eat them. For instance, there were parents/caregivers who could not afford some of the foods/fruits/vegetables/snacks that the students prepared or tasted at home. Based on the interviews, many educators attested that some of their students told them that their parents/caregivers could not afford to buy fruits and vegetables, however, the findings from the parents/caregivers survey showed that only 11%, 3%, 4% and 5% from schools A, B, C, and D respectively usually find it difficult to buy fruits and 83%, 85%, 79% and 85% reported that they could afford to buy. Also, students did not have much influence over what their parents/caregivers bought or provided from them. There could also be transportation issues as parents/caregivers may not be willing to go the extra mile if what they wanted is not close to home. Parents/caregivers have the choice not to follow the directions of the school. One of the

findings showed that some parents/caregivers refused to listen to the staff when they advised them not to send birthday cakes to school but instead fruits/vegetables tray.

There were also the financial implications as some of the students came from low income families and could not afford to regularly bring fruits or vegetables to school. Many parents/caregivers had two jobs, so they were unable to spend time with their children or monitor how much time they spent doing sedentary activities. Some parents/caregivers might not even have the time to prepare healthy meals for their children or tried out the recipes that were sent from school. The findings showed that some parents also sent their children to school with junk and/or packaged foods because they were cheaper, convenient, and fast to get. The priority of the school might not be what is most important to the parents/caregivers; hence it might not be their priority. When there is incongruency, people might not be on the same page.

Many of the parents/caregivers were newcomers to Canada and they might not understand what constituted healthy foods. Many of these parents/caregivers came from countries where they did not have access to fresh fruits and vegetables, thereby making it difficult for them to see the need to do things differently. Some of them also came from different culture where their idea of playing with or spending time with their children is farfetched. Other parents/caregivers might be concerned about the safety of their children in allowing them to walk to the school by themselves thereby discouraging them from walking to school.

Another factor worth considering is whether the program considers the health conditions of the students when it comes to taste testing or their capacity to participate in physical exercises.

6.4 Is the results statement unambiguous?

The result statement was well defined. They understood what they wanted to achieve at the end of it all. They wanted students who could make healthy choices irrespective of where they are. They also thought that when the students understand what they were doing, they could positively influence their families and their community at large.

The staff articulated what they wanted to achieve to the students and that has increased their buy-ins. Many parents/caregivers also came on-board by following the suggestions that were presented at the beginning of each school year about the list of food preferences for lunch and snacks.

6.5 Is the time frame for the result reasonable?

The timeframe seemed to have been reasonable based on the changes that took place in the last two years. For example, many students who were picky eaters developed the courage to try new fruits/vegetable/snacks. The fact that they tried new fruits/vegetables/snacks showed their willingness to explore new territories within a short time. Also, students who were not used to eating fruits and vegetables regularly have started eating them. Some students who used to be shy took leadership positions and active roles because of the program. Students also joined the fitness and cooking clubs respectively. The success of the program within the timeframe was partly due to the culture created around the school, staff's excitement and participation, students' admiration of their teachers, students' curiosity, influence of their peers, easy access to fruits/vegetables, easy to use equipment, simple exercises and freedom of expression of the students.

6. 6 Is there a need to measure the result? How can the results be measured? What is the likely strength or status of evidence for the result being realized?

There is a need to measure results. It might be visible to measure it in the short-term, however it may be very difficult thing to do longitudinally because of the school system. In the first place more resources would be needed to conduct this type of measurement which might be very expensive in the long run. For instance, the same intensity would have to be applied as the students move from one class to another to effectively measure the outcome of the program. The problem is how to measure if the new classroom teachers does not buy-in into the program and they really do not encourage it. Also, since not all the schools in the division are part of the SASH program, the chances that students would continue after they have moved on from their current schools are slim since the highest grade in all the participating schools is eight.

For the short-term purpose, proper record keeping is also encouraged on the activities. Based on the findings, there data collection strategies were not built into the program from inception. It is important that ongoing weekly, monthly, quarterly or yearly monitoring and evaluation be put in place to identify what has been successful and what needs to change or improved upon. A system of tracking should also be put in place to monitor children's participation, and changes that are occurring as they participate in different activities.

The intervention also needs to look at different ways to get parents/caregivers on board so that what is being done in schools can be replicated in their respective homes. A tracking record could also be put in place quarterly to monitor the participation of the parents/caregivers. This will help with obtaining and gathering accurate data. For example, based on the findings, 35%, 35%, 43%, and 30% of parents/caregivers from schools A-D reported that they usually talked to their children about SASH program. However, 28%, 20%, 20% and 34% of students reported

that they usually talked to their parents/caregivers about SASH programs at home. Ongoing information sessions and trainings need to be provided for the parents/caregivers to keep them involved in what the program is trying to achieve. It is also important that each school should have their own local SASH committee to involve staff, parents/caregivers and students to plan and execute the program in addition to the central SASH committee. The central committee should be expanded to include at least one parent/caregiver from each of the participating school and they should meet regularly to look at the program and make changes as needed.

In conclusion, the logic behind the theory of change was clear and well defined. The staff understood that encouraging active living and healthy eating early in life could lead to positive health outcomes. They also believed that their own active participation would help encourage the children to want to take an active role in their own well-being. With the way the program was set up, the activities were well defined and that has allowed more participation from the students. However, there are other factors that need to be considered along the way that could pose a serious challenge to the running of the program. Overall, the program set up and activities were congruent with its theory of change as well as with other programs that sought to help school age children achieve positive health outcomes (Schwartz, et al., 2012).

Chapter Seven

Discussion

The focus of this thesis was to evaluate the SASH program. Program evaluation is about determining and examining the worth of any program and what contributes to its success (Patton 2007). It is to ascertain whether a program accomplished its aims and objectives. Program evaluation is the “systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming” (Patton, 1997, p.23). The purpose of the SASH evaluation is to measure the school children’s attitudes and behaviors, as it relates to living actively and making healthy food choices. The second purpose is to assess if the program is worth continuing in the four schools and can be extended to other schools in the Seven Oaks School Division.

The SASH program sought to create positive and lasting changes in the way students see active living and healthy eating. As a result, the SASH committee was formed and decided to evaluate the program. The SASH objectives: (1) to increase children’s capacity to identify, understand and articulate fitness through daily healthy active living within a range of individual and group movement strategies and (2) to help children be well informed about food choices and to take the knowledge home to their respective families. Consequently, the purpose of the SASH program evaluation is to measure the school children’s attitudes and behaviors, as it relates to making healthy food choices and living actively. The second purpose is to assess if the program is worth continuing in the four schools and worth expanding to other schools in the Seven Oaks School Division.

The program actively engaged everyone in the schools—teachers, administrative staff, educational assistants and students. For the most part, the whole school community in all the four schools were involved in different levels of operation with the few exceptions of some staff in some schools who did not show commitment to the program. The participants in the interview expressed their views of and their experiences within the program. Many educators expressed how important the program was to the well-being of the students. They also reflected how the program has produced a healthier shift in the school as a whole.

As a result, active living and eating healthy had become an integral part of all the schools' culture from the classroom to the staffroom. The languages around the schools has also changed. Staff and students used the same language that they all understood. For example, everyone understood what they referred to when they discussed about healthy and unhealthy foods. Staff and students were excited about the program and its positively effects around the school. In consistent with various findings, the effectiveness of this kind of program depends on the commitment of the staff, how they can effectively work with students and how they can mobilize the students (Storey, Spitters, Cunningham, Schwartz, & Veugelers, 2011). As a result of the SASH program, children were introduced to fruit, vegetables and snacks and physical activities that they may not have tried otherwise.

The school environment has been found to be a prime place to promote active living and healthy eating because children spent majority of their day at school and can easily be influenced by their teachers and their peers (Bastian, Maximova McGavock, & Veugelers, 2015; Vander Ploeg, et al., 2012; DeCosta, Møller, Frøst, & Olsen 2017; Salvy Haye, Bowker & Hermans, 2012). As the saying goes: “monkeys see, monkeys do.” Children for the most part try to mimic what they see other people do; especially friends, families and those they admire (Higgs &

Thomas, 2016; Macdonald-Wallis, Jago, & Sterne, 2012). For example, Salvy Haye, Bowker & Hermans, (2012) found out that children tend to eat more when they see their peers eat whether healthy or unhealthy foods. The authors also reported how the presence of others can influence people's choices in trying different activities and how much they participate. Some of the reasons were to project that they can do what others are doing, the tendency to want to be liked by others, the effect of wanting to appear friendly, wanting to feel that they belong and not different. Other factor might be the fear of not wanting to be penalized by others in the social setting.

The school environment also has the tendency to help children engage in physical exercise in a structured or unstructured way. Engaging and participating in both active living and healthy is key to living well and remain healthy (Vander Ploeg, et al., 2014). School-based health programs can provide the resources (moral, inspiration and encouragement) that the children need to engage in such activities. Studies have also shown that children who participated in school-based health programs—active living and healthy eating—are more likely to continue in what they have learned whether they are at school or at home (Bastian, et al., 2015; Vander Ploeg, et al., 2014; DeCosta, et al., 2017).

