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THE IMPORTANCE OF RECESS IN THE LIVES OF CHILDREN

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Child Development

by
Kayla Villanueva
December 2020

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Approved by:

Dr. Amanda Wilcox, Committee Chair, Psychology

Dr. Eugene Wong, Committee Member

Dr. Amy Van Schagen, Committee Member

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ABSTRACT

Current research suggests that when children get the chance to play outdoors, they reap the benefits. However, in today's society children aren't outdoors very often. Children also don't have very much time to play outdoors during recess time while in a school setting. The purpose of this project was to educate and inform elementary school principals about the importance and benefits that recess has on children, as well as help them become an advocate for recess. A video was created that focused on the benefits of outdoor play for children, the importance of recess for children, as well as ways in which principals can help to improve the recess experience for young children. The initial and post questionnaires indicated that the video did help the principals gain knowledge about not only the importance of recess for children, but the importance administrator involvement in advocating for recess. Overall, the video did complete the desired result of principals learning and understanding more about outdoor recess. Future research may consider having a larger group of participants from different regions and creating a collaborative in person group in which principals and administrators could be in the same room exchanging ideas.

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TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	vii
CHAPTER ONE: INTRODUCTION	1
Time Spent by Modern Children Outdoors.....	2
The Importance of Outdoor Play	4
Creative Development	7
Motor/Physical Development	8
Cognitive Development	9
Psychosocial Development	10
Recess Provides Play-Based Outdoor Opportunities	11
Why are Children Spending So Much Time Inside?	16
What Can Schools Do to Promote Children’s Outside Time	19
Strides in the Right Direction	21
What Still Needs to be Done.....	25
Summary and Purpose of Project	26
CHAPTER TWO: METHODS	28
Overview	28
Participants.....	28
Project Materials	29
Initial-Questionnaire	29

Post Questionnaire	29
Demographic Information	30
Video	30
Procedure	31
CHAPTER THREE: RESULTS.....	33
Initial Questionnaire Evaluation	33
Initial and Post Questionnaires	35
Post Questionnaire Evaluation.....	39
CHAPTER FOUR: DISCUSSION	42
Initial and Post Questionnaires	42
Limitations	47
Future Directions	49
Conclusion	51
APPENDIX A: INITIAL QUESTIONNAIRE	52
APPENDIX B: POST QUESTIONNAIRE	57
APPENDIX C: DEMOGRAPHIC INFORMATION	61
APPENDIX D: “RECESS: AN IMPORTANT PART OF A CHILD’S DAILY LIFE” VIDEO SCRIPT	63
REFERENCES	80

LIST OF TABLES

Table 1. Demographic Information	34
Table 2. Means of Principals Knowledge of Staff Engagement During Recess (1=Not at all; 5=Very Much)	38
Table 3. What's the Average Length (in time) of Recess for Grades K-3 at your school? (N=4)	39
Table 4. What's the Average Length (in time) of Recess for Grades 4-6 at your school? (N=4)	39
Table 5. Does your School offer Unstructured Recess, Structured Recess, or Both? If so, How Much Time of Each? (N=4)	39
Table 6. Due to the Recent Impact of Coronavirus-19, Recess may Look Far Different than Before When Schools are reopened. How Do you Think Recess will be Different? (N=3)	39
Table 7. Initial and Post Questionnaire Means for Principals' Knowledge of Importance of Outdoor Play and Recess (1=Not at all; 5=Very Much)	41
Table 8. Initial and Post Questionnaire Means for Principals' Knowledge of Importance of Academics and Testing in School (1=Not at all; 5=Very Much)	43
Table 9. If yes, how: (N=4)	44
Table 10. Open Ended Feedback Regarding the Video (N=2)	44

CHAPTER ONE

INTRODUCTION

In today's world, people spend most of their time indoors. We live in an era that limits time spent outdoors. Because of this, the current generation is nicknamed "the Indoor Generation". A survey by YouGov in 2018 found that out of 16,000 participants, across North America and Europe, most people spent as little as 18% of their time outdoors (about 4 hours a day). Data shows that outdoor play for children is being replaced and distorted by television and the electronic media (NWF, 2013) and that Americans, on average, spend the majority of their time indoors. With the growth of technology, children are able to entertain themselves without needing to play outdoors. This trend is exacerbated by the fact that children also don't get to play outdoors much while at school (CDC, 2010). This is unfortunate as *"play is the highest expression of human development in childhood, for it alone is the free expression of what is in a child's soul"* (Froebel, 1826, trans 1912, pp. 50-512).

Play is a normal part of childhood, even during the school day. According to the National Association for the Education of Young Children (NAEYC), play is vital to a child's growth and development. They emphasize that children learn through play, that play helps reduce stress, and that outdoor play is very important. Outdoor environments help children gain different experiences and enhance children's growth in multiple domains (Louv, 2008).

As will be discussed below, children's time outdoors, while at school, is limited due to an increased focus on academics and the perceived importance of test scores. Due to these reasons, children are not spending enough time outdoors, including at recess while they are in school. Therefore, it is of utmost importance that administrators and principals are informed and educated about the importance of outdoor recess for a child's development. The purpose of this project is to create an informative video to educate elementary school principals about the importance and benefits of recess for children and help them consider ways to implement, increase, or improve recess time at their school. In sum, the hope is to convince elementary school administrators that *"teaching children about the natural world should be treated as one of the most important events in their lives."* -Thomas Berry

Time Spent by Modern Children Outdoors

In today's modern age, being outdoors isn't as popular as it used to be. A study by Klepeis, Nelson, Ott, Robinson, Tsang, Switzer, Behar, Hern, and Engelmann (2001) found that people spend 90% of their time in indoor settings. Over the last 20 years, American children, aged 6-17, have shown an increase in time spent indoors, including time spent in school and while studying (Juster, Ono, & Stafford, 2004). The United Kingdom National Trust found that children play outside for a little over four hours weekly, compared to the 8.2 hours weekly their parents spent outside as children (National, Trust, 2012).

