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Ontario Elementary School Teachers' Perceptions
of the Daily Physical Activity Policy

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Ontario Elementary School Teachers' Perceptions of the Daily Physical Activity Policy

Description of Project

The purpose of this study is to explore Ontario elementary school teachers' perceptions of the Daily Physical Activity (DPA) policy. The DPA policy was developed to help combat the increasing levels of inactivity and obesity with Ontario schoolchildren. Since the policy's introduction in 2005, little or no evaluation has been conducted to demonstrate the success or failure of the policy. Furthermore, gaps exist in the evaluation of the policy, particularly in regards to the views of the teachers who are the individuals responsible for implementing the policy in elementary schools. The interview guide (Appendix A) will invite participants to comment on various aspects of the policy including the participants' personal views, observed responses of teachers, parents, and students, challenges, successes and recommendations of future directions. Through this research, a clearer view of the perspectives of teachers of the policy in terms of its successes and challenges is anticipated and a list of suggestions or future directions will be determined.

Definitions

Physical Activity and Inactivity

The Canadian Fitness and Lifestyle Research Institute (2005b) classifies an active person as having an average daily energy expenditure of at least 3 kilocalories per kilogram (KKD) of body weight during the last 12 months while an inactive person has an average daily energy expenditure of less than or equal to 1.5 KKD. Moderately active representation falls within active and inactive. Examples of activity requirements

for each of the above activity levels include the following: "Active, if they walked at least 1 hour every day (3.0+ KKD); Moderately active, if they walked 1/2 hour every day (1.5–2.9 KKD); and, Inactive, if they walked no more than 1/2 hour every day (<1.5 KKD)" (Canadian Fitness and Lifestyle Research Institute, 2005b).

Obesity

The Public Health Agency of Canada (as cited in Morrison & Chanoine, 2007; Hramiak et al, 2007) states that "obesity (defined as a Body Mass Index or BMI of >30 kg/m²) is an important individual and population health issue, as it is a contributor to a wide variety of chronic diseases, such as diabetes, cardiovascular disease, hypertension and liver disease, as well as breast, colon and prostate cancer" (2007, paragraph 1).

Childhood obesity is defined as having a body mass index (BMI) greater than the 95th percentile of a paediatric height-weight-for-age chart (British Columbia Medical Association, British Columbia Ministry of Health, 2005). The 2004 Canadian Community Health Survey, as cited by Starky (2005), found that BMI measurements of Canadian children indicated that 18.1% of children ages 2 to 17 are overweight, and an additional 8.2% are obese.

Literature Review

Physical Inactivity

Studies show that physical activity of any kind contributes to a healthy lifestyle and helps prevent chronic disease regardless of age (Active Healthy Kids Canada, 2008; World Health Organization, 2002). Moreover, frequent participation in physical activity beginning at a young age is fundamental in determining one's lifespan and

quality of life (Active Healthy Kids Canada). Regular physical activity in a supportive setting also assists in developing healthy habits and routines, which can enable a sense of connectedness and belonging to the school environment (Government of Ontario, 2006). Furthermore, in the report completed by the Ontario Association for the Supervision of Physical and Health Education (OASPHE) and the Ontario Physical and Health Education Association (OPHAE) (2007), it was declared that “classroom-based physical activity was demonstrated to be effective for increasing daily in-school physical activity and improving on-task behavior [sic] during academic instruction” (p. 2). This information provides a valid argument in support of daily physical activity in the school setting. The following focuses on the issue of inactivity in children and its negative effects.

The issue of physical inactivity, which instigated the DPA policy, is a worldwide problem having been identified by the World Health Organization (WHO) in their 2002 World Health Report. In this report, it is stated that physical activity has many benefits, namely the reduction of cardiovascular disease and Type 2 diabetes, due to the effects of weight loss and decreased blood pressure (World Health Organization, 2002). This information has been repeated in numerous other studies (Mark & Janssen, 2008; Thomas, Greene, Ard, Oster, Darnell, & Gower, 2009; Rizzo, Ruiz, Oja, Veidebaum, & Sjöström, 2008; Andersen, Sardinha, Froberg, Riddoch, Page, & Anderssen, 2008; Ekelund et al., 2009). In addition, physical activity can reduce the probability of developing certain types of cancer such as colon cancer and breast cancer (WHO). Also, physical activity is known to improve musculoskeletal health, control body weight, and reduce the symptoms of depression (WHO; Andersen et al.; Ekelund et al.).

Finally, the WHO identified that physical inactivity is an approximate cause of 1.9 million deaths and 19 million disability adjusted life years lost across the globe. With so many ailments and conditions attributed to physical inactivity, it is vital that governments develop and implement programs that prevent these numbers from increasing again. Programs that encourage children and youth to take part in physical activity at a young age are an example of the directions governments are beginning to take in dealing with this issue.

Illnesses mentioned in the literature linked with obesity include chronic diseases such as diabetes, hypertension, cardiovascular disease, kidney problems as well as increasing the probability of developing certain types of cancer (British Columbia Medical Association, British Columbia Ministry of Health, 2005; WHO, 2002). Other conditions associated with being overweight or obese include depression, asthma, being bullied, and developing certain learning difficulties (British Columbia Medical Association, British Columbia Ministry of Health). Obese children are more likely to be subjected to the social stigma associated with being overweight and therefore may suffer from self-blame and low self-esteem, which can affect how they behave academically and socially (Sjöberg, Nilsson & Leppert, 2005). This can contribute to mental illnesses such as anxiety and depression and can lead to feelings of shame (Sjöberg, Nilsson & Leppert).

At home in Canada, obesity is also a crucial issue in regards to the health of the nation. In 2004, the Chief Medical Officer of Health Report: Healthy Weights, Health Lives, was published by the Ontario Ministry of Health and Long-Term Care. Findings of this report conclude that almost one out of every two adults in Ontario is overweight

or obese. Furthermore, the Chief Medical Officer reports that the number of obese children aged 7 to 13 has more than tripled from 1981 and 1996. These findings illustrate a close correlation with the following study completed by the Institute of Medicine (as cited by the Ontario Ministry of Health and Long-Term Care), which suggests about 60% of obese children ages 5 to 10 had at least one risk factor for cardiovascular disease present and 25% had two or more risk factors.

Active Healthy Kids Canada released the first annual Canada's Report Card on Physical Activity for Children and Youth based on findings from 2005 research. In this report, Canada was given a grade of 'D', meaning "insufficient appropriate physical activity opportunities and programs are available to the majority of Canadian children and youth" (Active Healthy Kids Canada, 2008, p. 8). Unfortunately, this grade has not changed whatsoever from the first report in 2005 to the 2008 report. Canada remained at a 'D' level. The most recent 2009 report has done away with the overall grade so there is no comparison with the 'D' grade from the previous report. The physical activity levels grade however, was an 'F' for the 2009 report, due to the 87% of Canadian children and youth who are still not getting the recommended 90 minutes of daily physical activity (Active Healthy Kids Canada, 2009). The objective of the Report Card is to examine physical activity opportunities for children and youth where they live, learn, and play. Areas that are evaluated in this report include physical activity and inactivity, family, community environment, school, policy, and health (Active Healthy Kids Canada, n.d.).

In addition to the 'F' grade for physical activity levels, the 2009 Report Card provides key findings including the following:

- 90% of Canadian children and youth are still not meeting the minimum guidelines set by the Canada's Guide for Physical Activity;
- physical activity decreases in the teenage years;
- girls tend to be less active than boys;
- socio-economic status of the family has a direct relationship with physical activity levels;
- children are not following the screen time guidelines of a maximum of 2 hours a day; and
- 26% of Canadian children and youth are overweight or obese (Active Healthy Kids Canada, 2009).

The Public Health Agency of Canada (2005) also revealed that more than half of Canada's children and youth are not active enough for optimal growth and development. These results provide conclusive evidence that daily physical activity including moderate and vigorous exercise needs to become lifestyle habits for our Canadian children and youth if we do not want these numbers to worsen.