So far so good, the students who took part in the SASH program were able to differentiate between healthy and unhealthy foods/snacks. The students had also gravitated towards choosing healthy foods/snacks over unhealthy foods/snacks while they were at school. The findings showed that students were excited about the program and they engaged in active living from the classroom to the outdoor and from moderate to rigorous exercises. Students were also participating in active movements in the classrooms between lectures. They had taken the responsibility of their bodies to keep moving. There was also the development of social skills

because students learned how they could relate to one another, share with one another and the importance of following instructions.

Studies have shown that active leadership role is essential to the success of any program (Storey, et al., 2011). The impact of leadership was felt at every level. For example, there were student leaders who helped out with the planning and the execution of some of the activities. They were involved in leading active movement in and out of the classrooms. They were also involved in the taste testing activities (food preparation and serving).

Moreover, staff—principals, staff and educational assistant were role models in the way they embraced and participated in all the programs. Staff took part in the both the active living and healthy eating activities, trained the student leaders, initiated conversation about healthy lifestyle with students and parents/caregivers, provided encouragement and made some changes to what they eat. The excitement and dedication they brought in seemed to have affected the culture around the schools. This seems to be congruent with other research around the same program (Roberts, et al., 2016).

Moreover, most of the staff believed that the program had made some progress and was heading towards the right direction. They mentioned that if they could continue with the same intensity they started with, they would be able to make smore impact in how the students view active living and healthy eating in the long run. They have seen an increase in the attendance for some students because of the availability of breakfast. Many students also ate more fruits and vegetables throughout the school. Several findings have shown that the exposition, availability of and accessibility to fruits and vegetables both at home and school can enhanced and positively influence children choices and increase their ability to try what they see. Also, allowing students to join different clubs like cooking clubs or fitness clubs can enhance students' participation

(Allirot, Quinta, Chokupermal, & Urdaneta, 2016; DeCosta, et al., 2017; Jarpe-Ratner, Folkens, Sharma, Daro, & Edens, 2016; Rasmussen, Krølner, Klepp, Lytle, Brug, & Bere, et al. 2006; Sharps & Robinson, 2016; Wang, et al. 2010). The program seemed to help children develop their self-esteem and it engaged the community as well.

Other findings have shown that it is inconclusive as to whether exposing children to healthy eating and active living make a significant difference in their choices (Schindler, Corbett & Forestell, 2013). However, from the study, more children were bringing more healthy foods and snacks to the schools instead of junk foods. Students took part in exercise both in the classrooms and on the playgrounds because of their exposure to those activities.

Nevertheless, more work needs to be done and an ongoing funding is still needed to further sustain and expand the program. Since the program is still in its early stages, it is necessary that the health champions, staff and the committee continue to work closely together for a better outcome.

Moreover, the contributions from and the cooperation of parents/caregivers are needed to complement the effort of the staff. There is the need to create an environment where they can enlist their buy-ins. Although staff reported that they did send some recipes home to them from time to time, they were not sure whether they usually prepare them for their children. More work needs to be done in this area and more monitoring strategies need to be put in place so that staff can know if their efforts are being complemented at home. It will also encourage parents/caregivers to continue to partner with the schools for the benefits of everyone involved. If everyone is on board the tendency of the program becoming more effective is there.

Accordingly, the findings also echoed the idea behind the theory of change. It showed that healthy outcome is possible if children are exposed to different activities that could help

them in the process (Patton 2017). In the case of the SASH program, the schools organized different activities around active living and healthy eating that they deemed would help their students achieve their aims of making healthy choices the easy choices whether they are at school or at home. Although, they have not ascertained whether what they did at school had an impact at home, they realized that children are more engaged when they are at school and that could be a positive sign that with more effort, they could also influence what happens in their respective homes.

Therefore, ongoing information, discussion, education and training are needed for parents/caregivers to get them on board. Especially for those who are newcomers to Canada to help them understand how to integrate their own foods/snack from their culture of origin to fit into the mainstream so that what they do at school can complement what is happening at home.

7.1 Limitations

One of the limitations of this study was that there was no before and after or comparison group study conducted to ascertain the effectiveness of the program. There was no baseline to measure against in order to properly determine how the program has measured up or achieved what they had hoped.

Since the questionnaires were carried out in the class, some students might have felt pressured by their peers or thought that they were obligated to participate even though they were told that it was voluntary. The cultural differences of the people represented in the data were not explored. Although parents/caregivers' questionnaires were translated into some languages some of the participants commented that it was not that clear and it took them a while to figure what

the questions was trying to say. Also, the understanding of what is termed healthy and unhealthy foods from different culture could be controversial if they were not from the mainstream society.

Also, the study did not consider the socioeconomic status of the students and their parents/caregivers. It did not consider if the parents/caregivers were able to afford to purchase the healthy foods/snacks that the schools asked them to send to school with their children.

The practicality of working within a tight schedule was a challenge and many of the educators struggled with finding the time to attend the interview. It took a long time before some of the educators responded to the email sent requesting an interview. Some educators who had consented to participate declined at the last minute because of time constraint. Others were rushed because they had to go back to their classrooms this might have impacted how they answered the questions. The results were also self-reported. Some of the implications of self-reporting can be social desirability bias where people tend to answer questions in a manner that will be viewed favorably by others, exaggeration, inaccurate self-assessment and reflection, the temptation of making themselves look good instead of being truthful and misrepresentation. In addition, the mixed method approach was limited in how the qualitative and quantitative were combined for the findings.

7.2 Recommendations

Based on the findings, the following recommendations are suggested: more funding and supports need to be injected into the program so that staff from the participating schools can establish more activities and build more facilities that can be helpful for the students' well-being. More community partnership is also needed to fund some of the activities to ensure continuity.

In addition, because of the positive impact and the shifts the SASH program is bringing to the table in creating a healthier school community and helping students make right choices, it is recommended that the program should continue in all the four schools and be expanded to all the remaining schools in the Seven Oaks School Division. The school board should also require all the schools in the division to have a written school active living and healthy eating policy that aims at discouraging students from eating unhealthy foods and sedentary lifestyle. Early intervention and prevention have been found to prevent childhood health concerns and reduce health costs later in life.

The SASH committee should include parents/caregivers to regularly discuss and share experiences about how they can better improve the program. A regular parents/caregivers information session should also be encouraged to keep them in the loop, provide continuous training and increase their interest and support. When parents/caregivers are involved and on board, the program has the capacity to create a healthier community not only at school, but at home.

Also, it is important that a separate staff member be designated to run the program in partnership with the teachers and the students. This will ensure that all the classrooms are on the same page and can encourage active participation from other staff who see their participation in the program as an additional responsibility to take on. This staff member can also help to coordinate training and information sessions for parents/caregivers on a regular and consistent basis. Also, it can help to prevent burn out from the staff who are actively participating.

From a research perspective, more studies need to be conducted to see the effects of these programs on the children, especially when they are not at school. For example, it is inconclusive whether the changing culture at school is changing the culture at home. A focus group interviews

that involve parents/caregivers could be set-up to know how they feel about the program and to know if they have been benefiting from it.

A focus group would also be helpful to gather their suggestions, the challenges they are facing and how best staff can improve the program. It might be helpful to have a longitudinal study of the impact of the program as the children move from one class to the other to know whether the students are continuing with what they learned in the previous school year. Since the highest grade in one of the schools is eight, it would be interesting to see how children fare as they grow older in the program.

Also, more studies can be conducted to know what works and what does not work in the program, to know the different training that can help the staff and to find ways to engage more staff and sustain their interest. Regular data collection is also encouraged. At least twice a year, teacher, students and parents/caregivers should participate in the survey. It will help with making dynamic changes to the program from time to time. This is what a program coordinator can undertake. The impact of staff turnover on the success of the program needs to be studied to understand how staff's stability can help with the continuation of the program.

It is also recommended that staff make available the lists of places where parents/caregivers can obtain free groceries or purchase low cost healthy foods in their immediate community as well as where they can go to participate in free family friendly recreation activities and programs to complement their efforts. Closely related to this, staff should endeavour to give parents/caregivers a list of foods/snacks that they prefer the students to bring to school everyday. This can help ease the difficulty that parents/caregivers may have about what to send the children to school with. Also, since most of the schools have different cultural groups, it is recommended that the schools find creative ways to encourage the

participation, engagement and the incorporation of the different cultural diversity represented in the school to strengthen the program. Nutrition workshops should be provided to help parents/caregivers understand the Canada Food Guide and help them find ways to integrate their cultural foods. More schools should have cooking classes for the students and their parents/caregivers so that they can learn how to prepare low cost healthy foods and further learn the benefits of the foods/fruits/vegetables in the process.

Finally, it is also recommended that more ongoing training should be made available to staff to keep them informed on the best practices and to help them remain on the cutting edge and to sharpen their skills. In addition, the autonomy of the program in each school and classroom should be maintained so that each school and classroom can continue to tailor their activities to the needs of their students.

7.3 Implications

One contribution of this program is its portrait of how the children can make healthy choices the easy choice. It discussed how consistent effort and commitment can result in greater impact and change the trajectory of how students think of exercise and food both inside and outside of the classroom. Although still in its cradle, the program seemed to have been a smart initiative by all the participating schools. The SASH program seems to have made some positive impacts on the students in relations to active living and healthy eating. The program kept on gaining ground every day which is a testament to all the efforts of the staff and the excitement of the students.