Another study in the United Kingdom reviewed national time use surveys from 1975, 2000, and 2015. The results showed that, over the years, there was a decrease in outdoor time and an increase in a child's time indoors at home (Mullan, 2018). Types of activities engaged in by U.S. children aged 6-12 have also changed. Between the years 1997 and 2003 there was a decline in children's participation in sports and outdoor activities (Hofferth, 2009). The National Recreation and Parks Association (2017), identified that children are only playing in outdoor environments and engaging in unstructured play for an average of four to seven minutes a day, while most children are averaging about seven and a half hours of screen time a day. International trends show that many children indulge in sedentary activities although outdoor active play opportunities are also available (Biddle, Gorely, Pearson, & Bull, 2011).

To make matters worse, children don't get adequate time to play outdoors while they are in school settings. Children are missing out on being outdoors almost their entire day. The School Health Policies and Programs Study (SHPPS), reported data from 2000-2014 which showed that regularly scheduled recess decreased from 42.3 percent in 2000 to 26.2 percent in 2014 in classrooms that had regularly scheduled recess. The following literature review will discuss research pertaining to the importance of children being outside, reasons why children don't play outside, and what educators and schools can do to help resolve this issue.

The Importance of Outdoor Play

Children should spend more time outdoors. Being outdoors regularly is very important to promoting a child's health and wellbeing (Armitage, 2009). As explained by the National Wildlife Federation's (NWF) report, outdoor play gives children a plethora of benefits for their well-being. Children gain the chance to build healthy bodies (NWF, 2013). When children engage in outdoor play they are exposed to higher levels of Vitamin D, it helps strengthen their immune systems, and protects them from future heart and bone disease. Outdoor play helps lower children's stress levels, improve their mood, and enhance their social interactions among peers (NWF, 2013). In addition, outdoor play promotes a healthy immune system and a good metabolism (Kernan & Devine, 2010). In another report published by NWF, children who spend time outdoors are more alert during the day and have much better sleep at night (NWF, 2010). The American Academy of Pediatrics (AAP) asserts that outdoor play "can serve as a counterbalance to sedentary time and contribute to the recommended 60 minutes of moderate to vigorous activity per day." Overall, it appears that outdoor environments allow opportunities for children to learn, play, develop social competence, and problem solve (Greenfield, 2004).

The importance of the outdoors has been recognized theoretically in the fields of education and child development. Professor, psychologist, and theorist Howard Gardner is known for his popular theory of "multiple intelligences" that was published in 1983. This theory takes into account that there is more than

one type of intelligence or way in which children and adults view, understand, and learn about the world around them. In his original theory, he proposed that there were 7 different categories of intelligence. These intelligences include linguistic, logical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. In 1995, he proposed an 8th intelligence, which he named “naturalistic intelligence”. This intelligence highlighted that some people are born “nature smart” and have a connection with animals and the environment around them (Gardner, 2011). This theory highlights the importance of time spent in nature for children who are nature smart and may not be as likely to shine and display their particular brand of intelligence when forced to be inside all day. Other theorists have spoken to the importance of being outdoors more generally. For example, John Dewey, philosopher and educator, spoke of the importance of children being present in local environments, such as the outdoors (Louv, 2008). He believed that it is important to support connectedness between a child’s educational experiences and their environment and that children must take a hands-on approach with their environment. He asserted that when children engage with their environment first-hand, in the context of educational settings, this interaction would positively determine a child’s behavior and decision making in their future (Dewey, 1938). In particular, he believed that children needed to experience an untouched natural outdoor environment at home and at school that is accessible for them to play in. Maria Montessori, creator of the “Montessori Method”, which is a highly respected and successful child-based

education system, also advocated for children to play outdoors. She saw the potential in children learning while outdoors and that the outdoors automatically invigorated children's senses and helped them choose what they should work on based on their own interests (Crain, 2001). Her goal in education was to help allow the optimal development (intellectual, physical, emotional, and social) to unfold naturally within children (Montessori, 1912) and the outdoors constitutes a place when this type of development can easily occur. It is clear from reviewing the work of Gardner, Dewey, and Montessori that they saw value in children being outside and that outdoor experiences can enhance children's learning and development. This acknowledgement of the importance of time spent outdoors has been championed by Richard Louv, a current and prominent theorist and child advocate expert, who has written extensively about children's need to play outside.

Louv coined the term nature-deficit disorder (NDD) which refers to a condition in which children have "diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses" (p. 36). Louv states that the cure for NDD is simply to have children spend time outdoors (2008). Submergence into nature exposes children to natural elements such as water, air, and the earth itself, which humans evolved from (Louv, 2008). Therefore, Louv asserted that nature provides something that can't be experienced or learned through media and electronics, which is why children need more time outdoors. Louv's ideas have been broadly disseminated and

discussed in both scholarly works and the popular press. Journalist Danielle Cohen further explained that children who get a chance to play outside show signs of happiness, are more attentive, and are smarter than children who play indoors. These children gain confidence, learn responsibility, enjoy reduced stress and fatigue, and receive enhanced stimulation. Playing outdoors leads to children who are physically and mentally stronger, and more socially adjusted (Child Mind Institute, 2018). These theoretical ideas regarding the importance of play to children's development have been borne out through research and applied to children's development in various domains.

Creative Development

Outdoor play in nature is needed for the healthy development of children's creativity and learning (Louv, 2008). It has been found that when children have the opportunity to engage in outdoor play, they learn to question and challenge others as well as themselves and make connections between events and objects that can lead to experimenting with different options in a quest to see what is possible (Richardson, 2006). Children's play traditions, known as the rules in which children abide by on the playground, show artistry as well as creativity (Bishop & Curtis, 2001). Outdoor play experiences enhance opportunities for children to learn in creative ways.