The above reports and findings draw questions as to how much of a financial burden physical inactivity and obesity are to the nation. Katzmarzyk and Janssen (2004) found that physical inactivity and obesity cost the Canadian government \$5.3 billion and \$4.3 billion respectively per year and represent 2.6% and 2.2% of the total health care costs in Canada in 2001. These numbers are clearly appalling considering that the most basic remedy for inactivity and obesity is simple activity. One would hope that a small step such as the DPA would help provide opportunities and create healthy

habits at a young age when optimal growth and experience is of the utmost importance.

The Canadian Fitness and Lifestyle Research Institute (2005a) found that while physical inactivity costs the government billions of dollars annually, physical activity proves to be one of the most cost-effective ways of attaining a healthier population, both physically and mentally. The dollar amount is just one way in measuring the toll physical inactivity takes on Canadians. Other measures include premature death and the reduction in quality of life due to chronic diseases and conditions. "If Canadians were to become more active, there would be: 26% fewer deaths from type II diabetes; 20% fewer deaths from colon cancer; and, 22% fewer deaths from cardiovascular disease" (Canadian Fitness and Lifestyle Research Institute, 2005a, paragraph 6). This information causes one to wonder how such a simple, cost-effective remedy such as physical activity is so difficult to attain.

Ontario Education System Reform 1990's – 2000's

Over the past 20 years, the educational system in Ontario went through significant changes due to the changes in ruling provincial parties. "Changes occurred in many areas of education policy influence, including curriculum, provisions for student diversity, accountability, governance, funding, teacher professionalism, teacher working conditions, and school safety" (Anderson & Jaafar, p. 2, 2006). Several major policy initiatives occurred during the 1990's and early 2000's. In 1995, *The Common Curriculum* was introduced by the NDP and brought the concepts of core curriculum, outcomes-based learning and curriculum integration into Ontario policy (Anderson & Jaafar). Due to this policy, all Ontario students were evaluated for specific outcomes at

Grade 3 and Grade 6 (Anderson & Jaafar). Furthermore, traditional subject matter was integrated into four wide areas: language arts, mathematics and science, arts, and self and society (Anderson & Jaafar).

Once the Conservative government took office in 1995, a document entitled, *The Common Sense Revolution* was introduced that outlined their political agenda (Anderson & Jaafar, 2006). The greatest impact the Conservatives had was through significant cuts to the education budget that included teacher layoffs, cuts in services and programs, and an increase in property taxes (Anderson & Jaafar). The following year, the Conservatives established the Education Quality and Accountability Office (EQAO) whose role was to administer and mark the standardized testing (including those for Grades 3 and 6) who are tested yearly in reading, writing, and mathematics (Anderson & Jaafar).

In addition, the Conservative government introduced Bill 160 in 1997, entitled the *Education Quality Improvement Act* (Anderson & Jaafar, 2006). While this bill attempted to end disparities faced by students in terms of funding by jurisdiction and location, it also legislated that the province would be the one to set the class size limits, teacher preparation time, as well as the length of the school year (Anderson & Jaafar). Furthermore, it allowed non-certified personnel to teach subjects including arts and physical education (Anderson & Jaafar). Exasperated by the reform, teachers staged a walkout protest in 1996. While this did not stop Bill 160, the government did withdraw on some propositions including those regarding non-certified personnel (Anderson & Jaafar).

In 1997, the Ministry of Education introduced *The Ontario Curriculum*, which included new documents for language and mathematics in Grades 1-8 to enable students to meet the rigorous requirements of the new high school curriculum (Anderson & Jaafar, 2006). To complement this, the *Quality in the Classroom Act* (2001) placed efforts on teacher testing and consequently results-driven mentality became prevalent. However, this act was later suspended (Anderson & Jaafar).

In the fall of 2003 came a shift from the Conservative government to the Liberals. Changes were seen in school board governance, funding, labour peace with teachers, teacher control over professional matters, student learning through progress and new initiatives, and health and safety (Anderson & Jaafar, 2006). Of the mentioned changes, health and safety was of particular importance to the existence of the Healthy Schools Program. Partly fuelled by Statistics Canada reports of the increase of childhood obesity, the government announced plans to focus more on the nutrition of students by banning junk food sales as well as providing guidelines for beverages sales in schools (Anderson & Jaafar). Furthermore, the introduction of the DPA policy in 2005 provided an activity-based accompaniment to the previously mentioned nutritional changes (Anderson & Jaafar).

Daily Physical Activity Policy

Beginning as young as 4 years old and continuing until they reach 17 or 18 years, Canadian children are spending many, if not most, of their waking hours in school. In this setting, children have the potential to develop lifestyle habits that are very influential to their futures. Quality school-based programs are significant in encouraging students to develop healthy lifelong habits for physical activity and healthy

eating (Baranoski et al, 1997). The DPA policy is one such program that is aimed to encourage healthy habits. The DPA policy is one part of the Ontario government's Healthy Schools Program (Government of Ontario, 2003; Ontario Ministry of Education, 2008). This program realizes the importance of nutritious food, daily physical activity, and a healthy learning environment and how these conditions influence a child's academic performance as well as continuous health benefits. The goal of the Healthy Schools Program is that it will provide for the students and community through four different areas: high-quality instruction and programs, a healthy physical environment, a supportive social environment, and community partnerships (Ontario Ministry of Education, n.d.). Current Healthy Schools Program initiatives are supported by the Ministry of Education and the Ministry of Health Promotion.

The first goal of the Healthy Schools Program relates to high-quality instruction and programs, and includes an increase in the hiring of specialty teachers in such subject areas as physical education, literacy and numeracy, and music and the arts. As well, financial support was made available in order to provide resources, training, and implementation of the DPA policy (Government of Ontario, 2003; Ontario Ministry of Education, n.d.).

In order to provide a healthy physical environment, school boards have been directed to remove all junk food from vending machines, to be replaced with healthy food choices that follow the guidelines provided by the Dieticians of Canada. As well, Sabrina's Law, a policy regarding the prevention and action of anaphylaxis in all school boards is now mandatory as of January 1, 2006, and funding has been provided so that

high school students have the opportunity to learn the life saving skills of CPR (Government of Ontario, 2003; Ontario Ministry of Education, n.d.).

Supportive social environment initiatives include healthy lunch/snack programs where students have access to healthy food throughout the school year such as the Northern Fruit and Vegetable Pilot Program as well as programs that empower students to lead a healthy lifestyle by avoiding addictive substances and providing activity throughout the day (Ontario Ministry of Education, n.d.)

To build community partnerships, school boards have signed agreements to open schools after hours to non-profit community organizations for free or at a reduced fee (Government of Ontario, 2003; Ontario Ministry of Education, n.d.) as well as supporting active transportation to school (Ontario Ministry of Education)

With all the components in place for the Ontario Healthy Schools Program, including the addition of the DPA, it should only be a matter of time before the success of the DPA program is evident. However, one must be reminded that the Healthy Schools initiative requires a great deal of change to take place in the schools, and while the program was designed with good intent, not all educators are necessarily supportive of the change. Thus, the success of the policy may very well be significantly influenced, if not solely determined, by the context and environment in which it is implemented (i.e., the school and the teachers).

The DPA policy was developed by the Ontario Physical and Health Education Association (OPHEA), and implemented by the Ontario provincial government in order to provide a mandatory 20 minutes of uninterrupted moderate to vigorous physical activity to elementary school students in publicly funded Ontario schools outside of

recess, physical education class and lunch breaks. It is important to participate in both moderate and vigorous physical activity on a daily basis in order to see improvements in body composition and fitness levels. Moderate physical activity increases the heart rate and breathing of the participant but not so much in that they are unable to carry on a conversation during the workout. Examples of moderate physical activity include swimming, brisk walking, skating, recreational dancing, and cycling. Vigorous physical activity is aerobic activity that increases the heart rate and breathing to a point that provides cardio-respiratory conditioning. While partaking in vigorous physical activity, the participant should find it difficult to maintain a conversation due to breathlessness; however, this depends on the current fitness level of the individual. Examples of vigorous physical activity include running, jogging, aerobic dancing and soccer (Ontario Physical and Health Education Association [OPHEA], 2008; Public Health Agency of Canada, 2002). Elementary school educators should be aware of these fitness principles as they should each receive a training manual and resources to supplement the DPA program.