This type of program seems to be useful in helping children achieve positive health outcomes. The exposure to regular active and healthy lifestyle can have an overall effect not only

on the children but on the health care system of the nation (Sharps & Robinson, 2016). This type of program can also help children cut unhealthy habits and position them to make healthy choices and pay more attention to what they eat.

The study findings can be of use: to make adjustments and strengthen the existing program; to provide a first level understanding of its theory of change that can be extrapolated for the development of similar school programs; to develop further program evaluation approaches; and to propose a broader policy at the school division levels to foster active living and healthy eating among school age children and their families.

In conclusion, this evaluation is the first since the inception of the program in 2016. The SASH committee provided directions as to what they wanted to find out; hence, that informed the type of questions there were asked and the type of survey that was conducted. For the most part, the program was well received by the school community. However, the program is still evolving although some successes have been recorded. Parents/caregivers need to be on board if the objectives of the SASH program will be fully actualized and to see the transfer of learning from school to home.

Although the collaboration within the school community had been seen as a positive, there still were the staff that were not on board at the time of the evaluation that needs to be encouraged to become contributors to the program. Ongoing partnership between the SASH committee, health champions, teachers, educational assistants and students; consistency and continuous monitoring and evaluation will be beneficial to the sustenance of the SO Active SO Healthy program in the long run.

References

- Allirot, X., da Quinta, N., Chokupermal, K., & Urdaneta, E. (2016). Involving children in cooking activities: A potential strategy for directing food choices toward novel foods containing vegetables. *Appetite*, 103, 275-285. <http://doi.org/10.1016/j.appet.2016.04.031>
- Barkley, J., Salvy, S., Sanders, G., Dey, S., Von Carlowitz, K., & Williamson, M. (2014). Peer influence and physical activity behavior in young children: An experimental study. *Journal of Physical Activity & Health*, 11(2), 404-9.
- Bastian, K. A., McGavock, J., & Veugelers, P. (2015). Does school-based health promotion affect physical activity on weekends? And, does it reach those students most in need of health promotion? *PLOS ONE*, 1-15. <http://dx.doi.org/10.1371/journal.pone.0137987>
- Birch, L., Savage, J., & Ventura, A. (2007). Influences on the development of children's eating behaviours: from infancy to adolescence. *Canadian Journal of Dietetic Practice and Research*, 68(1), S1-S4, S6.
- Boddy, L., Knowles, Z., Davies, I., Warburton, G., Mackintosh, K., Houghton, L., & Fairclough, S. (2012). Using formative research to develop the healthy eating component of the CHANGE! school-based curriculum intervention. *BMC Public Health*, 12, 710. <http://doi.org/10.1186/1471-2458-12-710>
- Colley, R. C., Janssen, I. S., & Tremblay, M. (2012). Daily step target to measure adherence to physical activity guidelines in children. *Medicine & Science in Sports & Exercise*, 44(5), 977-982.
- Comprehensive School Health Program. Retrieved from: <http://www.jcsh-cces.ca/upload/JCSH%20CSH%20Framework%20FINAL%20Nov%2008.pdf>
- Curbing Childhood Obesity: A federal, provincial and territorial framework for action to

- promote healthy weights. Retrieved from <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/framework-cadre/pdf/ccofw-eng.pdf>.
- DeCosta, P., Møller P., Frøst, M., Olsen, A. (2017). Changing children's eating behaviour - A review of experimental. Volume 113, 327-357, ISSN 0195-6663
<https://doi.org/10.1016/j.appet.2017.03.004>
- Deschesnes, M., Trudeau, F., & Kebe, M. (2010). Factors influencing the adoption of a health promoting school approach in the province of Quebec, Canada. *Health Education Research*, 25(3), 438-450.
- Dunning, H., Williams, A., Abonyi, S., & Crooks, V. (2008). A mixed method approach to quality of life research: a case study approach. *Social Indicators Research*, 85(1), 145.
- Edwards, J., Munro, S., & Bligh, I. (2004). Annapolis Valley Health Promoting School Project: Our story [Making the healthy choice the easy choice]. *Physical & Health Education Journal*, 70(2), 18-21.
- Eisenmann, J., Alaimo, K., Pfeiffer, K., Paek, H., Carlson, J., Hayes, H., . . . Holmes, D. (2011). Project FIT: Rationale, design and baseline characteristics of a school- and community-based intervention to address physical activity and healthy eating among low-income elementary school children. *BMC Public Health*, 11, 607.
- Ekwaru, J., Ohinmaa, A., Tran, B., Setayeshgar, S... & Meyre, D. (2017). Cost-effectiveness of a school-based health promotion program in Canada: A life-course modeling approach. *PLoS ONE*, 12(5), PLoS ONE, 2017, Vol.12(5).
- Faught, E., Vander Ploeg, K., Chu, Y., Storey, K., & Veugelers, P. (2016). The influence of parental encouragement and caring about healthy eating on children's diet quality and body weights. *Public Health Nutrition*, 19(5), 822-829. doi:10.1017/S1368980015002049

- Fung C, Kuhle S, Lu C, Purcell M, Schwartz M, et al. (2012) From “best practice” to “next Practice:” the effectiveness of school-based health promotion in improving healthy eating and physical activity and preventing childhood obesity. *Int J Behav Nutr Phys Act* 9: 27.
- Garcia, J., Sirard, J., Deutsch, N., & Weltman, A. (2016). The influence of friends and psychosocial factors on physical activity and screen time behavior in adolescents: A mixed-methods analysis. *Journal of Behavioral Medicine*, 39(4), 610.
- Gosling, R., Stanistreet, D., & Swami, V. (2008). "If Michael Owen Drinks It, Why Can't I? "--9 and 10 Year Olds' Perceptions of Physical Activity and Healthy Eating. *Health Education Journal*, 67(3), 167-181.
- Government of Canada. Physical activity tips for children (5-11 years). Retrieved from <https://www.canada.ca/en/public-health/services/health-promotion/healthy-living/physical-activity/physical-activity-tips-children-5-11-years.html>
- Government of Canada. Planning meals. Retrieved from <https://www.canada.ca/en/health-canada/services/food-nutrition/canada-food-guide/using-food-guide/planning-meals.html>
- Heitzler, C., Martin, S., Duke, J., & Huhman, M., (2006). Correlates of physical activity in a national sample of children aged 9–13 years. *Preventive Medicine*, 42(4), 254-260.
- Higgs, S., & Thomas, J. (2016). Social influences on eating. *Current Opinion in Behavioral Sciences*, 9(C), 1–6. <https://doi.org/10.1016/j.cobeha.2015.10.005>
- Jago, R., Brockman, R., Fox, K., Cartwright, K., Page, A., & Thompson, J. (2009). Friendship groups and physical activity: Qualitative findings on how physical activity is initiated and maintained among 10-11 year old children. *The International Journal of Behavioral Nutrition and Physical Activity*, 6, 4.

- Jarpe-Ratner, E., Folkens, S., S Sharma, S., Daro, D., & Edens, N. (2016). An Experiential cooking and nutrition education program increases cooking self-efficacy and vegetable consumption in children in Grades 3–8. *Journal of Nutrition Education and Behavior*, Volume 48, Number 10
- Jensen, B., & Simovska, V. (2005). Involving students in learning and health promotion processes-clarifying why? what? and how? *Promotion & Education* 12 (3-4), 150-156
- Joint Consortium for School Health. Retrieved from: <http://www.jcsh-cces.ca/>
- King, K., & Jiying Ling, J. (2015). Results of a 3-year, nutrition and physical activity intervention for children in rural, low-socioeconomic status elementary schools, *Health Education Research*, Volume 30, Issue 4, Pages 647-659, <https://doi.org/10.1093/her/cyv029>
- Kostenius, C. (2013) Student-driven health promotion activities. *Health Education*, Vol. 113 Issue: 5, pp.407-419, <https://doi.org/10.1108/HE-02-2012-0012>
- Lagarde, F., & LeBlanc, C. (2010). Policy options to support physical activity in schools. *Canadian Journal of Public Health*, 101, S9-13.
- Lindqvist, A.-K., Kostenius, C., Gard, G., & Rutberg, S. (2015). Parent participation plays an important part in promoting physical activity. *International Journal of Qualitative Studies on Health and Well-Being*, 10, 10.3402/qhw.v10.27397. <http://doi.org/10.3402/qhw.v10.27397>
- Mayne, J. (2017) Theory of change analysis: building robust theories of change. *Canadian Journal of Program Evaluation / La Revue canadienne d'évaluation de programme* 32.2 (Fall / automne), 155–173 doi: 10.3138/cjpe.31122
- Maturo, C., & Cunningham, S. (2013). Influence of friends on children's physical activity: a