A study in Australia examined whether the existence of nature could impact children's learning and play. Twelve children, at two different sites were observed for a 12-week period. The children were observed and then

interviewed about their play behavior. The conclusion was that natural outdoor environments did in fact support positive relationships between children and imaginative play (Dowdell, Gray, & Malone, 2011). Another study done by Kiewra and Veselack (2016) looked at children's creativity when in outdoors settings. In this study, children spent most of the day outdoors. They were provided with a multitude of materials and opportunities to learn through outdoor play. The teachers observed the children's learning and play through the documentation of "nature notes". The teachers served together on an analysis team and each "nature note" was sorted and analyzed. The data showed that outdoor play supported children's imagination and creativity through storytelling and creative problem solving.

Motor/Physical Development

Twenty to thirty-five percent of Northern American children are obese (Potwarka, Kaczynski, & Flack, 2008). The Centers for Disease Control and The American Academy of Pediatrics point out that every child should be participating in about 60 minutes of activity daily. Children need to be moving and physically active in order to stay healthy and fit. Only 36% of children achieve the recommended amount of physical activity within a day (Johnson, 2007). In the United States, childhood obesity has almost tripled since the 1970's (Fryar, Carroll, & Ogden, 2018). A helpful solution to this pandemic is outdoor play. Outdoor free play is directly associated with children engaging in higher levels of physical activity (Coleman, Geller, Rosenkranz, Dzewaltowski, 2008; Trost,

Rosenkranz, Dzewaltowski, 2008; Vanderloo, Tucker, Johnson, & Holmes, 2013).

Outdoor play benefits children not only in time spent in physical activity, but physical health, as well. A Norwegian study found a correlation between time spent in a natural environment and children's increased motor fitness. Children who played outdoors more often demonstrated increased coordination, balance, and being able to master their bodies (Fjortoft, 2001). Any kind or type of outdoor play helps prevent obesity and helps improve the learning and development of young children (Frost, 2010, p. 261). The outdoors provides full body play and gives children a chance to activate different senses through hands on experiences (Richardson, 2006). The National Association of Sport and Physical Education (NASPE) suggests that while at school children have a need to participate in outdoor activity that includes both physical education as well as recess (NASPE, 2006).

Cognitive Development

According to psychologist Jean Piaget, cognitive development occurs over a series of sequential stages (1936). Through these stages, a child gains more knowledge and can understand more complex information. As cognition grows, children become more rational and think more abstractly. As these abilities develop, children use much more of their brain capacity. Unfortunately, children today tend to be sedentary creatures who are unhealthy and not physically active, which can affect cognitive skills.

Previous research focused on cognition shows that the brain needs breaks in order to keep focused attention. Twelve research studies conducted between 2012-2017 were reviewed to examine if there was a correlation between green space and a child's overall health. This meta-analysis showed that giving access to green space improved cognitive development and mental well-being in children. Green space contributed positively to children's memory, attention, self-discipline, and stress moderation (McCormick, 2017). Eric Jensen (2005), author of "Teaching with the Brain in Mind" found that cognitive breaks are needed because the brain of a child is unable to support attention for multiple hours in a row and down time is needed to enhance retention of learned material. The implication of this assertion is that children need breaks throughout the school day. A study conducted in Switzerland used exercise breaks to see if it improved on-task behavior in children. The results indicated that children who took exercise breaks demonstrated greater on-task behavior than children who were given sedentary breaks (Howie, Beets, & Pate, 2014). A meta-analysis of 134 studies indicated that physical activity had a small positive effect size of 0.25 on children's cognitive performance (Etnier, Salazar, Landers, Petruzzello, Han, & Nowell, 1997). The results of these studies support the relationship between enhanced cognitive performance and time for recess during the school day.

Psychosocial Development

Outdoor play gives children a variety of possible social interactions. Children have opportunities to collaborate and use cooperative play with other

children outdoors (Richardson, 2006). The book *Play Today in the Primary School Playground: Life, Learning and Creativity*, by authors Julia Bishop and Mavis Curtis, asserts that playing outdoors contributes to the development of social skills when children create rules and share with one another within their play experiences (Bishop & Curtis, 2001). Similarly, the Encyclopedia of Early Childhood Development notes that outdoor spaces give children opportunities to be social and gain self-efficacy (2019). One study looked at micro social interaction and unstructured play between children while playing in outdoor environments. The results showed that children experience an increase in autonomy when engaging in social relationships outdoors (Waite, Rogers, & Evans, 2013). Children also feel more in control of their environment while outdoors due less teacher supervision which results in better social competencies (Waite, Rogers, & Evans, 2013). When outside, children benefit from both experiences that promote social relationships, as well as their own autonomy (Rivkin, 1998; Waite, Rogers, & Evans, 2013). Also, the physical risks that children gain while actively playing outdoors help children grow in self-confidence (Little & Wyver, 2008). Play experiences for children help cultivate the child's literacy experience with language in a social setting (Overstreet, 2018).

Recess Provides Play-Based Outdoor Opportunities

It is clear from the research described above that playing outside affords children many developmental benefits. One source of outdoor play for children in elementary school is recess. Recess is a necessary component of education and should be implemented in both the preschool and elementary school systems (The National Association of Early Childhood Specialists in State Departments of Education, 2001). Similarly, NASPE states that all elementary school aged children should be given at least one session of recess for at least 20 minutes every day (NASPE, 2006). However, in the United States, recess is not required in any state. Instead, many states have a “general physical activity requirement” that does not require recess (Shape of Nation, 2016). Joseph Lee, father of the playground movement, said that “it is the supreme seriousness of play that gives it its educational importance” which suggests that recess, which is more play-based in nature than physical education requirements, should be considered a separate entity from other physical activity programs offered to children while at school. In addition to time for recess, this period of the day should provide students with a sufficient amount of space, equipment, and supplies (CDC & SHAPE America, 2017).