In addition to developing the DPA, OPHEA also provides the resources to accompany the program. This allows educators to provide DPA to their students in an enjoyable format that can be easily adapted to different populations, intensities, and locations. OPHEA takes into consideration feedback from the educators when designing and improving the resources. Examples of resources provided by OPHEA for educators include activity cards, music, training manuals, safety guidelines and information about using the DPA with children and youth who suffer from Asthma (OPHEA, 2008). It is important to ensure that all students, regardless of ability level or

needs, have an equal opportunity to engage in DPA. The DPA policy states, "All activities must be adapted, as appropriate, to insure that students with special needs can participate in them. Such adaptations must be consistent with the accommodations and/or modifications that are typically found in a student's Individual Education Plan" (Ontario Ministry of Education, 2005, p.2). Furthermore, through feedback from educators regarding time constraints in the classroom, OPHEA is redesigning resources to provide more cross-curricular opportunities and connecting the most recent DPA activity cards with literacy and numeracy lessons (OPHEA). In this way, the DPA can assist in different areas of the curriculum and provide a learning environment that some students will find less intimidating and will appeal to different learning styles.

Canada's Report Card on Physical Activity for Children and Youth (2008) stated that daily physical activity for children and youth will encourage a healthy lifestyle through participation in physical activity, improve confidence and skills as children are able to build skills through repetition such as throwing and catching or building on endurance, and serve as a social outlet where children will participate in DPA as a group and work together to reach class DPA goals. While current physical education curriculum provides these opportunities, it is often combined with the health curriculum. This is problematic in that class time is occasionally dedicated to both subjects in a seated-class setting, thus students are not physically active during these occasions. For this reason, it is important to ensure that every Ontario elementary student has the opportunity to take part in structured physical activity every day through the DPA policy when physical education classes are not held or are not activity based. In addition, through a coalition with the Government of Ontario's Active 2010 program, which is a

comprehensive strategy designed to increase participation in sport and physical activity throughout Ontario, two additional DPA programs were developed to help educators provide outdoor opportunities for physical activity (Government of Ontario, 2008).

Winter Active and Summer Active each provide educators with six weeks of outdoor-based challenges to supplement the DPA program (Government of Ontario). Each of the Winter Active and Summer Active challenges can be implemented with limited equipment, either indoors or outdoors, and provide modifications to increase or decrease levels of difficulty depending on the age and ability of the students (Government of Ontario). Furthermore, the posters that accompany the program include warm-up and cool-down activities to ensure that both the students and teachers are able to follow along (Government of Ontario). One anticipates that the flexibility of the DPA program (in that there are resources available to deal with changes in seasons, spaces available, levels of the students and resources available) would incur the success of the program in terms of opportunities for activity regardless of season or location.

Since Canada's Guide to Physical Activity for Children and Youth declares that 90 minutes of physical activity is recommended each day, some suggest that the DPA requirement of 20 minutes is not enough to provide a significant change in the health of Ontario children. OPHEA (2008) maintains that while children and youth should still aim to meet the goal of 90 minutes a day of physical activity, the DPA only intends to provide activity at school and assist in forming healthy habits surrounding physical activity. Parents, caregivers and the community still have a major and important role to play in supporting and enhancing current and future physical activity opportunities in

order to meet the 90-minute guidelines set by the Public Health Agency of Canada. The DPA is only a complement to the physical activity that children and youth should be participating in on a regular basis outside of school. However, in support of the 20-minute time guidelines established by the DPA, Sallis and McKenzie (as cited by the Heart and Stroke Foundation, 2008a) found that “physical education classes averaging 18 or more minutes a day can more than double the odds than an overweight or obese child becomes and remains physically active.” For some children, while 20 minutes of continuous activity is exhausting, having a program and staff in place that support and encourage them can provide the momentum in developing a live changing habit of daily physical activity.

When promoting physical activity in a school setting, it is reasonable to require that those who are teaching are educated in that field. Current evaluation illustrates that while the Healthy Schools Program has worked to increase the number of specialty teachers in elementary schools in Ontario, not all the teachers are full time, nor are they divided evenly throughout the province (People for Education, 2007). From the 2007 Annual Report on Ontario's Public Schools, it was discovered that while the percentage of specialist physical education teachers in Ontario elementary schools had been restored to 41%, the same number it was a decade ago, only half of these teachers are currently full time. However, it should be noted that as of the 1997/98 school year, only 18% of Ontario Elementary schools had a full time physical education teacher, which may indicate that the Healthy Schools Program may be influencing the number of full time physical education teachers who are currently employed in Ontario (People for Education, 2004) The report also demonstrated inequities across the province, in that

while 64% of the elementary schools in the Greater Toronto Area have physical education teachers, in comparison, only 25% of Northern Ontario elementary schools have the same (People for Education, 2007).

Most concerning of all, the report also revealed that even with the introduction of the DPA in 2005, the average number of weekly physical education minutes has declined by 6% since 2004. Researchers speculate that the teachers are not following the DPA guidelines including substituting physical education class time for DPA (People for Education, 2007). While it is appropriate to implement DPA during physical education classes, it should be a complement to the curriculum already in place and consequently activity minutes should be increasing since the introduction of the DPA policy, not decreasing. Finally, in the fall of 2006, OASPHE in collaboration with OPHEA, conducted a survey of Ontario elementary educators to gain a perspective on the current health and physical education curriculum. In regards to the DPA specifically, results found that educators wanted a clearer message concerning the mandate, including evidence and more background information about childhood obesity. Educators also called for specific information on DPA time requirements, clothing requirements, and access to available support resources (Ontario Association for the Supervision of Physical and Health Education [OASPHE] & OPHEA, 2007). That being said, the DPA policy is still in the first few years of implementation and it is reasonable to believe it will take another year or two to make the necessary modifications and begin seeing the success indicators that are expected.

Regardless of the numerous good intentions set forth by the implementation of the DPA policy in 2005, Ontario children and youth are still less active than is

recommended. In a study funded by the Heart and Stroke Foundation of Canada (2008a), it was determined that despite access to facilities and programs that support and encourage daily physical activity, Ontario elementary school children are still not receiving the recommended amount of physical activity. The study found that while most schools were meeting the Ontario guidelines for physical education class minutes, they were deficient in guidelines set by Physical and Health Education Canada of 30-minutes per day (Physical and Health Education Canada, 2009). However, facilities and resources were not found to be the cause of the inactivity; it was more the lack of encouragement by the teachers for the children to make use of the resources. Furthermore, the Heart and Stroke Foundation of Canada (2008b) suggested that possibly too much emphasis is placed on academics and social demands like friendships and family obligations, and this may be the cause of the decline in physical activity participation. This conflicting evidence in regard to the DPA hopefully suggests that the policy may be achieving some goals, but is still young and needs a few years of evaluations in order to make improvements and redesign some aspects. The evidence points to physical activity in the school setting as being important for children to form healthy bodies and healthy minds; the correct way to implement such strategies as the DPA and to get all the major actors on board is another issue altogether.

Benefits of Promoting Physical Activity in the School Setting

Several examples of studies were found that illustrated the benefits of promoting physical activity in the school setting from around the world. An Australian study reviewed evidence-based strategies in promoting physical activity among children across the globe. They found nine studies that reported interventions that promote

children's physical activity in schools. Timperio, Salmon and Ball (2004) concluded that whole-school approaches that include curriculum, environmental, and policy strategies were shown to be most successful in increasing physical activity, over curriculum-only based programs.