- review. *American Journal of Public Health*, 103(7), E23-38
- McAuley, K., Taylor, R., Farmer, V., Hansen, P., Williams, S., Booker, C., & Mann, J. (2010). Economic evaluation of a community-based obesity prevention program in children: the APPLE Project. *Obesity*, 18(1), 131-136.
- Macdonald-Wallis, K., Jago, R., & Sterne, J. (2012). Social Network Analysis of Childhood and Youth Physical Activity: A Systematic Review: A Systematic Review. *American Journal of Preventive Medicine*, 43(6), 636–642. <https://doi.org/10.1016/j.amepre.2012.08.021>
- McCambridge, T., Bernhardt, D., Brenner, J., & Congeni, J. (2006). Active healthy living: prevention of childhood obesity through increased physical activity. *Pediatrics*, 117(5), 1834-1842.
- McIsaac, J., Read, K., Veugelers, P., & Kirk, S. (2017). Culture matters: A case of school health promotion in Canada. *Health Promotion International*, 32(2), 207-217.
- Mendelson, Rena. (2007). Think tank on school-aged children: Nutrition and physical activity to prevent the rise in obesity. *Applied Physiology*, 32(3), 495-499.
- Miglioretti, M., Velasco, V., Celata, C., & Vecchio, L. (2013). Teachers' ideas about health: implications for health promotion at school. *Health Education Journal*, 72(6), 695-707.
- Obesity in Canada. Retrieved from <http://www.obesitynetwork.ca/obesity-in-canada>
- Ofori, N., Ekwaru, J., Bastian, K., Loehr, S., Storey, K., Spence, J., & Veugelers, P. (2018). Long-term effects of comprehensive school health on health-related knowledge, attitudes, self-efficacy, health behaviours and weight status of adolescents. (Report). *BMC Public Health*, 18(1), 1–9. <https://doi.org/10.1186/s12889-018-5427-4>
- Ohinmaa, A., Langille, J., Stuart, J., Whitby, C., & Veugelers, P. (2011). Costs of implementing and maintaining Comprehensive school health: The case of the Annapolis Valley Health

- Promoting Schools program. (QUANTITATIVE RESEARCH). *Canadian Journal of Public Health*, 102(6), 451-454.
- Our Health Our future: A National Dialogue on Healthy weights. (2011). <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/ohof-nsna/assets/pdf/ohof-nsna-eng.pdf>.
- Pan-Canadian Public Health Network. Compilation of Initiatives. Retrieved from:
<http://www.phn-rsp.ca/thcpr-vcpsre-2013/compilation-eng.php>
- Patton M.Q. (1997). Utilization-focused evaluation: The new century text. 3rd ed. Thousand Oaks, CA: Sage Publications.
- Patton, M.Q. (2012). Essentials of utilization-focused evaluation. Thousand Oaks, CA: Sage Publications.
- Ramanathan, S., Allison, K., Faulkner, G., & Dwyer, J. (2008). Challenges in assessing the implementation and effectiveness of physical activity and nutrition policy interventions as natural experiments. *Health Promotion International*, 23(3), 290-297.
- Rasmussen, M., Krølner, R., Klepp, K.-I., Lytle, L., Brug, J., Bere, E., et al. (2006). Determinants of fruit and vegetable consumption among children and adolescents: A review of the literature. Part I: Quantitative studies. *The International Journal of Behavioral Nutrition and Physical Activity*, 3(1), 22. <http://doi.org/10.1186/1479-5868-3-22>
- Roberts, E., Bastian, K., Ekwaru, P., Veugelers P., Gleddie, D., & Storey, K. (2016). The role of the comprehensive school health principal in knowledge sharing and use revue
phénEPS/PHEnex Vol 8 no 1

Salvy, S., Bowker, J., Roemmich, J., Romero, N., Kieffer, E., Paluch, R., & Epstein, L. (2008).

Peer influence on children's physical activity: an experience sampling study. *Journal of Pediatric Psychology*, 33(1), 39-49.

Salvy, S., de la Haye, K., Bowker, J. C., & Hermans, R. C. J. (2012). Influence of peers and friends on children's and adolescents' eating and activity behaviors.

Physiology & Behavior, 106(3), 369-378.

Schindler, J., Corbett, D., & Forestell, C. (2013). Assessing the effect of food exposure on children's identification and acceptance of fruit and vegetables. *Eating Behaviors*, 14(1), 53–56. <https://doi.org/10.1016/j.eatbeh.2012.10.013>

Schwartz M., Karunamuni N., Veugelers P. (2010). Tailoring and implementing comprehensive school health: the Alberta project promoting active living and healthy eating in schools.

Physical and Health Education Academic Journal, 2, 1–15.

Sharps, M., & Robinson, E. (2016). Encouraging children to eat more fruit and vegetables:

Health vs. descriptive social norm-based messages. *Appetite*, 100, 18–25.

<https://doi.org/10.1016/j.appet.2016.01.031>

Slawta, J., & Deneui, D. (2010). Be a fit kid: nutrition and physical activity for the fourth grade. *Health Promotion Practice*, 11(4), 522-9.

Statistics Canada. Directly measured physical activity of children and youth, 2012

and 2013. <http://www.statcan.gc.ca/pub/82-625-x/2015001/article/14136-eng.htm>

Stolp, S., Wilkins, E., & Raine, K. (2015). Developing and sustaining a healthy school community: Essential elements identified by school health champions. *Health Education Journal*, 74(3), 299-311.

- Storey K., Montemurro M., Schwartz M., Farmer A., Veugelers P. (2012). Preparing school health facilitators: building competence and confidence for a new role. *Revue phénEPS/PHEnex* J.7(2).
- Storey K. E., Spitters H., Cunningham C., Schwartz M., Veugelers P. J. (2011) Implementing comprehensive school health: teachers' perceptions of the Alberta project promoting active living and healthy eating in schools–APPLE schools. *Revue phénEPS/PHEnex Journal*, 3, 1.
- Storey, K., Montemurro, G., Flynn, J., Schwartz, M., Wright, E., Osler, J., . . . Roberts, E. (2016). Essential conditions for the implementation of comprehensive school health to achieve changes in school culture and improvements in health behaviours of
- Tariq, S., & Woodman, J. (n.d.). Using mixed methods in health research. *JRSM Short Reports*, 4(6), 2042533313479197.
- The APPLE schools. Retrieved from <http://www.appleschools.ca>
- Tran, B., Nair, V., Kuhle, S., Ohinmaa, A., & Veugelers, P. (2013). Cost analyses of obesity in Canada: Scope, quality, and implications. *Cost Effectiveness and Resource Allocation*, 11, 3.
- Tran B., Ohinmaa A., Kuhle S., Johnson J., & Veugelers P. (2014). Life course impact of school-based promotion of healthy eating and active living to prevent childhood obesity. *PLoS ONE*9(7): e102242. <https://doi.org/10.1371/journal.pone.0102242>
- Tremblay, M. (2012). Major initiatives related to childhood obesity and physical inactivity in Canada: the year in review. *Canadian Journal of Public Health / Revue Canadienne De Sante'e Publique*, 103(3), 164-169.

- Vander Ploeg, K., Maximova, K., McGavock, J., Davis, W., & Veugelers, P. (2014). Do school-based physical activity interventions increase or reduce inequalities in health? *Social Science & Medicine*, 112, 80.
- Vander Ploeg, K. A., McGavock, J., Maximova, K., & Veugelers, P. J. (2014). School-based health promotion and physical activity during and after school hours. *Pediatrics*, 133(2), 371-378. <http://dx.doi.org/10.1542/peds.2013-2383>
- Vander Ploeg, K., Wu, B., McGavock, J., & Veugelers, P. (2012). Physical activity among Canadian children on school days and nonschool days. *Journal of Physical Activity & Health*, 9(8), 1138-45.
- Veugelers, P., & Fitzgerald, A. (2005). Effectiveness of school programs in preventing childhood obesity: a multilevel comparison. *American Journal of Public Health*, 95(3), 432-5.
- Veugelers, P., & Schwartz, M. (2010). Comprehensive school health in Canada. *Canadian Journal of Public Health = Revue Canadienne De Sante Publique*, 101 Suppl 2, S5-8.
- Wang, M. C., Rauzon, S., Studer, N., Martin, A. C., Craig, L., Merlo, C., Fung, K., Kursunoglu D., Shannguan, M., & Crawford, P. (2010). Exposure to a comprehensive school intervention increases vegetable consumption. *Journal of Adolescent Health*, 47(1), 74-82.
- Ward, S., Bélanger, M., Donovan, D., & Carrier, N. (2015). Systematic review of the relationship between childcare educators' practices and preschoolers' physical activity and eating behaviours. *Obesity Reviews*, 16(12), 1055-1070.
- Weepie, A., & McCarthy, A. (2002). A healthy lifestyle program: promoting child health in schools. *The Journal of School Nursing*, 18(6), 322-328.

- Williams, A., Henley, W., Williams, C., Hurst, A., Logan, S., & Wyatt, K. (2013). Systematic review and meta-analysis of the association between childhood overweight and obesity and primary school diet and physical activity policies. (Review). *The International Journal of Behavioral Nutrition and Physical Activity*, 10, 101.
- Whitby, C. (2013). One province's experience with health promoting schools. *Physical & Health Education Journal*, 79(4), 18-20,22-24.
- World Health Organization (2016). Report of the commission on ending childhood obesity. http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066_eng.pdf?ua=1
- World Health Organization. The Ottawa Charter for Health Promotion. Retrieved from: <http://www.who.int/healthpromotion/conferences/previous/ottawa/en/>
- Wu, X., Ohinmaa, A., & Veugelers, P. (2012). Diet quality, physical activity, body weight and health-related quality of life among grade 5 students in Canada. *Public Health Nutrition*, 15(1), 75-81. doi:10.1017/S1368980011002412 students. *BMC Public Health*, 16, BMC Public Health, 2016, Vol.16.