Recess provides children with benefits that include increasing physical activity levels, improving social and emotional development, helping children stay on task while in the classroom, and even reducing disruptive behavior in the classroom (CDC & Shape America, 2017). Children need breaks from learning within the classroom and this is where recess fits in. Children who had more

time at recess enjoyed it and were more physically active (Johnson, 2007). A study looking at how recess can impact behavior found that fourth grade students acted less fidgety and tended to be on task within the classroom when they were given adequate recess time (Jarret, Maxwell, Dickerson, Hoge, Davies & Yetley, 1998). Another study showed that teachers tended to report the behaviors of children as much better when the children experienced 15 minutes of recess time per day (Barros, Silver, & Stein, 2009). This proved very beneficial for children to have experienced an outdoor break in between learning within the classroom. Tom Jambor (1994) found that children at recess have meaningful social experiences. They learn and are able to cope with their emotional trials and afflictions (Jambor, 1994). Children share the culture of recess, develop rules, and learn to make choices which are vital to their social development (Beresin, 1993; Bishop & Curtis, 2001). Due to the free time that is available during recess, children can freely interact with their peers. Recess is a time where a child's social behaviors, both anti and pro, and leadership skills can be seen (Hartle, Campbell, Becker, Harman, Kagel, & Tiballi, 1994). They gain empathy, emotional regulation, and get to practice sensing the perspectives of others (Pellegrini & Smith, 1998; Piaget, 1962). Children also have an increase in autonomy when engaging in social relationships (Hartle et al, 1994; Waite, Rogers, & Evans, 2013). They learn self-restraint, taking turns, sharing, and simply getting along (Glover, 1999). Recess gives children multiple opportunities to play and learn both about themselves and others. They gain valuable

opportunities for themselves to help aid in their overall development and it helps balance out their school day.

Recess is a critical necessity that is set aside specifically for children to gain cognitive, social, and physical benefits that cannot be obtained in a structured sit-down elementary classroom setting. The opportunity for children to take a break from structured indoor classroom learning is essential. The American Academy of Pediatrics stated in the journal *Pediatrics* in 2013, that children need downtime given the cognitive pressures and challenges of school. Mental breaks are essential for people of all ages. Experimental research on attention and memory showed that recall is improved in a learning setting when it is spaced out instead of bestowed all at once (Toppino, Kasserman, & Mracek, 1991). Recess is the best essential plan of action in increasing physical activity for children (Wood Johnson, 2007). In addition to the many developmental benefits of recess described above, recess is related to children's performance in school. Several studies have shown that students focused better on tasks given after recess and had better attention skills (Pellegrini & Davis, 1993; Pellegrini & Huberty, 1995; Jarrett, Maxwell, & Dickerson, 1998).

Pellegrini and Davis (1993) manipulated the time in which children spent outdoors during a school day. Results showed that children were less attentive inside the classroom on days where they did not receive outdoor time. In 1995, Pellegrini and Huberty conducted experiments to determine the effects of recess

timing on children's classroom behavior. After observing children's behaviors in the classroom, they found that children had better classroom behavior when given a longer recess. Jarrett, Maxwell, and Dickerson (1998) examined the effect of recess on students' classroom behavior. They tested behaviors by giving children recess only once a week. It was found that on recess days, children were more on task and less fidgety.

Unfortunately, despite the proven benefits of playtime outdoors and recess while at school, recess is not always considered to be an important part of children's time in school. In 2010, the CDC reported that fewer than half of schools in the United States found recess necessary enough to be offered. This is unfortunate, as recess is an ideal venue to reap the benefits of being outdoors. The American Academy of Pediatrics highlights that recess is "a necessary break in the day for optimizing a child's social, emotional, physical, and cognitive development." It is also a way to assure that children are receiving the recommended amount of physical activity daily, as within a school year, recess accounts and provides opportunities for almost half of a child's physical activity (Wood, 2007). Although research has demonstrated that children benefit from being outdoors in nature and participating in recess, many schools continue to cut or eliminate recess and reduce the amount of time that children are outdoors (Louv, 2008). This reality speaks to the importance of educating school personnel about the benefits of recess and outdoor play. Burris and Burris (2011) examined the relationship between educational policy, outdoor play time,

and educator's perceptions about the importance of outdoor play. The results indicated that school site communication between administrators and teachers was vital to planning good quality outdoor experiences needed for children.

Why are Children Spending So Much Time Inside?

As can be seen, modern children spend much of their time indoors, even while at school. It is normal for a child to not know what it is like to spend a lot of their time outdoors. The National Kids survey explored why children aren't spending a lot of time outdoors. The results found that children don't spend a lot of time outdoors due to other general interests. Children would rather listen to music, read, watch TV, and play video games indoors, than go outdoors (Larson, Greene, & Cordell, 2011). In addition to children's interest in indoor activities, there are other factors that contribute to why children are spending most of their time indoors. These factors include the rise of technology, societal fear of strangers and environmental dangers, and the obsession with higher test scores from K-12 school districts. As the purpose of this paper is to focus primarily on recess, the focus of this section will be on how increased interest in academics and test scores has reduced time spent outside by children when at school, as technology and concerns about safety primarily affect children's out of school time.

When examining children in the United States in comparison to children in other developed countries, children in the U.S. rank very low on academic

performance (Organization for Economic Co-operation and Development, 2010). In 2001, the No Child Left behind Act was passed and pushed for better test scores across 30,000 schools. This movement led to cutting recess time in the hope that children would be able to pay more attention within the classroom (Elkind, 2008; Louv, 2008). In order to re-direct the focus in school to mathematics and language arts, school districts reduced time for recess, music, art, physical education, and even lunch (McMurrer, 2008). Children are expected to go to school and learn for hours and hours without a break. The rationale behind this trend was to assure that test scores in the USA will become significantly higher. This desire is often tied to cutbacks of recess and most physical activity, including activities that are fun and meaningful for children (Wood Johnson, 2007). Since the implementation of the NCLB Act, American schools suffered a 28 percent decrease in recess, and a 35 percent decrease in physical education (Siedentop, 2009).

The introduction of national K-12 standards has served to further exacerbate the trend of reducing or eliminating recess created by NCLB. In 2009, the Common Core State Standards were created. They were created to ensure that there was a standard of proficiency across all school systems and help make sure that all children grow and succeed. As with NCLB, Common Core led to a rationalization that less time outdoors at recess would leave more time for productivity within the classroom (Louv, 2008; Sobel, 2016). This hope has not been borne out. Since the adoption of Common Core, according to the

National Assessment of Educational Progress (NAEP), no significant changes have been found for math or reading scores for 4th graders and 8th graders (2019). These results showed that both elementary and middle school students scored worse in reading than the previous two years. In addition, the most recent data from the program for International Student Assessment (PISA) (that measures the performance of 15-year old's in science, reading, and mathematics) shows that out of 73 countries, the U.S placed 18th in science, 15th in reading, and 37th in mathematics (2015).