A 'best practices' search on the Public Health Agency of Canada website retrieved a three-year program from the Annapolis Valley in Nova Scotia entitled "Making the Healthy Choice the Easy Choice" (2008). Researchers concluded that when in comparison to schools that did not have this program in place, the Annapolis Valley program had lower rates of children who were overweight or obese and demonstrated higher rates of physical activity participation. Similar to the Daily Physical Activity policy in Ontario, this program introduced healthier choices in the cafeterias and vending machines and provided greater opportunities for physical activity (Annapolis Valley Health Promoting School Project, 2008; Veugelers & Fitzgerald, 2005). Due to the success of this program, it is reasonable to expect that Ontario's DPA policy could prove to be just as successful in bettering the health of Ontario children. Finally, the Canadian Cancer Society (2008) provided evidence-based research on physical activity policies. They found that school-based policies that use resources to encourage physical education, such as specialized teachers and opportunities outside of the classroom, on top of increased hours of physical education are most successful in promoting physical activity in the school environment.

Methodology

Project Goals/Objectives

The purpose of the study is to explore Ontario elementary school teachers' perceptions of the Daily Physical Activity (DPA) policy. "The goal of the Daily Physical Activity (DPA) is to enable all elementary students to improve or maintain their physical fitness and their overall health and wellness and to enhance their learning opportunities (Peel Region Public Health, n.d.)". Since the policy's introduction in 2005, little or no evaluation has been conducted demonstrating the success or failure of the policy. Furthermore, gaps exist in the evaluation of the policy, particularly in regards to the views of the teachers who are the individuals responsible for implementing the policy in the elementary schools.

Participants

Ontario elementary school teachers who have been teaching for at least two years and have experience with the Daily Physical Activity policy were recruited to participate in an in-depth, semi-structured interview. I attempted to recruit up to six participants from various locations within Ontario and successfully managed to enlist four participants. Participants had a wide range of teaching experiences, from four to 30 years. All participants were female, and all were teaching in a rural setting in southern Ontario.

Participant Recruitment

Convenience sampling was used to recruit the participants. Initially, the list of potential participants included several teachers whom I knew through various experiences including sports and university. They were sent a cover letter (Appendix B)

and were asked to contact me via email or phone to discuss participation in the study in more detail.

Each potential participant was also asked to suggest another possible participant who might be interested in participating in this study. Cover letters were sent to the potential participants initially contacted to then distribute to other potential participants. These potential participants were then asked to contact me if they were interested in participating in the study. All interested participants were then sent a consent form (Appendix D) that they were required to return to me as soon as possible. Once the consent form had been returned, the interview was planned to be conducted at a time that was convenient for the interested participants. Initially, a cover letter (Appendix B) was sent to the potential participants and they were asked to reply to me by email or phone. Following their contact with me, I called participants to describe the study in more detail (Appendix C). A consent form (Appendix D) was then sent to the participants.

Participants selected through convenience sampling participated in a confidential phone interview. The interview guide (Appendix A) invited participants to comment on various aspects of the policy including the participants' personal views, observed responses of teachers, parents and students, challenges, successes and recommendations of future directions. Through this research a clearer view of the direction of the policy in terms of its success with the teachers and students is anticipated and a list of suggested or future directions will be determined.

Data Collection Strategies

An interview guide (Appendix A) was developed which asked the participants to provide information about themselves including the type of credentials that they have, how long they have been teaching, what grade levels they most recently taught, if they taught in a rural or urban setting and what their class sizes were. These questions were followed by DPA specific questions including what changes they have noticed in teaching since they began teaching; how long the DPA policy had been implemented at their school; what their role was in the implementation of the DPA policy; what their personal views of the DPA policy were; what the response of the teachers to the introduction of the DPA policy was; what the response of the parents to the DPA policy was; what challenges did themselves or their school encounter during the implementation of the DPA policy; if they thought the DPA policy was achieving what it was intended to; if they saw any issues with the policy; what their students' reactions were to the policy; if they could provide any examples of the success of the DPA policy; what they would change about the DPA policy; and if they thought there was anything wrong with the amount of physical activity that children are participating in today.

In addition to the interview guide, I also developed a cover letter (Appendix B), a phone call script (Appendix C) where I could describe the study in more detail, a consent form (Appendix D), and finally an introduction paragraph (Appendix E) to the interview. In the introduction paragraph, following the ethics board guidelines, I reassured the participant that all information collected would remain confidential, that the interview was voluntary and that they could stop at any time should they wish to do

so. I also reminded the participants of the suggested time frame of the interview as well as giving them a chance to ask any questions before we got started.

Participants were sent both a cover letter (Appendix B) and a consent form (Appendix D) written in accordance with the ethics board guidelines. The consent form was required to be signed and returned to me before any research could commence. I was available to answer any detailed questions that participants may have had in regards to the study for true understanding on the part of the participant. I received no questions from any of the participants prior to the study commencing. Both the cover letter and the consent form indicated that the participants understood that they were volunteering and could withdraw from the study at anytime they should choose. The introduction paragraph of the interview (Appendix E) also reminded participants that information collected would remain confidential and that they could withdraw from the study at any time should they choose.

The study collected data over a period of two weeks. Each participant was called to participate in the telephone interview. Telephone interviews were the choice method in conducting the interviews as the participants were all living in a different community than I. Each interview took between 20 and 30 minutes to complete and was recorded as per the consent of the participant. A copy of the interview guide that was used during the interviews is attached (Appendix A). Data was then analyzed for major themes and content.

All information provided will remain confidential. Participants were asked to provide their contact information to me so I was able to set up a time for an interview. This information will be kept separate from interview transcripts or recordings to insure

anonymity and confidentiality of participants. The participants were sent a cover letter (Appendix B) and an informed consent form (Appendix D). The information in the letter and the consent form was described verbally to the participants, in addition to the participants having had the time to read the forms for themselves. Prior to the interview, the researcher stressed to the participants that the interview was voluntary, that they could refuse to answer any questions, and that they could withdraw from the study at any time. All interviews were conducted by phone. Pseudonyms were used on all transcripts. During all publications, presentations, and references to the research, pseudonyms will be used.

Data Analysis

Each participant interviewed was labelled as either 'A', 'B', 'C', or 'D'. Raw data collected from the four recorded interviews. First, I listened to the audio-taped interviews several times while going through the interview guide and making notes. Once that was completed, I listened to the interviews several more times and transcribed them verbatim. After the interviews were transcribed verbatim, I read through them to make sure nothing was missed and later open coded for emergent themes. During open coding, I read through the interview transcripts while making notes in a journal where I identified tentative categories. I used different coloured ink to identify various themes of similar words and phrases. Once all four interviews had been coded, the relevant phrases or quotes were listed under the appropriate code title or subtitle in a word document. At this point, I differentiated the participant responses with different coloured text so I was able to see what responses or points of view belonged to whom.

Once all the key phrases or quotes from the interviews were organized and examined, major themes began to surface. Major themes were identified as a significant number of words, phrases, or quotes on a certain topic by more than one participant. Major themes were identified as the environment in which the DPA was implemented, the DPA and its effects on students' behaviour, the levels of physical activity in students, the DPA knowledge among teachers, and nutritional concerns in the schools. Once these major themes were identified, I reported on the findings using phrases and direct quotes from the interviews that were conducted.

Findings

Major themes that were identified occurred in a rigid environment that focused on results and goal achievements. Therefore, the DPA policy, how it was implemented, and how it was perceived, was significantly influenced by the context in which it was implemented. Out of this context, themes such as the DPA policy context which included the DPA atmosphere and the skewed knowledge by the teachers of the goals and background of the DPA policy, supporting factors of the DPA policy which included variations in the levels of physical activity in the students and the apparent lack of nutritional concern in the schools, and finally the benefits of the DPA policy which included the unintentional behavioural changes in the students, emerged through the comments of the participants made during the interviews.