Appendix A**SASH Evaluation questionnaires for parents/caregivers****INSTRUCTIONS**

1. Check the column that shows your best answer to each question
2. There are no right or wrong answers. Please be as truthful as you can
3. Your answers will be completely confidential. No one but us can know how you answered the questions
4. You have the right to skip any question that you do not want to answer
5. You can stop filling out the questionnaire at any time you wish

Legends: 1= Usually 2= Sometimes 3= Rarely

	Questionnaires for families	1	2	3
1	How often does your child/children talk to you about healthy foods?			
2	Do you find yourself offering more fruits to your child/children?			
3	Do you find yourself offering more vegetables to your child/children?			
4	Have you tried any of the SASH recipes featured by the school at home?			
5	Do you find it easy to get your child/children to eat their fruits?			
6	Do you find it difficult to get your child/children to eat their vegetables?			
7	How often do you have fruits available in your home?			
8	How often do you have vegetables available in your home?			
9	How often do you read the nutrition labels on food packages?			
10	I cannot afford to buy fruits			
11	I cannot afford to buy vegetables			
12	Do you limit the amount of time your child/children spend(s) watching TV, playing on the computer, or using electronic devices?			

Appendix A (i) Punjabi

SO Active So Healthy Questionnaire for Families

ਪਰਿਵਾਰ ਲਈ "ਬਹੁਤ ਫੁਰਤੀਲਾ ਬਹੁਤ ਤੰਦਰੁਸਤ" ਪ੍ਰਸ਼ਨਾਵਲੀ

SASH ਪ੍ਰੋਜੈਕਟ ਦੇ ਟੀਚੇ ਇਸ ਪ੍ਰਕਾਰ ਹਨ:

1. ਵਿਅਕਤੀਗਤ ਤੌਰ ਅਤੇ ਸਮੂਹ ਦੀ ਕਾਰਜਨੀਤੀ ਦੀਆਂ ਰਣਨੀਤੀਆਂ ਦੇ ਵਿੱਚ ਰੋਜ਼ਾਨਾ ਦੇ ਤੰਦਰੁਸਤ ਸਕਾਰਾਤਮਕ ਜੀਵਨ ਦੁਆਰਾ ਫਿਟਨੈਸ ਨੂੰ ਪਛਾਣਨ, ਸਮਝਣ ਅਤੇ ਸਪਸ਼ਟ ਕਰਨ ਲਈ ਬੱਚਿਆਂ ਦੀ ਸਮਰੱਥਾ ਨੂੰ ਵਧਾਉਣ ਲਈ
2. ਬੱਚਿਆਂ ਨੂੰ ਖਾਣੇ ਦੇ ਵਿਕਲਪਾਂ ਬਾਰੇ ਚੰਗੀ ਤਰ੍ਹਾਂ ਜਾਣੂ ਕਰਵਾਉਣ ਅਤੇ ਉਨ੍ਹਾਂ ਦੇ ਪਰਿਵਾਰਾਂ ਨੂੰ ਗਿਆਨ ਗ੍ਰਹਿਣ ਕਰਨ ਵਿੱਚ ਮਦਦ ਕਰਨ ਲਈ

ਬੱਚਿਆਂ, ਦੇਖਭਾਲ ਕਰਨ ਵਾਲਿਆਂ, ਅਤੇ ਸਕੂਲ ਦੇ ਭਾਈਚਾਰੇ ਉੱਪਰ ਇਸ ਤੰਦਰੁਸਤ ਪ੍ਰੋਗ੍ਰਾਮ ਦੇ ਅਸਰ ਨੂੰ ਨਿਰਧਾਰਤ ਕਰਨ ਲਈ ਤੁਹਾਨੂੰ SASH ਪ੍ਰੋਗ੍ਰਾਮ ਦੇ ਮੁਲਾਂਕਣ ਵਿੱਚ ਹਿੱਸਾ ਲੈਣ ਲਈ ਚੁਣਿਆ ਗਿਆ ਹੈ।

ਹਦਾਇਤ:

1. ਕਾਲਮ ਵਿੱਚ ਚੈਕ ਮਾਰਕ ਲਗਾਓ ਜਿਹੜਾ ਵੀ ਤੁਹਾਡੇ ਪ੍ਰਸ਼ਨਾਂ ਦਾ ਸਹੀ ਜਵਾਬ ਦਰਸਾਉਂਦਾ ਹੈ।
2. ਤੁਹਾਡੇ ਜਵਾਬ ਪੂਰੀ ਤਰ੍ਹਾਂ ਗੁਪਤ ਰੱਖੇ ਜਾਣਗੇ।
3. ਕੋਈ ਵੀ ਜਵਾਬ ਸਹੀ ਜਾਂ ਗਲਤ ਨਹੀਂ ਹੈ, ਕ੍ਰਿਪਾ ਕਰਕੇ ਜਿੰਨਾ ਹੋ ਸਕੇ ਸੱਚਾ ਜਵਾਬ ਦਿਉ।
4. ਤੁਸੀਂ ਪ੍ਰਸ਼ਨਾਵਲੀ ਨੂੰ ਕਿਸੇ ਵੀ ਸਮੇਂ ਭਰਨਾ ਬੰਦ ਕਰ ਸਕਦੇ ਹੋ।

ਰਵਾਇਤ: 1= ਅਕਸਰ 2=ਕਦੇ ਕਦੇ 3= ਕਦੇ ਨਹੀਂ

1 2 3

- 1 ਤੁਹਾਡਾ ਬੱਚਾ/ ਬੱਚੇ ਸਿਹਤਮੰਦ ਭੋਜਨ ਬਾਰੇ ਤੁਹਾਡੇ ਨਾਲ ਕਿੰਨੀ ਵਾਰ ਗੱਲ ਕਰਦਾ ਹੈ?
- 2 ਕੀ ਤੁਸੀਂ ਆਪਣੇ ਬੱਚੇ/ ਬੱਚਿਆਂ ਨੂੰ ਵਧੇਰੇ ਫਲ ਲੈਣ ਦੀ ਪੇਸ਼ਕਸ਼ ਕਰਦੇ ਹੋ?
- 3 ਕੀ ਤੁਸੀਂ ਆਪਣੇ ਬੱਚੇ/ ਬੱਚਿਆਂ ਨੂੰ ਵਧੇਰੇ ਸਬਜੀਆਂ ਲੈਣ ਦੀ ਪੇਸ਼ਕਸ਼ ਕਰਦੇ ਹੋ?
- 4 ਕੀ ਤੁਸੀਂ ਘਰ ਵਿੱਚ ਸਕੂਲਾਂ ਦੁਆਰਾ ਵਰਤੇ ਗਏ ਕਿਸੇ ਵੀ SASH ਪਕਵਾਨਾਂ ਨੂੰ ਤਿਆਰ ਕਰਨ ਦੀ ਕੋਸ਼ਿਸ਼ ਕੀਤੀ ਹੈ?
- 5 ਕੀ ਤੁਹਾਨੂੰ ਲਗਦਾ ਹੈ ਕੀ ਆਪਣੇ ਬੱਚੇ/ਬੱਚਿਆਂ ਨੂੰ ਫਲ ਖਵਾਉਣਾ ਸੌਖਾ ਹੈ?
- 6 ਕੀ ਤੁਹਾਨੂੰ ਲਗਦਾ ਹੈ ਕੀ ਆਪਣੇ ਬੱਚੇ/ਬੱਚਿਆਂ ਨੂੰ ਸਬਜੀਆਂ ਖਵਾਉਣਾ ਔਖਾ ਹੈ?
- 7 ਤੁਸੀਂ ਆਪਣੇ ਘਰਾਂ ਵਿੱਚ ਕਿੰਨੀ ਵਾਰੀ ਫਲ ਉਪਲਬਧ ਕਰਦੇ ਹੋ?
- 8 ਤੁਸੀਂ ਆਪਣੇ ਘਰਾਂ ਵਿੱਚ ਕਿੰਨੀ ਵਾਰੀ ਸਬਜੀਆਂ ਉਪਲਬਧ ਕਰਦੇ ਹੋ?
- 9 ਕਿੰਨੀ ਵਾਰ ਤੁਸੀਂ ਖਾਣ ਵਾਲੇ ਪਦਾਰਥਾਂ ਦੇ ਪੈਕੇਜਾਂ ਤੇ ਪੋਸਟਿਕੀ ਲੇਬਲ ਪੜ੍ਹਦੇ ਹੋ?

- 10 ਮੇਰੇ ਲਈ ਫਲ ਖਰੀਦਣਾ ਬਹੁਤ ਮਹਿੰਗਾ ਹੈ
- 11 ਮੇਰੇ ਲਈ ਸਬਜ਼ੀਆਂ ਖਰੀਦਣਾ ਬਹੁਤ ਮਹਿੰਗਾ ਹੈ
- 12 ਤੁਸੀਂ ਆਪਣੇ ਬੱਚਿਆਂ ਦੀ ਟੀਵੀ ਦੇਖਣ, ਕੰਪਿਊਟਰ ਤੇ ਖੇਡਣਾ, ਜਾਂ ਇਲੈਕਟ੍ਰਾਨਿਕ ਉਪਕਰਣ ਵਰਤਣ ਲਈ ਸਮਾ ਬਿਤਾਉਣ ਦੀ ਮਿਆਦ ਨੂੰ ਸੀਮਤ ਕਰਦੇ ਹੋ?