Since the inception of NCLB, recess has been offered in varying degrees across the United States. The 2016 Shape of the Nation Report reported that only 16% of states actually require daily recess in elementary schools. As stated by FairTest.org, some schools throughout the nation eliminated recess altogether in order to focus more heavily on academics and raise test scores. For example, the Clark County School District in Nevada and the Bain School of Arts and Language in Kenosha, Wisconsin completely eliminated recess in order to focus more on the Common Core Standards. Thankfully, some states have re-instated recess time. In 2011, the Chicago Public Schools reintroduced daily recess in the 2012 school year. In 2015, Seattle Public schools and its teachers agreed that there would be a minimum of 30 minutes of daily recess time given to elementary school students.

When schools eliminate or reduce recess, to make more time for children to learn within the classroom, they are ignoring child development research and not benefitting children. Schools are mandating that time is focused on academics to increase test scores, but there is generally not a mandate guaranteeing children time outdoors even though there are organizations such as the CDC and APA who recommend outdoor time and show the benefits.

What Can Schools Do to Promote Children's Outside Time?

The school environment provides a potentially optimal place for children to participate in active play. While there is much that inhibits children's playtime outdoors and their access to recess, data related to our nation's physical health has encouraged conversation about children's need to engage in physical activity. Obesity and overweightness is an issue, especially for children. Childhood obesity rates have more than doubled within the span of the last 20 years (NWF, 2013). According to the National Environmental Education Foundation (NEEF), 18.5% of children (aged 2-19) are obese (2020). This represents over 13.7 million children. Obesity in children can lead to conditions such as cardiovascular disease, asthma, and diabetes (NEEF, 2020). While there is recognition that child health is important, standards and testing have limited recess and obesity has continued to grow in children. Although test scores are important, unhealthy children are also of great concern.

Unfortunately, recess receives very little funding compared to Physical Education classes and even after school programming (Wood Johnson, 2007). The Department of Education's 21st Century Bill and California's After School Education and Safety Program provide aid for after school programs to be funded at both school and center-based sites. The U.S. The Department of Education's Physical Program distributes close to 70 million every year in order to help physical education programs. Generally, these types of support are not available for recess. This is unfortunate as demonstrated by the Robert Wood Johnson Foundation, which was created in 1972 and focuses solely on health initiatives. In 2007 they surveyed 1,055 schools in order to help improve the amount of physical activity children engage in both during and after school. The findings showed that recess is the best opportunity for children to have physical activity even over Physical Education classes (P.E.) and after school programs. Thus, funding for recess is important to create a good environment that helps support children's active play.

Bringing recess back to schools necessitates creative solutions related to the provision of recess in the face of the limitations described above and funding difficulties. It also requires support from agencies that promote the welfare of children. The Child Nutritional and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Reauthorization Act (2004), advocated bringing recess and physical education opportunities back to the school setting. Schools receiving WIC funds had to adhere to the policies of providing children

with recess time. Another solution is not just to add back in or increase recess time, but to structure recess differently to maximize children's developmental outcomes.

Strides in the Right Direction

It is apparent that play and recess are important for children. In addition to working to bring recess back to schools and increase amount of time given to children to pursue this activity, there have also been attempts by schools to restructure recess time and use playground interventions to help increase physical activity (PA) during recess, so as to maximize the time that children do get to spend outside. Examples include implementing playground markings, activity zones, and teacher led activities. Studies across the world have shown that such efforts can lead to positive outcomes for children.

A study with British children showed that providing large equipment and adding playground markings on the playground increased PA levels in children (Ridgers, Stratton, Fairclough, & Twisk, 2007). A literature review found that simply providing portable play equipment, such as jump ropes and balls during recess positively encouraged children's activity levels (Ridgers, Salmon, Parrish, Stanley, & Okely, 2012). A study in France in 2013 showed that a small intervention to the playground itself increased physical activity levels in children. Playground markings were added to the black asphalt playground which had minimal trees and plants. The markings were color coded and separated by the

types of activity each zone was supposed to entice. After the invention was placed, the children's PA levels were much higher and their sedentary behavior was lowered (Blaes, Ridgers, Aucouturier, Praagh, Berthoin, & Baquet, 2013). The “markings” used in this intervention are not only a simple but relatively cheap way to increase physical activity during recess time. In 1996, the Schoolyard Habitats program was created to help create better outdoor environments on school campuses. This program helps add wildlife types of environments for children to spend time in. It is through this program that children acquire cross curricular learning through creation and restoration of their outdoor environments at school. These projects include meadows, wetlands, and forests, depending on the area. This program has over 5000 schools certified all over the United States.

One of the key issues with running successful recess periods is the lack of organizational help for educators on the playground. Since teachers and administrators usually are on their breaks during recess, there are very few adults available to help aid in the play and physical activity that occurs during the recess period. One of the biggest sources of support has come from the Playworks nonprofit organization. Formally known as Sports4kids, Playworks began in 1996 with a few educators teaming up with the intention of improving recess for children. They base their core value around play and the importance for children to be able to play during recess periods. This organization goes into the school and with a holistic approach helps schools rethink recess in three

major categories: Safety, Engagement, and Empowerment. They do this by giving professional development resources, consultative support, and even on-site staffing. So far Playworks has helped over 1,500,000 students and 2,500 schools nationwide. In 2019, Playworks conducted two surveys in schools engaging with Playworks; a classroom and playground survey. The classroom survey showed that 96% of staff saw more student engagement within the classroom, 93% of students were more focused within the classroom, and 81% of staff reported less disruptive behavior within the classroom. The playground survey results showed that 94% of staff reported that children were able to resolve conflicts on their own, there was 96% more cooperation among students, and the staff reported that there were 83% less disciplinary incidents occurring.