The DPA Policy Context

DPA Atmosphere

Every one of the participants mentioned that the biggest challenge of the DPA policy was finding enough time, or finding the right time in a day, to fit it in the twenty minutes: *“Well, I think one of it [challenges] is time constraints, with everything else [curriculum].”* Three participants explained how difficult it was to fit in the twenty minutes of DPA while still maintaining the expectations set in the curriculum by the Ministry of Education: *“20 minutes is a big chunk of learning time.”* Furthermore, a certain level of guilt was reflected in the participants' comments regarding DPA expectations with one participant specifically mentioning the feelings of guilt: *“the stress that I think I feel, as a teacher trying to ensure that I've accomplished it [DPA], and then the guilt you feel when you don't.”*

Participants also revealed the recent increase in emphasis being placed on literacy and numeracy in the curriculum: *"there's been a big push on literacy and numeracy."* One participant mentioned that with this change, the focus has become on results of literacy and numeracy testing: *"you make time to make sure you have all the literacy and numeracy and you sort of cut back other things was the message I received."* As well, the atmosphere has become more data driven while the goal setting for the board, teachers, and classrooms has become more streamlined. Negative reactions by the participants to the curriculum changes included the increase in accountability, paperwork, expectations and stress: *"there's a lot more paperwork... a lot more expectations."* While accountability is important, the increase indicated higher levels of stress by the participants with one participant quoting that, *"if your students don't do well, it's a poor reflection of you as a teacher."* It is understandable how thoughts such as these will add to the frustrations involved with teachers while implementing the DPA policy.

The interviews revealed that when the DPA policy was introduced, the teachers felt they essentially lost 20 minutes of teaching time a day which they found quite frustrating: *"We're still expected to teach everything but all of a sudden we've lost twenty minutes a day."* The DPA policy appeared as though it was just another component that had to be fit into an already full curriculum. Moreover, it was felt by one participant that the DPA had to be introduced seamlessly in order for the day's activities to flow together, and that was sometimes difficult to do: *"Well where am I going to find the time, and how I'm I going to, you know, deliver in, in a, in a day where I only have so many minutes? How am I going to deliver an extra, you know, 20 minutes, like, of, of*

physical activity, and finding ways to fit it in so that it's seamless?" Unfortunately, even though the policy has been in place in the participants' schools for five years now, the frustrations mentioned do not seem to have been resolved. Teachers felt as though they were being pulled in several different directions by various initiatives, and therefore implementation of the DPA took a back seat in some instances. One participant regretfully admitted this particular notion: *"Admittedly, the pressures of um, you know, all of the other curriculum that we have to cover, the DPA has taken a back seat."*

DPA Policy Knowledge

One theme that came as a surprise was the limited specific knowledge that the participants had of the origins of the policy or what the exact goal of the DPA policy was, other than the obvious goal of increasing the daily physical activity levels of elementary school students. The goal of the DPA policy is to enable all elementary students to improve or maintain their physical fitness and their overall health and wellness, and to enhance their learning opportunities (Ontario Ministry of Education, 2005). While the participants knew the basic information about the DPA policy, it did not seem that they were ever informed about the reasoning behind it. Not one of the participants mentioned key documents or reports that were circulated on why this policy was important and why it was being introduced. However, this realization was also discovered during the literature review (Ontario Association for the Supervision of Physical and Health Education & OPHEA, 2007). It was suggested that unless the teachers knew the important benefits of DPA policy, they may not cooperate and continue to follow the policy: *"Maybe we [teachers] just don't understand the necessity*

for it.” and “unless the teachers see the benefits of it, then they aren’t going to do it.”

Along the same lines, it was also suggested that maybe if parents knew that their children were doing DPA and realized the importance of it, awareness would carry over at home.

Moreover, it was interesting to learn that not one participant fully believed that this policy was currently successful. While nobody disputed the benefits of daily physical activity, it was agreed that the DPA policy was a step in the right direction. While comments such as: *“something’s better than nothing”* were made, 20 minutes of physical activity was not seen as enough to provoke significant change in the levels of physical activity of the students: *“I don’t think this 20 minutes a day at our schools is going to be enough.”* Furthermore, suggestions on improving the success of the DPA policy included increasing the awareness of both the teachers and parents about the goals and benefits of the DPA policy. One of the participants suggested that the government needed to continue to publicize the program and make it an important topic on the agenda or it would end up being neglected: *“I think if the government doesn’t keep publicizing it and making it important that it’s just going to be a new thing that goes by the wayside.”* With this same idea came the suggestion of continuously updating and providing more training and resources to the teachers: *“if they [government] don’t keep reminding people, that you need it, and keep spending the money to publicize it and also keep updating and training people and coming up with new resources, then it’s going to be tough for them [government].”* Furthermore, it was noted that while being sent resources and manuals was helpful, for some teachers they needed more support and assistance especially if they were not particularly comfortable with physical

education: *"Training sessions are really important."* Those who were uncomfortable with physical education were teachers who were also often hesitant of the DPA policy and they need to be reassured that they will be trained and provided with material that will make their job easier, not more difficult and frustrating.

Additionally, two participants discussed the realization that DPA could be successfully implemented during class hours through cross-curricular experiential learning. They both agreed that DPA could, and should be fit into other curriculum areas: *"In order to keep it viable, I think they're going to have to try to bring in, in terms of the curriculum in other areas."* In other words, effort needs to be put into providing resources that ensure the DPA can easily be introduced into other subject areas. An example included using the DPA during a French lesson, and using French vocabulary such as numbers to fit it in seamlessly.

Finally, the most obvious suggestion included the reintroduction of daily physical education classes: *"give us a gym period every day where we can accomplish this."* It sounded as though if the concept behind DPA were an actual part of the curriculum, teachers would definitely be more supportive and likely to provide the program as well as having the extra pressures of something added on top of the curriculum, decrease.

Supporting Factors of the DPA Policy

Levels of Physical Activity in Students

The comments provided by the participants regarding the levels of activity among their students were very interesting. It was not surprising that the participants mentioned that they found far too many students were inactive nowadays, but it was

interesting that three of the participants also remarked that some students are actually involved in too much activity.

In terms of inactivity, it was generally agreed that many students did not do anything active outside of school hours. One participant commented that the DPA was important because if the students did not have the opportunity to exercise daily at school, then some may not exercise at all: *"There's [sic] kids that go home and sit in front of the TV and they don't do anything. If they aren't going to exercise at school, some of them aren't going to exercise."* Another participant reiterated this observation by stating that some of her students did not participate in physical activity outside of school hours in any way: *"so many of them [students] don't do things outside of school that doesn't involve any physical activity at all."* Both participants had the same opinion that their students went home after school and sat in front of the TV watching programs or playing video games. In fact, the increase in indoor distractions such as TV and video games was blamed by the participants for this decrease in activity: *"I think as parents, it's our responsibility to limit that [indoor distractions] as much as possible."* This observation went hand in hand with another participant's hesitant remark that the students who went home after school and sat in front of the TV and did not participate in physical activity were typically not the strongest students in the class: *"I'm finding the ones [students] that aren't going home and doing something, they're sitting in front of the TV, aren't necessarily, I shouldn't say this, but, they aren't necessarily your, um, strongest students."* Parents should be made aware of this phenomenon which may influence them to make some changes to their habits at home and set a good example for their own children.

In contrast to what was mentioned previously, three participants noted how some students were very active out of school hours but as one participant put it, *"those aren't the ones we worry about. It's the other ones."* However, two participants noted that some of their students were "extracurriculared-out" in the sense that they did too many activities: *"you know, every night they have dance, and then soccer and then swimming and... you know, all kinds of things going on."* One participant even offered a personal anecdote of how some children did too much and got overly competitive: *"some of the kids got too competitive and the dance teacher told the parents that the kids were doing too much dance."* However, most students seemed to handle what they were doing in terms of extracurricular sports and school.