Appendix A (ii)- Arabic



إستبيان - نشط جداً صحي جداً (SASH) - للأسر



الأهداف لمشروع SASH هي كما يلي:

- ١ من أجل زيادة قدرة الأطفال على التعرف على اللياقة البدنية وفهمها وإبرازها من خلال حياة يومية نشطة صحية ضمن مجموعة من استراتيجيات الحركة الفردية والجماعية.
- ٢ لمساعدة الأطفال على أن يصبحوا على دراية جيدة حول الخيارات الغذائية ولكي يأخذوا هذه المعرفة للمنزل لأسرهم الخاصة بهم.

لقد تم اختيارك للمشاركة في تقييم برنامج ساش من أجل المساعدة في تحديد تأثير برنامج نشط جداً صحي جداً على الأطفال ومقدمي الرعاية وكذلك المجتمع المدرسي.

التعليمات:

- ضع علامة اختيار في العمود الذي يشير إلى أفضل إجابة لك على كل سؤال.
- ١ لا توجد اجابات صحيحة أو خاطئة . يرجى أن تكون صادقاً أكثر ما تستطيعه.
 - ٢ إجاباتك سوف تبقى سرية تماماً.
 - ٣ لديك الحق في أن تتجاوز على أي سؤال لا ترغب في الإجابة عنه.
 - ٤ يمكنك التوقف عن ملء الإستبيان في أي وقت.

قائمة تفسيرية: ١= في كثير من الأحيان ٢= بعض الأحيان ٣= أبداً

٣

٢

١

- ١ كم عدد المرات التي يتحدث فيها طفلك / أطفالك معك عن الأطعمة الصحية؟
- ٢ هل أنت تجد نفسك تقدم المزيد من الفواكه لطفلك / أطفالك؟
- ٣ هل أنت تجد نفسك تقدم المزيد من الخضروات لطفلك / أطفالك؟
- ٤ هل أنت حاولت أي من وصفات SASH عرضت من قبل المدرسة في المنزل؟
- ٥ هل أنت تجد أنه من السهل أن تجعل طفلك / أطفالك يتناولون فاكهتهم؟
- ٦ هل أنت تجد صعوبة في أن تجعل طفلك / أطفالك يتناولون خضرواتهم؟
- ٧ كم مرة غالباً ما تكون لديك الفواكه متوفرة في منزلك؟
- ٨ كم مرة غالباً ما تكون لديك الخضروات متوفرة في منزلك؟
- ٩ ما عدد المرات التي تقرأ فيها ملصقات التغذية على عبوات الطعام؟
- ١٠ لا أستطيع تحمل تكاليف شراء الفواكه.

١١ لا أستطيع تحمل تكاليف شراء الخضراوات

١٢ هل تحد من مقدار المدة الزمنية التي يقضيها طفلك / أطفالك في مشاهدة التلفزيون أو اللعب على الكمبيوتر أو استخدام الأجهزة الإلكترونية؟

شكرا لك على وقتك

Appendix A (iii)



Анкета программы «SO Active SO Healthy»



	Условные обозначения: 1 = Часто 2 = Иногда 3 = Никогда	1	2	3
1	Как часто Ваш ребенок/Ваши дети разговаривают с Вами о здоровой пище?			
2	Вы предлагаете своему ребенку/детям больше фруктов?			
3	Вы предлагаете своему ребенку/детям больше овощей?			
4	Вы пробовали дома какие-либо из рецептов программы SASH, которые предлагались в школе?			
5	Легко ли Вам добиться, чтобы Ваш ребенок/дети съел(и) свои фрукты?			
6	Легко ли Вам добиться, чтобы Ваш ребенок/дети съел(и) свои овощи?			
7	Как часто у Вас дома есть фрукты?			
8	Как часто у Вас дома есть овощи?			
9	Как часто Вы читаете характеристики питательности продуктов на упаковках?			
10	Я не могу позволить себе покупать фрукты			
11	Я не могу позволить себе покупать овощи			
12	Вы ограничиваете время, которое Ваш ребенок/Ваши дети проводят перед телевизором, за компьютером или за электронными устройствами?			

(«Активный и здоровый ребенок») для членов семей

Цели проекта SASH:

1. Повысить способность детей ра

спознавать, понимать и заниматься физкультурой, ведя ежедневно здоровый и активный образ жизни при помощи разнообразных индивидуальных и групповых программ двигательной активности.

2. Помочь детям стать более информированными в выборе продуктов питания, а также принести эти знания в свои семьи.

Вас выбрали для участия в анализе программы SASH для того, чтобы помочь определить влияние программы «SO Active SO Healthy» на детей; людей, так или иначе связанных с воспитанием детей; а также на школьный коллектив.

УКАЗАНИЯ:

Отметьте, пожалуйста, галочкой в колонке свой оптимальный ответ на каждый вопрос.

1. Правильных или неправильных ответов здесь не существует. Ответьте, пожалуйста, максимально правдиво.
2. Ваши ответы будут сохраняться в полной конфиденциальности.
3. Вы можете пропустить любой вопрос, на который Вы не хотите отвечать.
4. Вы можете прекратить отвечать на вопросы в любой момент.

Спасибо, что Вы заполнили анкету.

Appendix A (iv)- Spanish

**TAN Activo TAN Saludable Cuestionario para Familias**

El propósito del proyecto SASH (TAN Activo TAN Saludable) es:

1. Incrementar la capacidad de los niños para identificar, entender y expresar su aptitud física a través de una vida activa y saludable, con unas estrategias individuales y grupales.
2. Asistir a los niños con informarse sobre sus elecciones de comida y llevar este conocimiento a casa para compartir con sus familias.

Usted ha sido seleccionado/a para participar en la evaluación del programa SASH, para poder determinar el impacto del programa sobre los niños, sus cuidadores y la comunidad escolar.

INSTRUCCIONES:

Por favor, marque con un ✓ la columna que mejor refleja su respuesta.

1. No existen respuestas correctas ni incorrectas. Por favor, responda con la opción que mejor describe lo que usted piensa.
2. Todas sus respuestas se mantendrán confidenciales.
3. Si prefiere no responder a una pregunta, la puede saltar.
4. Puede dejar de completar al cuestionario en cualquier momento.

Descripción: 1 = Frecuentemente 2 = A veces 3 = Nunca

1 2 3

- 1 ¿Con qué frecuencia su hijo/a habla con usted sobre comida sana?
- 2 ¿Usted se ha dado cuenta que le está ofreciendo fruta a su hijo/a más a menudo?
- 3 ¿Usted se ha dado cuenta que le está ofreciendo vegetales a su hijo/a más a menudo?
- 4 ¿Ha probado en casa alguna de las recetas de SASH que ofrece la escuela?
- 5 ¿Le resulta fácil convencer a su hijo/a para que coma fruta?
- 6 ¿Le resulta difícil convencer a su hijo/a para que coma sus vegetales?
- 7 ¿Con qué frecuencia tiene fruta disponible en su casa?
- 8 ¿Con qué frecuencia tiene vegetales disponibles en su casa?
- 9 ¿Con qué frecuencia lee la etiqueta nutricional en un envase de alimento?
- 11 No tengo suficiente dinero para comprar fruta.
- 12 No tengo suficiente dinero para comprar vegetales.
- 13 ¿Usted pone un límite a la cantidad de tiempo que su hijo/a puede pasar viendo la televisión, jugando en la computadora o usando dispositivos electrónicos?

Gracias por su tiempo!

Appendix (v)- Tagalog

Kuwestyonaryo ng  SO Active So Healthy para sa mga Pamilya 

Ang mga layunin ng proyektong SASH ay ang mga sumusunod:

1. Upang dagdagan ang kapasidad ng mga bata na makilala, maunawaan at makapagsalita ng fitness sa pamamagitan ng araw-araw na malusog na aktibong pamumuhay sa loob ng hanay ng mga estratehiya sa kilusan ng indibidwal at grupo.
2. Upang matulungan ang mga bata na magkaroon ng maayos na kaalaman tungkol sa mga pagpili ng pagkain at dalhin ang kaalaman na ito sa tahanan sa mga pamilya nila.

Ikaw ay napili upang lumahok sa pagsusuri ng programa ng SASH upang makatulong na matukoy ang epekto ng programa ng SO Active SO Healthy sa mga bata, sa mga nagbibigay ng maalagang pangangalaga, at sa komunidad ng paaralan.

PAANO GAGAWIN ITO:

Lagyan ng markang tsek sa patlang na magpapakita ng iyong pinakamainam na sagot sa bawat tanong.

1. Walang tama o maling sagot. Mangyaring maging tapat hangga't makakaya mo.
2. Ang iyong mga sagot ay mananatiling lihim.
3. May karapatan kang laktawan ang anumang tanong na hindi mo nais sagutin.
4. Maari mong itigil ang pagpuno sa kuwestyonaryong ito sa anumang oras.