Another program called Peaceful Playgrounds started in 1995 and has dedicated itself to helping recess run smoothly for both the teachers and administration as well as the children. They believe in creating a safe play environment to support free play for children during recess. They help provide low-cost equipment and schools design a play space that gives children a chance to explore, while being safe and grounded. They also provide training and help for the school personnel so that they will be successful during recess time. The research behind Peaceful Playgrounds shows that their inventions have resulted in increased physical activity levels in children, decreased confrontations, and decreased injuries on the playground (2008).

The LiiNK Project is dedicated to improving the health of children while giving them unstructured outdoor recess and character education training. They implement teacher and administrator training (four 15 min outdoor play breaks and four 15 min positive character curriculum lessons regarding outdoor recess). They have successfully partnered with multiple school districts within the United States to help make recess better for children. This program has demonstrated improved health outcomes in children, increased creativity in the classroom, and higher expectation of ethical behaviors (2019).

According to the office of the United Nations High Commissioner for Human Rights, play is a right of all children (2002). Children should have the right to play and engage in play with the help of the school personnel. As the research shows, recess is very important to a child's development and overall well-being. However, children need to be provided with much more than a time slot of outdoor play within their school day. In order to make recess effective, there needs to be training of administration and staff who are watching the children during recess. There also needs to be a pleasant and inviting environment that children can utilize while at recess. If children aren't given any equipment and there is no green space during recess, children won't engage. The programs discussed above have found great outcomes by supporting the way in which recess is implemented. Children were found to be more physically active with improved overall health. Children also had fewer behavioral outbursts and issues while inside the classroom during the day. They were found to be

more creative and even have fewer confrontations while at recess. If all schools were able to help make recess better and more effective, there would be a better chance of all children gaining the benefits that recess and outdoor time can provide.

What Still Needs to be Done

Although there have been strides towards bringing recess back and thinking about how it can be structured more effectively, there has been little work to date focusing on administrators. Although it is important to include teachers in making recess a better and more productive time, it is important to have buy in at the administrative level. If principals were given all of this information, there could potentially be big change. They should know the benefits of recess to children's well-being. Principals and administrators should be aware of the research about the importance of recess and make policy decisions based on this knowledge at their school sites or encourage their districts to rethink recess time more broadly.

This is particularly important as principals have reported recess being a very stressful period during the day due to the lack of help and supportive adults to help recess run accordingly (Wood Johnson, 2007). Given this, it is important to work with administrators to think about how they can provide training and adequate supervision for recess periods at their school sites. The National Association of Elementary School Principals believe that principals can

encourage and maintain supervised free play for the children during the school day. Principals play one of the biggest roles in the implementation of a school and how it is run. They have the power to voice change and contact higher administrators in order to make pertinent and important changes.

In sum, everyone should come together to help get children back outdoors. All advocates should be aware of how important outdoor time and recess can be for children's overall development. Daily recess should be recommended and implemented as policy within the school setting. There should be recess-type games and good equipment available on the playground. There is an overwhelming amount of research supporting recess time for children. This research supports the notion that recess and outdoor time lead to positive developmental outcomes for children, including behavioral changes, social and emotional competence, physical health, and academic success. Supporting more and better recess for children is crucial and definitely worth pursuing. If we can all invest in recess and make it a fun, healthy, and safe aspect of each child's school day, we can set children up for success not only in school, but in life. If money and resources were given and available, schools nationwide would be able to see the benefits recess can bring to children both within and outside of the classroom.

Summary and Purpose of Project

There is plenty of research that shows how beneficial recess can be for children. Spending time outdoors aids children's development all around. Children also do better in school when given breaks such as recess. After reviewing the research, there is a missing gap of targeting the administration to make change to improve recess. Principals play a critical role improving the school system and it is important that they have access to this research.

Therefore, the purpose of this project is to share information with elementary school principals about the benefits of recess and why it is so vital to a child's health and well-being through an approach that stimulates both deliberation and reflection. The three expected results from this project include: 1) participants gaining knowledge about the importance of recess on well-being and health, 2) participants considering how to extend their role as an advocate for recess and make strides towards improving recess at their schools, and 3) participants understanding the barriers they may encounter and learning how to resolve these barriers.

CHAPTER TWO

METHODS

Overview

The purpose of this project was to increase elementary school principals' knowledge about the importance of young children having recess and to provide them with strategies to implement, increase, and improve recess time. Participants took a brief initial questionnaire that asked them to comment on their perceptions of the importance of recess and how recess is conducted at their school and completed a demographic form. The participants then watched a video titled "*Recess: An Important Part of a Child's Daily Life*" and completed a follow up questionnaire that asked participants to re-visit items on the initial questionnaire along with questions designed to evaluate the effectiveness of the video watched.

Participants

A total of four elementary school participated in this project. Their ages ranged from 48-57 years; all four of the participants were Caucasian. All four of the principals had their master's degree, while one participant additionally had completed some post graduate doctoral work. All four of the principals reported working with school aged children, while one of the principals had additional experience working with infants and toddlers. Their experience as elementary school principals ranged from 2 to 16 years (see Table 1).

Table 1. Demographic Information

	Principal 1	Principal 2	Principal 3	Principal 4
Sex	Female	Female	Female	Male
Age	48	57	51	55
Educational Background	Master's degree	Master's degree	Master's degree	Some Post Graduate study
Ages of children worked with	Infants and Toddlers School age children	School age children	School age children	School age children
Length of time working with children	23	32	29	25
Years served as an Elementary school Principal	16	2	3	14

Project Materials

Initial-Questionnaire

Participants completed an author-created pre-questionnaire before watching the video to assess their perceptions of the importance of outdoor play and recess, as well as questions that inquired about how recess is conducted at their school. (Appendix A).

Post-Questionnaire

The participants responded to an author-created post-questionnaire after watching the video. These questions were related to recess and aimed to see if participants changed in their way of thinking towards the importance that recess

holds for children, the benefits it provides children with, and if they plan on implementing any new adjustments at their school based on the information that was provided in the video. The participants were also asked to answer a few questions regarding the quality of the video and if it was at all helpful to them. (Appendix B).