Two participants commented on the relationship between physical activity and recess and said that children were not active enough during recess anymore. One participant stated, *"playgrounds at recess used to be places that were full of activity and, and now they're not so much."* In fact, the trend of inactivity during recess was influenced so much by gaming systems brought to school and used during recess, her school had placed a ban on the devices during school hours and students were not allowed to be sitting against the wall doing nothing at recess. Another participant who chose to do DPA with her students to begin the class immediately following recess concurred by saying, *"even though they had just come in from recess, like lunch recess, doesn't mean they've been doing a lot of physical activity."* One would hope that by having children active on a daily basis through the DPA, children would be more likely to take what they have learned in the games, dances and sports and introduce physical activity into other areas of their lives like recess, afterschool, and on weekends.

Additionally, while levels of activity, levels of fitness, and body composition are not necessarily interrelated, in many cases they are and participants provided some interesting observations linked to the changes they saw in the body composition of their students and their levels of fitness. One participant estimated that roughly one third of the students in her previous class were overweight and believed that this trend was on the rise. Furthermore, in terms of the fitness level of her students, she stated that some of her students could not keep up on walking trips they did as a class and that *“track and field is pretty sad when kids can’t run around the field once.”*

Finally, it was mentioned that when teachers were encouraging the DPA to their students, it was considered important that the students saw them as role models in terms of physical activity. In fact, one participant went so far as to set herself as the example and made it a habit to bike to school when the weather is nice and had convinced ten of her students to take up the same positive habit as well.

Nutritional Concern in the Schools

As the DPA policy is a part of the Healthy Schools Program, one might believe that there would be some more nutritional education and support for students and teachers. However, two participants mentioned the lack of nutritional awareness they saw on a daily basis through the students' lunches. One participant remarked how their students were doing really well through the DPA but followed it by eating lunches that were high in sugar and processed foods: *“It’s not just exercise ‘cause there are kids who are doing some great things but then in their lunches they have really high sugar, high fat, um, over processed, sort of easy lunches so I think that has a lot to with it as*

well.” Another participant foreshadowed the correlation between what the students brought for lunch and what they likely ate at home: *“They’re not eating the healthiest lunches, so I can only imagine what they are eating at home.”* Both participants suggested that a modification to the policy should include more attention paid to nutrition as to not waste the benefits prompted by the DPA policy.

Finally, although the nutritional substance found in the lunches may be inadequate, another participant mentioned the accessibility of nutritional knowledge and healthy choices at her school. She indicated that there was a snacks program at her school and that it was a requirement that students brought healthy snacks to school. Furthermore, she mentioned the school provided different fruits and vegetables for the students to try over the past year to introduce them to new foods.

Through the major themes emerging from the interview data, it became clear that the lack of consistency of the DPA policy was voiced the loudest by the participants. The frustrations mentioned with the DPA policy were often rooted in the inconsistency of messages that the participants have received. Participants were aware that daily physical activity was important; however, they had never clearly been explained why. Physical health is a combination of both activity and healthy choices and yet the participants observed that their students played too many video games, watched too much TV and ate unhealthy food. The message participants were receiving regarding their role as teachers was becoming more and more distorted as they believed they were taking on more and more of the responsibility of the parents in ‘raising’ their students to be healthy individuals. As one participant put it, *“I find myself frustrated because as, a teacher and as a parent I feel like, it’s one more area where, something*

that I feel is a parental concern is being downloaded on to teachers. I feel like it [DPA] takes away from classroom time when it, it needn't be that way. And I think where I'll, I'll often wonder, well why aren't parents, you know, riding bikes with their kids after school? Or, or doing all the things that I try to do with my own children. You know?"

Lastly, it seemed as though the message of educational importance was skewed as teachers felt they were being pulled in opposite directions to ensure that curriculum expectations were met as well as DPA policy expectations while it was obvious that the hours in a school day often do not allow for both to occur without difficulty.

Finally, the environment in which the DPA policy has been implemented had the largest role in determining its success. The rigid results-focused and goal-oriented atmosphere was alluded to by the participants through comments regarding the time constraints, curriculum requirements, and pressures felt by the addition of the DPA program. The removal of 20 minutes of teaching time was felt considerably by the participants as was curriculum modifications which included the recent emphasis being placed on literacy and numeracy. Furthermore, in an environment that revolves around subjects easily measured and evaluated such as math and languages, it was expected that pressures to find success in an area as subjective as physical activity would disrupt the results and goal oriented environment. However, within this environment, the participants mentioned the benefit of improved focus, productivity and attention of the students due to the DPA. While another addition to the curriculum was seen by some as negative at first, the positive outcome of improved concentration of the students was certainly an unexpected positive outcome.

Benefits of the DPA Policy*Unintentional Benefits of the DPA Policy.*

Despite the challenges expressed by participants to implementing the DPA in the school environment, positive benefits to the policy were mentioned numerous times. A common benefit of the DPA policy mentioned by all four participants was surprisingly not that of an increase in physical activity or fitness among the students, but of the students' increased ability to focus after DPA sessions. Following the DPA sessions, levels of classroom productivity were found to be up: *"I do see the, like I really can see the students be more focused once we've had a break."* and *"the only part of that policy that I see as, as beneficial or as even, sort of, that I've seen evidence of, is the part about it enhancing their learning opportunities. I mean I think some kids, you know just oxygenating their brains for you know, 5 minutes at a crack, that certainly helps some kids."* One participant also noticed a difference in genders in that while productivity was increased throughout her class following the DPA break, it was especially noticeable in her male students: *"the last couple of years I've had a lot of boys in my classroom, and I find that they need those breaks a lot more so than the girls do. I see their productivity, in their, like work output and their, like willingness to try things, really increase after [DPA]."* Another comment provided by a participant included that DPA breaks were valuable in helping students to regroup and consolidate their knowledge, as well as increasing the participation and efficiency of the students: *"I often will use body breaks while I'm teaching and I know that's helpful for them to just regroup and also when they do things with their body it helps them to consolidate their knowledge too. Like, I'll see them doing something, sort of an individual task, and I'll see them doing actions to*

themselves to help them remember things that we've done before." Furthermore, it was noticed that the time of the DPA break greatly influenced the students' class participation: *"I found that if I did DPA at the end of the class, I didn't get as much out of them."* In addition, another participant pointed out that students with ADD or ADHD showed significant improvements following DPA breaks in terms of their ability to focus: *"I've had experiences where I've had students with, um, ADD or ADHD and they, they do benefit from an opportunity to be physical."* This would lead one to believe that the DPA policy was successful in reaching the goal of enhancing the students' learning experience through daily physical activity.

A noticeable improvement in confidence was also seen in students while they were working out. An increase in confidence of eye-hand coordination as well as fine motor skills was also seen as a result of the DPA policy: *"For some kids, especially in the primary, they're not very well coordinated, some of them. So some of these moves is [sic] working on their eye-hand coordination, and their fine motor skills and stuff. So for some of them, it can be intimidating, but if they do it enough times, they can get confidence that way too."* In addition, participants stated that the DPA also provided an increased sense of community within the school. For example, one participant mentioned how students would see each other in class doing activities together as well as the school as a whole on occasion: *"They like it the whole year and it was really cool too because we do assemblies and if we need a body break or whatever, they [students] look around and they see, like the whole school doing the same dances and it's sort of a sense of community then too."* Another way that the DPA policy helped to build a sense of community was through the peer leader program that occurred at two

participants different locations. They both mentioned that they had peer leaders for DPA in the most senior grades in their schools; either grades five or seven and eight students: *"I think it's good for the leadership skills of the older kids and it helps them to have connections with the younger kids too."* Furthermore, the participation in extra-curricular physical activity also helped students with their organization skills. One participant stated, *"sometimes the busier you are, the more organized you are"*, meaning that students who are active and social are also working other parts of their brains, and consequently, seem to be more organized than students who are not physically active.