Mga pagpipilian na sagot: 1=Lagi-lagi 2=Paminsan-minsan 3=Hindi kailanman

1 2 3

Gaano kadalas makipag-usap ang anak/mga anak mo sa inyo tungkol sa mga pagkaing nakakapagpalusog?

1

2 Nakikita mo ba sa sarili mo na i-aalok mo sa anak/mga anak mo ang mas maraming prutas?

3 Nakikita mo ba sa sarili mo na i-aalok mo sa anak/mga anak mo ang mas maraming gulay?

Nasubukan mo na ba ang kahit alin sa mga SASH resipe na itinampok sa paaralan sa inyong tahanan?

4

Madali mo bang makita na makuha mo ang anak/mga anak mo para kumain ng kanilang mga prutas?

5

Mahirap mo bang makita na makuha mo ang anak/mga anak mo para kumain ng kanilang mga gulay?

6

7 Gaano kadalas na meron kayong mga prutas na magagamit sa inyong tahanan?

8 Gaano kadalas na meron kayong mga gulay na magagamit sa inyong tahanan?

Gaano kadalas kang nagbabasa ng mga nutrisyong nakatatak sa etiketa sa mga pakete ng pagkain?

9

10 Wala akong kakayanan na bumili ng mga prutas.

11 Wala akong kakayanan na bumili ng mga gulay.

Nililimitahan mo ba ang oras ng iyong anak/mga anak na ginugugol sa panonood ng telebisyon, paglalaro ng computer, o sa paggamit ng mga gamit na elektronika.

12

Salamat po sa inyong oras.

Appendix B

Questionnaire on food choice Children's Survey K-8

How old are you? _____

What Grade are you? _____

Gender

Male ☐Female ☐Other ☐

Instruction on how to complete

1. Check the column that shows your best answer to each question
2. There are no right or wrong answers. Please be as truthful as you can
3. Your answers will be completely confidential. No one but us can know how you answered the questions
4. You have the right to skip any question that you do not want to answer
5. You can stop filling out the questionnaire at any time you wish

1. Do you eat breakfast before you come to school?

☐ Usually☐ Sometimes☐ Rarely

2. I enjoy eating fruits at school?

☐ Usually☐ Sometimes☐ Rarely

3. I enjoy eating vegetables at school?

☐ Usually☐ Sometimes☐ Rarely

4. The foods we tried at school are different from the ones we have at home

☐ Usually☐ Sometimes☐ Rarely

5. Do you talk to your parents/caregivers about fruits, vegetables and other healthy foods that you have tasted at school?

☐ Usually☐ Sometimes☐ Rarely

6. Do you eat the fruits, vegetables and other healthy foods that you have tasted at school at home?

☐ Usually☐ Sometimes☐ Rarely

7. How often do you talk to your parents/caregivers about healthy food choices?

☐ Usually☐ Sometimes☐ Rarely8. How often do you eat foods that are **least** healthy (e.g. cake, chips, chocolate, candy bars etc.)?☐ Usually☐ Sometimes☐ Rarely

9. I eat fruits and vegetables in and with my prepared meal (breakfast, lunch and dinner)?

☐ Usually☐ Sometimes☐ Rarely

10. I know to choose **most healthy** foods like fruits, vegetables etc over **least healthy** foods like chips, chocolate

☐ Usually ☐ Sometimes ☐ Rarely

11. I choose **most healthy** foods like fruits, vegetables etc over **least healthy** foods like chips, chocolate

☐ Usually ☐ Sometimes ☐ Rarely

12. How often do you drink water during the day?

☐ Usually (more than 8 times) ☐ Sometimes (between 4 and 8 times) ☐ Rarely (less than 4 times)

13. I choose water over sugary drinks like juice and pop

☐ Usually ☐ Sometimes ☐ Rarely

Questionnaire on Active living

14. Do you exercise or participate daily in activities that make your heart beat fast?

☐ Usually ☐ Sometimes ☐ Rarely

15. Do you participate in activities that you have never tried before?

☐ Usually ☐ Sometimes ☐ Rarely

16. I enjoy exercising or being physically active

☐ Usually ☐ Sometimes ☐ Rarely

17. I spend time playing actively outside

☐ Usually ☐ Sometimes ☐ Rarely

18. When you play with your friends, do you choose to be physically active like building a fort, playing tags, having a race, taking a walk, riding a bike etc?

☐ Usually ☐ Sometimes ☐ Rarely

19. I am physically active with my parents/caregivers at home

☐ Usually ☐ Sometimes ☐ Rarely

20. Throughout the school year, I participate in organized activities after the school hour

☐ Usually ☐ Sometimes ☐ Rarely

21. If you had the choice, would you play video games instead of being physically active

☐ Usually ☐ Sometimes ☐ Rarely

22. If you had the choice, would you spend your time watching TV instead of being physically active

☐ Usually ☐ Sometimes ☐ Rarely

Appendix C**Parental Consent Form**

Date:

Dear Parent or Guardian:

My name is Daniel Omolola and I am a Graduate student at the University of Manitoba Winnipeg, Manitoba. I am asking for permission for your child to complete a survey being administered to students in school. The survey will ask questions about their experience about being a student in SO Healthy SO Active (SASH) school. It is our hope that data from this survey will contribute to a better understanding of how healthy eating and active living can help in the reduction and prevention of childhood obesity.

Your child's responses to the survey will be confidential or anonymous. No identifiable information will be kept; however, the data may be used in publications/presentations.

Your consent and your child's participation are completely voluntary, and your child may withdraw at any time. There is no reward for participating or consequence for not participating. There are no risks associated with participation in the study. We will also seek your child's assent to participate before he or she begins the study.

For further information on this research please contact me Daniel Omolola at (blank) or (blank).

If you have any questions about your rights or child's right as a research participant you may contact the University of Manitoba human ethics at humanethics@umanitoba.ca.

There are two copies of this letter. After signing them, keep one copy for your records and return the other one to your child's school.

"By signing below, I agree to allow my child _____ to participate."
(name of your child)

Signature: _____

Name (please print): _____

Date: _____

Please put a checkmark in the space below if you do not want your child to participate in the survey

() I do not consent my child to participate in the survey

Appendix D**ASSENT FORM****SAMPLE ASSENT FOR CHILDREN 7-13 years old**

Study title: “An Evaluation of Seven Oaks School Division SO Active SO Healthy Pilot Project

Investigator: *Daniel Omolola*

Why you are here

The school wants to tell you about a study about children with who participate in healthy eating and active living. They want to see if you would like to be in this study. This form tells you about the study. If there is anything you do not understand, please ask your parent, your guardian or the study staff.

Why are they doing this study?

They want to learn more about being in SASH school have been able to increase your active living like running, playing tag with your friends, riding your bike and healthy eating like eating fruits and vegetables.

What will happen to you?

If you want to be in the study these things will happen:

1. The study will take about 30 minutes. You will be asked to complete some questions in your classroom.

Will the study hurt?

The study will not hurt you in any way.

Will you get better if you are in the study?

N/A

What if you have any questions?

You can ask questions any time, now or later from your class teacher.

Who will know what I did in the study?

Any information you give to the study staff will be kept private (*or secret*). Your name will not be on any study paper and no one but your teacher, the study staff and his advisor will know that that you fill out the form.

Do you have to be in the study?

You do not have to be in the study. No one will be mad at you if you don't want to do this. If you don't want to be in this study, just say so. We will also ask your parents if they would like you to be in the study. Even if your parents want you to be in the study you can still say no.
Even if you say yes now you can change your mind later. It's up to you.

Do you have any questions?
What questions do you have?

Assent

I want to take part in this study. I know I can change my mind at any time.

_____ Verbal assent given Yes ☐
Print name of child

_____ Age _____
Signature of Child Date

[The following statement and signature is required]:

I confirm that I have explained the study to the participant to the extent compatible with the participants understanding, and that the participant has agreed to be in the study.

_____ Signature of _____
Printed name of Person obtaining assent Person obtaining assent Date

Appendix E

RESEARCH STUDY INFORMATION & CONSENT FORM for SASH school administrators/School Health champions/program coordinator

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

You are invited to participate in a research study conducted by principal investigator, Daniel Omolola, a graduate student in the department of Family Social Science Community Health Sciences, Faculty of Health Sciences, College of Medicine at the University of Manitoba.

You are free to end your participation in this study at any time without consequence by telling the principal investigator in person, over the phone or by email. Should you withdraw from the project all your data will be destroyed and not used in the study. You may also refuse to answer any questions you do not want to answer and still remain in the study. There are no 'right' or 'wrong' answers. If you have any further concerns or questions, you can contact directly the graduate student's supervisor (contact information below) at any time and without the student's knowledge.

STUDY DETAILS

Study title: An Evaluation of the SASH pilot project

Principal Investigator: Daniel Omolola (blank)

Research Supervisor: Dr. Javier Mignone (blank)

Human Ethics Coordinator: humanethics@umanitoba.ca

The purpose of this study is to evaluate the effectiveness of SASH program. You will be asked about one or more of the following questions:

1. Please kindly list the SASH activities that you do in your school
2. What is the role you play in the program?
3. How are these programs carried out in your school?
4. Please describe your experience as being a part of the SASH program
5. What are some of the challenges you face in the program?
6. What are some of the success that you see in the program
7. In what ways can the program be improved?