Demographic Information

Participants were asked to provide demographic information regarding their age, gender, educational background, ethnicity, how long they have worked with children, and how long they have worked as an elementary school principal. (Appendix C).

Video

An author-created video was emailed to the participants and contained information about why children don't play outdoors anymore, how being outdoors helps children in many ways, and why recess is vital to a child's overall development. The video also included recess improvement programs and how the participants could help to improve recess and make a difference within their job. The video was based on literature that shows that over the last 20 years children are increasing spending more time in indoor settings (Klepeis, Nelson, Ott, Robinson, Tsang, Switzer, Behar, Hern, and Engelmann, 2001) and that children don't spend time outdoors while in a school setting either. According to the CDC, fewer than half of the schools in the United States found recess to be necessary (2001). The contents of the video were also based on research

demonstrating the importance of outdoor play and recess to children's development and programs that have been shown to be efficacious in promoting children's outdoor play while at recess. Being outdoors regularly is important for a child's health and wellbeing (Armitage, 2009) and recess is essential to increasing physical activity for children (Wood Johnson, 2007). Successful programs include the Schoolyard Habitats, Playworks, Peaceful Playground, and the LiiNK Project. These programs focus on the importance of recess, the recess environment, and the training of school staff. (Appendix D).

Procedure

Participants were recruited via email and were chosen based on their job title as elementary school principals. Emails were obtained by searching district websites for principal contact information. A total of 51 principals received an initial email. Principals from the school system were emailed. They were asked if they would be willing to participate in completing two short questionnaires and watching a video discussing the importance of recess for young children. Out of the 51 principals contacted, 7 agreed to participate. Of the 7 that agreed to participate via email, only 4 principals participated. Participants who agreed were sent a link that included the demographic form and initial questionnaire. This link directed principals to the Qualtrics website (Qualtrics.com) where the surveys were housed. The participants were given a week to complete the initial questionnaire.

After a week, and once participants had completed the demographic form and the initial questionnaire, the participants were emailed a link to watch the video "*Recess: An Important Part of a Child's Daily Life*" as well as a link to the post questionnaire. The video link directed the principals to the site YouTube (youtube.com). The post questionnaire link sent the principals back to the Qualtrics website. The principals were asked to complete the tasks of watching the video and answering the post questionnaire within 5 days. Upon agreement the participants were issued an ethics statement noting that all participants would be treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2017).

CHAPTER THREE

RESULTS

Initial Questionnaire Evaluation

To learn more about recess time at each school, participants were asked questions on the initial questionnaire regarding what happens during recess at their individual schools. First, four questions were asked to determine level of staff engagement during recess. Answers indicated that staff only participated in moderate engagement, planning, and evaluation with children during recess time. (See Table 2).

Table 2. Means of Principals knowledge of Staff Engagement during Recess (1=Not at all; 5=Very Much)

19. How often do your staff engage with children in grades K-3 in play during recess?	2.5
20. How often do your staff engage with children in grades 4-6 in play during recess?	2.25
21. How often does your staff work to make recess a better experience for children?	2.5
22. How often do your staff evaluate children during recess?	2.25

Next, principals were asked if they had experienced barriers in trying to provide for or implement children's outdoor recess time. All of the principals answered "no" to this question, indicating that their school's moderate engagement in children's recess time was not due to barriers related to

implementation. As can be seen in Tables 3 and 4, recess time varied greatly across the schools surveyed, with one school noting that recess lasted only 15 minutes in both the upper and lower grades, while two other schools provided 45 minutes at both grade levels for recess time.

Table 3. What's the average length (in time) of recess for grades K-3 at your school? (N=4)

P1	15 minutes
P2	45 min
P3	20 minutes
P4	45 min

Table 4. What's the average length (in time) of recess for grades 4-6 at your school? (N=4)

P1	15 minutes
P2	45 min
P3	20 minutes
P4	45 min

Finally, principals indicated that most of the recess time offered at their schools was unstructured (see Table 5) and that due to Covid-19, recess would likely look different, at least for the near future, according to the three principals who answered (see Table 6).

Table 5. Does your school offer unstructured recess, structured recess, or both? If so, how much time of each? (N=4)

P1	No, it's generally free-time for students under the supervision of staff.
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P2	Playground games have been taught, but recess is unstructured and students have the choice for play the taught games or not. 45 min of unstructured
P3	Both 90% unstructured, 10% structured
P4	Games are encouraged, but most unstructured play. All of it.

Table 6. Due to the recent impact of Coronavirus-19, recess may look far different than before when schools are reopened. How do you think recess will be different? (N=3)

P1	Smaller groups on the playground at a given time, limited equipment, social distancing as much as possible.
P3	Few children on the playground at one time.
P4	Recess will be needed more than ever

Initial and Post Questionnaires

To determine whether the video had the effect of increasing participant's perceptions of the importance of outdoor play and recess, initial and posttest means were compared. It is important to note, when comparing these means, that principals scored high on all items prior to watching the video. This shows that the principals who participated in this project had a good understanding of the importance of outdoor play and recess to children's development. Therefore, generally there wasn't a noticeable improvement in scores after watching the video. That said, there were four items wherein scores showed a small

improvement (4.25 to 5.0) between the initial and post-questionnaires. The first question was “Is it important for administrators to act as an advocate for children’s outdoor recess?” After watching the video, principals showed a new understanding of importance for administrators to be aware of the importance of recess. The second question was “Do children learn while outdoors?” The change in mean score showed that after watching the video, the principals did in fact gain knowledge about how much children do actually learn while playing outdoors. The third question was “Is it important for you (the principal) to be involved in implementing a good outdoor recess environment?” This is the most important changed measured. One of the purposes of this project was for the principals to consider how to extend their role as an advocate for children’s recess and to make strides towards improving it. The last question was “Is it important for all school staff to understand how beneficial recess is for children?” This result showed that the principals were able to understand not only the importance of themselves becoming an advocate for recess, but that they had learned and understood the importance of all staff having knowledge and working together to improve recess. (See Table 7).