Finally, while it seemed to be mainstream thinking among the participants that physical activity could help students focus, it also may be due to the fact that participants reported that most students genuinely enjoyed the DPA breaks. Participants observed that students saw it as an opportunity to get out of school work for a short time and they enjoyed that fact very much however, it was also a chance for them to relax in a positive, fun way. One participant summed up the atmosphere produced by the DPA breaks; *"We laugh and giggle and be silly for a little while..."* While this may be the case in most situations mentioned by the participants, exceptions are noted: *"Well, there are some kids that don't like it. Like, they tolerate it 'cause we do it and others that love it."* Another participant noticed how some of her students would make excuses to get out of DPA: *"they'll always be a couple of kids that, uh, have to go to the bathroom during that time, or struggle with tying their shoes for five minutes who are just basically trying to get out of any sort of physical activity at all."* While another participant noticed that they had some students who still participated but made a point

to do it half-heartedly: *"Half the class will participate enthusiastically and the other half the class will, stand around and kind of you know, limply move their arms and legs and talk."* While it is impossible to please every student with the DPA policy, observations conclude that most students were fond of it.

To reiterate, the major themes identified through the interviews reveal that teachers work within a rigid environment with a major focus on results and goal achievements. The DPA policy context encompasses the DPA atmosphere, most notably time constraints, as well as the knowledge of the policy held by the teachers. Factors which support the DPA policy include the variation in the levels of physical activity in the students as well as the need for a nutritional component in the schools. Finally, benefits of the DPA policy were revealed through the unintentional behavioural changes found in the students.

Discussion

The findings suggest that the DPA policy was designed without fully taking into consideration the role of the teachers and the rigid environment in which they work. Too many inconsistencies were found between the goal of the policy and the environment in which the policy was implemented. Neither the teachers, school boards nor the Ministry of Education seemed to have a common understanding of what was necessary to meet the goal of the DPA policy. Therefore, the goal of the policy has been difficult to achieve thus far.

Due to the inconsistencies in the DPA policy evidenced in the findings, it would be expected that not all teachers would be able to fully support the policy to the extent that it was intended. As mentioned in the findings, teachers found it difficult to support the policy when the goals had clearly not been explained nor had the messages from the supporting documents that instigated the policy been shared. If the teachers are not entirely aware of what the basis of the policy is, it is unlikely that they will be able to express the importance of the policy to the students through DPA. Finally, the less the teachers and students know about the significance of the DPA policy, the less the parents are aware of the policy and its effects and another opportunity to encourage daily physical activity is lost.

It seemed as though the Ministry of Education did not have enough time available in the curriculum due to the demands of the literacy and numeracy focus, nor providing an environment supportive of the flexibility a policy such as the DPA policy requires. The largest complaint of the policy from teachers was finding the time to fit in the 20 minutes of DPA. It did not sound as though the Ministry of Education took this

into consideration when designing the DPA policy. Had time constraints been taken into consideration during the creation of this policy, one would suspect that cross-curricular materials would have been provided to ensure that the time was available every day for physical activity without disrupting the learning schedule of the day. Currently, the participants alluded to the current lack of cross-curricular resources. Only a couple of participants mentioned that they did try to bring the DPA into other areas of the school day; however, that takes creativity and a desire to see the policy succeed which not all teachers possess.

As well, through the findings, successes of the DPA policy were noted, such as the effect on the students' abilities to focus during lesson time. While the participants were not able to explicitly remark on the changes in the levels of physical activity in the students due to participation in the DPA policy, every participant mentioned that they found their students had better abilities to focus and had higher productivity following the DPA break. Another observation by the participants was the increase in self-esteem noticed in some students as well as the increased connection some students felt with their peers. These findings would suggest the importance the DPA policy had on the students' abilities to learn and has, in turn, met the goal to enhance or improve the learning opportunities of the students. This did not come as a surprise; several research studies support the idea that physical activity has positive effects on a child's academic performance as well as attention span, self-esteem, and behaviour (Mahar, Murphy, Rowe, Golden, Shields, & Raedeke, 2006; Field, Diego, & Sanders, 2001; Castelli, Hillman, Buck, & Erwin, 2007; Tremblay, Inman, & Willms, 2000). Furthermore, improvements in the behaviours of students with learning disabilities such as Attention

Deficit Disorder or Attention Deficit Hyperactivity Disorder (ADD or ADHD) would place emphasis on the importance of the policy and the need for it, or some type of DPA to continue.

The lack of nutritional awareness in the students was troubling for two of the participants of the study. This is understandable as the emphasis placed on the DPA policy seems lost when the students and parents are not knowledgeable about the components of a healthy diet, and what benefits can be achieved by eating well. While the DPA policy specializes in physical activity, it is a part of the Healthy Schools Program which does include a component about healthy nutrition. Possibly this is a gap in the health education curriculum as well as the funding directions of the school board. If the goals of healthy living are meant to be aimed at all school boards across the province, it is important to ensure that there is equal access to resources to help reach the goal set by the DPA policy.

As mentioned previously, the findings suggest that there are gaps within the DPA policy. Through observations of the participants, several options for policy modifications are recommended, however all recommendations include a common thread of curriculum revision. The following paragraphs will discuss how revisions to the current Ontario elementary school curriculum will attempt to deal with challenges presented by the DPA policy and the same challenges that the DPA policy was designed to address.

As one participant suggested, *“Give us a gym [physical education] period every day where we can accomplish this [goals of the DPA policy].”* In agreement, it seems that the easiest solution to the lack of physical activity that elementary school students are currently participating involves a guarantee that they have a structured physical

education period every day. As of now, after speaking to the participants, it appears as though the number of physical education classes offered per week varies by school board where some boards offer more classes per week but for a shorter duration while others offer fewer classes but for longer durations. Furthermore, research demonstrates that there is also a variation in the number of schools which have staff members who have a physical education specialty for the elementary level (People for Education, 2007). It would make sense if the Ministry of Education wants to ensure that students are engaging in quality physical activity on a daily basis, a requirement would be mandated that every school has at least one staff member whose specialty is physical education as well as having daily physical education classes as a part of the curriculum. One of the most significant frustrations mentioned by the participants includes the lack of time available to accomplish the 20 minutes of required DPA; however, if this was a part of the curriculum in the form of daily physical education classes, time would not have to be found and it would be the hope that the teachers' frustrations with the policy would decrease.

Additionally, participants also mentioned how cross-curricular resources would be beneficial to the implementation of the DPA policy. Cross-curricular practices are helpful to both teachers and students depending on the teaching and learning styles of the individual. As mentioned by the participants, different students have different learning styles or needs. The DPA breaks allowed some students the chance to refocus during the day as well as increasing levels of productivity in others. While it takes a certain level of creativity to teach cross-curricular lessons successfully, if training and resources were offered as a part of the curriculum, the stress would be

relieved from the teachers to find a way. Furthermore, cross-curricular lessons might help to reduce the pressure of teachers who are not strong in physical education while still allowing them to provide outlets for physical activity during the school day.

Another recommendation for curriculum modifications as suggested by the participants, while not entirely DPA policy based, would be to make certain that students are well educated in the importance of nutrition. This is another subject that could be taught in a cross-curricular manner if the resources were available to the teachers. While not directly DPA based, one cannot undermine the importance that a healthy diet has on the benefits of a physical activity program. It was commented how it was a shame to see the students work so hard with their bodies only to fuel them with nutritionally inferior lunches. Furthermore, if students were more knowledgeable about the importance and benefits of healthy nutrition, these teachings may carry over at home.

Finally, participants mentioned that the role of the parents and the role of the schools tend to overlap. The responsibilities of each party are not made clear with the DPA policy and as one participant put it, "*a parental concern is being downloaded on to teachers.*" The role of the teacher is becoming increasingly difficult with parental responsibilities being placed on them while they continue to work in an environment that is becoming more regulated and achievement based. If a closer relationship existed between the schools and the parents, themes such as physical activity of students and nutritional knowledge may be dealt with more successfully with both groups working together to reach a common goal.