8. How do you motivate the school (both teachers and students) to participate in the program?

Interview process: You will be asked to participate in one interview, with an expected length of 45 minutes to 1 hour. If you consent, I will audiotape the interview so that I can accurately transcribe what you say, and to make sure I don't miss anything you say during the interview. You will have the opportunity to examine your transcribed interview in order to validate its accuracy.

Confidentiality: Any personal identifiers will be removed from the data. The information and data collected during the interview process will remain confidential. Personal identifiers such as names and phone numbers will not be associated with the information that will be collected. The use of pseudonyms will be used to ensure all names and any identifiable information will be removed from association with the participants. Participants will not be referred to by name during the interview process to ensure anonymity on the interview audio recording. The data will be stored for five years by the principal investigator. Only the principal investigator and his supervisor will have access to the data, which will be securely stored in a locked office.

Potential risks and discomforts: The investigator did not foresee any a potential risk that may occur during the interview process that may cause emotional distress. You will also not be penalized for any unanswered questions and you can withdraw from the study all together at any time without penalty.

Potential benefits to participants and/or to society: Benefits of this study include contributing to the knowledge and understanding of how healthy eating and active living can help reduce childhood obesity. This can help the program to move to other schools in the division and other schools in the province of Manitoba.

Use of data: The data gathered from this interview will be used to write an internal evaluation report for SASH program and will also be used for a master's thesis.

Participation and withdrawal

You are free to end your participation in this study without consequence at any time by telling the principal investigator in person, over the phone or by email. Should you withdraw from the project all your data will be destroyed and not used in the study. You may exercise the option of removing any of your data from the study. You may also choose not to answer any questions you don't want to answer and still remain in the study. You may also choose to have your data omitted from the thesis and just used for the evaluation report. All data will be destroyed/erased permanently by 01/2024.

I have read all the information listed above. I confirm that the purpose of the research, study procedures, possible risks and discomforts as well as benefits have been explained to me. All my questions have been answered. By signing this form, I express my willingness to participate in this study.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at (204) 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Print first name (do not include last name): _____

Middle name initial: _____

Phone: _____ Email: _____

Please circle 'Y' (Yes) or 'N' (No):

Do you agree to have your data used in the thesis report? Y/N

Do you agree to have your data used in the evaluation report? Y/N

Do you agree to be audiotaped? Y /N

I have received a copy of the Information and Consent Form? Y / N

I have received the contact information for support services? Y / N

I agree to be contacted in the future if further information is required after the interview? Y/N

I would like me to receive a 1-page summary of findings by 12/18? Y/N

How do you wish to receive the summary? () Email () Surface mail

Email address: _____

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Appendix F

Sample of possible questions to be asked during the semi structured interviews

1. Please describe the activities that you are currently doing, planning to do or have discussed regarding healthy food choices and active living
2. Please describe the activities that your school is doing that are unique to your school and/or that are done in a different way than the other schools
3. What is the role you play in the program?
4. How are these programs carried out in your school?
5. Please describe your experience as being a part of the SASH program
6. What are some of the challenges you face in the program?
7. What are some of the success that you see in the program
8. In what ways can the program be improved?
9. How do you motivate the school (both teachers and students) to participate in the program?

Appendix G: Sample email invitation to staff to participate in the semi-structured interview

Hello,

My name is Daniel Omolola and I am a graduate student from the department of Community Health Sciences at the University of Manitoba (my supervisor is Javier Mignone). I am contacting you because your name has recently been provided to me by [blank] with the agreement of the SASH evaluation committee to invite you to participate in a study. The purpose of the study is to evaluate the SASH pilot project. I was wondering if you can take about 10-15 minutes out of your busy schedule to help answer some questions in a one-on-one interview with me as a part of the SASH pilot project evaluation.

Participation in this study is voluntary. I will be coming to your school at a time agreed upon within the next two weeks to conduct the interview. I am also available if you prefer to do the interview over the phone. There are 3-4 questions that I will be asking within that time slot. You can choose to skip any of the questions. Please understand that the information collected will be kept confidential and will not be shared with anyone in the school division and your name will not be included in the findings. The study has been reviewed and has received ethics clearance through the Health Research Ethics Board at the University of Manitoba.

If you are interested in participating, please contact me through my email at [blank] or phone [blank] I will send a confirmation email indicating suggested time slots so that you can choose and sign-up for the time that is more convenient for you. You will also be required to sign a consent form before you participate in the interview.

I will appreciate it if you can please respond to this email as soon as you can to know if you are interested in participating in the interview.


Thank you for your time and looking forward to hearing back from you.

Sincerely,

Daniel Omolola
Graduate Student
Family Social Sciences (now Community Health Sciences)

University of Manitoba

Appendix H: University of Manitoba Health Research Ethics Board (HREB) approval letter

 UNIVERSITY OF MANITOBA		Research Ethics and Compliance	Research Ethics - Bannatyne P126-770 Bannatyne Avenue Winnipeg, MB Canada R3E 0W3 Phone +204-789-3255 Fax +204-789-3414
HEALTH RESEARCH ETHICS BOARD (HREB) CERTIFICATE OF FINAL APPROVAL FOR NEW STUDIES Full Board Review			
PRINCIPAL INVESTIGATOR: Daniel Omolola	INSTITUTION/DEPARTMENT: U of M/Medicine/Family Social Services	ETHICS #: HS21863 (H2018:223)	
HREB MEETING DATE: May 28, 2018	APPROVAL DATE: June 25, 2018	EXPIRY DATE: May 28, 2019	
STUDENT PRINCIPAL INVESTIGATOR SUPERVISOR (If applicable): Dr. Javier Mignone			
PROTOCOL NUMBER: NA	PROJECT OR PROTOCOL TITLE: An evaluation of Seven Oaks School Division SO Active SO Healthy (SASH) pilot project		
SPONSORING AGENCIES AND/OR COORDINATING GROUPS: NA			
Submission Date(s) of Investigator Documents: May 1 and June 11, 2018		REB Receipt Date(s) of Documents: May 2 and June 12, 2018	
THE FOLLOWING ARE APPROVED FOR USE:			
Document Name		Version(if applicable)	Date
Protocol: Protocol (Undated) including Clarifications as per Letter dated June 11, 2018 and Revised REB Submission Form Pages 6 and 10 and Revised Page 38 of the Protocol submitted June 11, 2018			April 2018
Consent and Assent Form(s): Parents/Caregivers Information and Consent Form Research Participant Information and Consent Form - Individual Interview Assent for Children Grade 1 - 14 Years Old			June 11, 2018 June 11, 2018 June 11, 2018
Other: Parent/Caregivers Invitation to Participate (Undated)			submitted June 11, 2018
English Family Questionnaire (Undated)			submitted June 11, 2018
Recruitment Email of Invitation to Participate (School Staff) (Undated)			submitted May 1, 2018
Students Questionnaire (Undated)			submitted May 1, 2018
Questionnaire on Food Choice Children's Survey K-8 (Undated)			submitted May 1, 2018
Poster (Undated)			submitted May 1, 2018
Questionnaires for the Interview (Tagalog, Arabic, Spanish, Punjabi, Russian and Hindu)			submitted June 11, 2018
CERTIFICATION The University of Manitoba (UM) Health Research Board (HREB) has reviewed the research study/project named on this Certificate of Final Approval at the full board meeting date noted above and was found to be acceptable on ethical			

grounds for research involving human participants. The study/project and documents listed above was granted final approval by the Chair or Acting Chair, UM HREB.

HREB ATTESTATION

The University of Manitoba (UM) Health Research Board (HREB) is organized and operates according to Health Canada/ICH Good Clinical Practices, Tri-Council Policy Statement 2, and the applicable laws and regulations of Manitoba. In respect to clinical trials, the HREB complies with the membership requirements for Research Ethics Boards defined in Division 5 of the Food and Drug Regulations of Canada and carries out its functions in a manner consistent with Good Clinical Practices.

QUALITY ASSURANCE

The University of Manitoba Research Quality Management Office may request to review research documentation from this research study/project to demonstrate compliance with this approved protocol and the University of Manitoba Policy on the Ethics of Research Involving Humans.

CONDITIONS OF APPROVAL:

1. The study is acceptable on scientific and ethical grounds for the ethics of human use only. ***For logistics of performing the study, approval must be sought from the relevant institution(s).***
2. This research study/project is to be conducted by the local principal investigator listed on this certificate of approval.
3. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to the research study/project, and for ensuring that the authorized research is carried out according to governing law.
4. **This approval is valid until the expiry date noted on this certificate of approval.** A Bannatyne Campus Annual Study Status Report must be submitted to the REB within 15-30 days of this expiry date.
5. Any changes of the protocol (including recruitment procedures, etc.), informed consent form(s) or documents must be reported to the HREB for consideration in advance of implementation of such changes on the Bannatyne Campus Research Amendment Form.
6. Adverse events and unanticipated problems must be reported to the REB as per Bannatyne Campus Research Boards Standard Operating procedures.
7. The UM HREB must be notified regarding discontinuation or study/project closure on the Bannatyne Campus Final Study Status Report.

Sincerely,