Limitations

Several limitations were observed in this study, the most apparent being the small sample size of only four participants. By having a greater sample size, it may have been easier to avoid the remaining limitations. However, given that this was an exploratory study, and that limited time and resources were available, four willing participants were readily accessible.

Location is considered another limitation to this study. All four participants taught in a rural setting. It is difficult to say that the responses of the participants would have varied had they taught in different locations; however, a deviation in location would have been ideal to gain a better perspective of what Ontario schoolteachers think of the DPA policy. A larger sample size may have provided a variation in participant location.

An additional limitation is that all of the participants were female. While it is more common to find female teachers in elementary schools, a male perspective on the DPA would have been welcome. It is not known what disparity in responses would have been provided by having both male and female participants, but it would have been interesting to have this perspective. A larger sample size may have provided a variation in participant gender.

Significance of Findings to Public Health Practice, Policy, or Research

The findings of this project suggest that there should be a closer relationship between the Ministry of Education and the Ministry of Health and Long-Term Care in terms of the DPA policy, the Health Schools Program, as well as the school curriculum in general. Although the Ministry of Education realizes the important relationship between daily physical activity and the well being of the students, the DPA policy is

barely enough to meet the goal that the Ministry of Education has set with the policy. Simply put, there are not enough opportunities for teachers to ensure that students are able to meet the DPA policy goal. Furthermore, as mentioned previously by the participants, 20 minutes is not enough to enhance the physical health of the students. If increased physical fitness is truly a goal the Ministry of Education wants their students to meet, then more opportunities must be provided in the curriculum. The suggestion of daily physical education classes as well as cross-curricular material is a step in the right direction; however, policies must be set in place to ensure this occurs. Furthermore, the Ministry of Education might consider include public health staff, specifically those trained in research, program planning and evaluation, as part of the team that develops curriculum and initiatives such as the Healthy Schools Program and the DPA policy. For a policy such as the DPA policy, or anything specifically health related, it only makes sense that public health should be involved.

Conclusion

This project can be concluded by noting that while the DPA policy is a step in the right direction by providing children the opportunity to participate in physical activity on a daily basis, it is but one step. For the program to meet the goal that has been created, it is important that the teaching environment allows it to thrive. Furthermore, consistency must be provided to ensure that those who are implementing this policy, that is, the teachers, are properly informed, trained and supported so that the students get the most out of this policy. As Canadian children are less active and are beginning to feel the negative health impacts because of it (Ontario Ministry of Health and Long-Term Care,

2004), this policy will be irrelevant if precautions to keep it viable are not put in place. Finally, the reasons behind the DPA policy are as much education based as they are health based so it would be expected that both government agencies be involved with the research, design, implementation, and evaluation of this policy.

The research demonstrates that the perspectives of the teachers have not been collected formally as of yet; however, their opinions are vital in keeping this policy alive. Future considerations would be to conduct this study province wide with the limitations mentioned previously considered. Furthermore, the program and resources should be adaptable depending on the details of the school to insure that the opportunity for students to participate in daily physical activity not be limited.

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Appendix A

Interview Guide

- Tell me a bit about yourself
 - How long have you been teaching?
 - What grade level do you teach?
 - Do you teach in an urban or rural setting?
 - What are your class sizes?
1. Tell me about some of the changes you have seen in teaching today from when you first started.
 2. I'm sure you are aware of the current Daily Physical Activity policy (describe briefly).
 - a) How long has it been since the policy was implemented at your school?
 3. How involved are you in implementing the DPA policy?
 - a) What is your role?
 - b) What activities do you do?
 4. What are your views of the current DPA policy?
 - a) What do you think of the policy?
 5. What was the response of teachers when this policy was first introduced?
 6. What was the response of parents when this policy was first introduced?
 7. What challenges did you or the school encounter when implementing this policy?
 8. What do you think this policy was meant to achieve?
 - a) Do you think this policy can achieve what it is intended to?
 9. What issues do you see with the policy?
 - a) What could be changed?
 10. What do the children think of this policy?
 11. Do you think this policy is successful? (read the goals if I need too)
 - a) Can you give me any examples of how successful it is or isn't?
 12. What do you suggest the Ministry do differently to achieve their goals?
 13. Do you think there is a problem in the amount of physical activity today's children participate in?

working with you.

Sincerely,

A handwritten signature in black ink that reads "Jessica Wiseman". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Jessica Wiseman
Master of Public Health Candidate
Lakehead University

Appendix C

Verbal Recruitment Script

I am Jessica Wiseman, a graduate student in the Master of Public Health Program at Lakehead University in Thunder Bay. Thank you for replying back to me. I appreciate your interest in this study. Just to reiterate from the information letter you received, the research I am doing is on Ontario teacher's perceptions of the Daily Physical Activity policy.

As a participant in this study, I will be asking you to take part in a phone interview that will last between 30 to 60 minutes where I will be audio taping our conversation. All information gathered throughout this study, including the audiotapes of the interviews will be kept strictly confidential and will only be accessed by myself and my supervisor. In order to protect the anonymity of all participants, pseudonyms for the participants involved in the study will be used in all notes taken throughout the project and in written and oral reports of the project. All information pertaining to the study will be kept in a locked filing cabinet at Lakehead University for a minimum of five years. Participation in this study is completely voluntary and you may choose not to participate. During the interview, you may decline to answer particular questions if you wish. You may also choose to withdraw from this study at any time.

If you would like to participate in the study, please fill out and return the consent form in the self addressed stamped envelope when it arrives. If you have questions, please contact me at jwiseman@lakeheadu.ca or at (807) 343-8888 x 5068, or you may contact my advisor, Dr. Elaine Wiersma at ewiersma@lakeheadu.ca or at (807) 766-7250.

Thank you for your consideration.

Appendix D

Declaration of Informed Consent

I have read the information letter provided by Jessica Wiseman describing the purpose of the study. My consent to participate is made under the following conditions:

1. That I have read and understood the information in the study cover letter.
2. My involvement includes participating in an interview that will take approximately 30 to 60 minutes and will be scheduled at a time convenient for me during the week.
3. My participation is completely voluntary and all data collected will be used solely for research and teaching purposes.
4. All information will be kept strictly confidential, accessed only the researcher and supervisor involved in the project. Pseudonyms for all participants as well as any identifying information will be used on all documents pertaining to the study and in all oral and written reports of the project. My name will never be used.
5. I may withdraw from the study at any time by simply notifying Jessica Wiseman or Dr. Elaine Wiersma, and may refuse to answer any questions during the interview.
6. It is not anticipated that I will experience physical or psychological harm.
7. The findings of the research will be prepared for publication at professional conferences and journals.
8. Data will be published in aggregate form, and no individual participants will be identified in published results without their explicit consent.
9. All data will be securely stored in a locked filing cabinet at Lakehead University for a minimum of five years.
10. I may request an executive summary of the findings upon completion of the study. These will be available through Lakehead University after summer 2009.

This study has been reviewed by the Research Ethics Board at Lakehead University and has received ethics clearance. The Office of Research Ethics at Lakehead University is available for any concerns and comments pertaining to this study.

Consent to Participate in an Interview

Name of Participant _____

Signature of Participant _____

Date _____

Signature of Researcher _____

Consent for the Interview to be Audiotaped

Name of Participant _____

Signature of Participant _____

Date _____

Signature of Researcher _____

Appendix E

Interview Introduction

Hi, this is Jessica Wiseman calling from Lakehead University to conduct the interview regarding the Daily Physical Activity policy. I just want to remind you that this interview is confidential and voluntary and if at any point you would like to stop the interview, just let me know. This interview should take between 30 and 60 minutes to complete. Do you have any questions before we get started?