Table 7. Initial and Post Questionnaire Means for Principals’ Knowledge of importance of Outdoor Play and Recess (1=Not at all; 3=Somewhat; 5=Very Much)

	Initial Questionnaire (N=4)	Post Questionnaire (N=4)
1. Does outdoor recess aid in the development of the whole child in grades K-3?	5	5

2. Does outdoor recess aid in the development of the whole child in grades 4-6?	4.75	5
3. Do mental breaks throughout the school day benefit children in grades K-3?	5	5
4. Do mental breaks throughout the school day benefit children in grades 4-6?	5	5
5. Are there social-emotional consequences for children when they don't spend enough time in outdoor environments?	4.5	5
6. Are there cognitive-language consequences for children when they don't spend enough time in outdoor environments?	4.5	5
7. Are there physical consequences for children when they don't spend enough time in outdoor environments?	4.75	5
8. Is it important for administrators to act as an advocate for children's outdoor recess?	4.25	5
13. Is it important to provide outdoor recess during the school day to children in grades K-3?	5	5
14. Is it important to provide outdoor recess during the school day to children in grades 4-6?	4.75	5

15. Do children learn while outdoors?	4.25	5
16. Is it important for children to spend time in outdoor environments outside of school?	4.75	5
17. Is it important for you (the principal) to be involved in implementing a good outdoor recess environment?	4.25	5
18. Is it important for all school staff to understand how beneficial recess is for children?	4.25	5

Next, to determine whether the video had an effect on participant's understanding of the role of academics and testing in school, initial and post questionnaire means were compared. Responses demonstrated that watching the video did not have an effect on participant's opinions about the importance of standardized testing, but that participant's did change their opinion about the importance of academic achievement and grades. Both items related to this issue showed that participants rated academics and grades as less important after watching the video. (See Table 8).

Table 8. Initial and Post Questionnaire Means for Principals' Knowledge of importance of Academics and Testing in school (1=Not at all; 3=Somewhat; 5=Very Much)

	Initial Questionnaire (N=4)	Post Questionnaire (N=4)
9. Is standardized achievement test taking	3.25	3.25

important for children in grades K-3?		
10. Is standardized achievement test taking important for children in grades 4-6?	3.5	3.5
11. Are academics and grades in school important for children in grades K-3?	4.75	2.5
12. Are academics and grades in school important for children in grades 4-6?	4.75	2.25

Post Questionnaire Evaluation

The post questionnaire evaluation showed that the principals found the video to be a helpful and positive experience. Although participating principals already understood the importance of outdoor play and recess to children's development prior to watching the video, the comments made by the principals showed that they gained knowledge about the importance of administrator promotion of recess and working actively to implement better recess for children at their schools. That said, although principals indicated that the video was useful (M = 4.75), they stated that they were only somewhat likely to use information from this video to help enhance the outdoor recess experience at their school (M = 3.75). With regard to navigating barriers to recess provision, three out of the four principals stated that they have a better understanding of how to navigate barriers to providing recess for children. When asked how they will navigate any

barriers they might encounter, one principal stated that she they would prioritize recess and another stated “Though not specific to our school, your example of seeing students on their phones at recess remind me of how school policies can support healthy practices (such as the possibility of phones at recess just like no phones in class).”

When asked if they were going to make strides towards improving recess at their schools all four of the principals answered “yes’. The principals were then asked how they were going to make strides towards improving recess at their schools. The comments all show that the principals are aiming in a positive direction to improving recess. (See Table 9).

Table 9. If yes, how: (N=4)

P1	We implement the program Peaceful Playground on our campus
P2	Purchase equipment and provide training
P3	We will be using the outside agencies and their resources to identify strategies for maintaining the fun of recess during the pandemic.
P4	Try my best to do as much as I can to help improve recess. I will also have discussions to help facilitate ideas among my staff

Finally, the post questionnaire evaluation asked participants to provide open ended feedback about the video itself; what they found most helpful about the video, least helpful about the video, and what might be added to the video. Only two of the four principals answered these questions. (See Table 10).

Table 10. Open ended feedback regarding the Video (N=2)

<p>What did you find the most helpful about the video? (N=2)</p>	<p>P1: research</p>	<p>P3: I appreciated the perspective of how our environment and national initiatives impacted time outdoors. This creates hope that we can share our value for physical activity and the SEL recess provides, and elect to bring that back to our students. I also appreciated the mention of organizations that might support practices and training for schools.</p>
<p>What did you find least useful about the video? (N=2)</p>	<p>P1: Length</p>	<p>P3: All areas were useful. Where you raise a point you won't go into fully, you might offer resources for those who need more explanation.</p>
<p>What would you like to see added to the video? (N=2)</p>	<p>P1: N/A</p>	<p>P3: Perhaps you could provide direct links to the research and specifically the adjacent research on Social Emotional Skills.</p>

CHAPTER FOUR

DISCUSSION

The purpose of this project was to help inform elementary school principals about the benefits and importance of outdoor recess for children during school. Due to the lack of outdoor play that children experience in this era and the recent pandemic, a video was created in order to help provide knowledge and information about recess. Overall, the four principals who watched the video indicated that they understood the importance of outdoor play and recess to children's healthy growth and development prior to watching the video, but increased their knowledge regarding their role as an advocate for recess. This was shown through both Likert-scale items, as well as through open-ended comments, where participants showed that they will be aiming to serve as an advocate for recess and implement changes to recess at their elementary schools.

Initial and Post Questionnaires

There were three expected results from this project. First was that the participants would gain knowledge about the importance of recess on children's well-being and health. Results indicated that the participant's knowledge of the importance of outdoor recess to development did not increase as a result of this project. This was due to the fact that the principals who participated in this

project already understood that outdoor environments help children gain different experiences and enhance growth in multiple domains. That principals who participated in this project had knowledge about the necessity of outdoor play to children's development speaks to the fact that, in recent years, links between children's development and time spent outdoors has received positive attention; increasing knowledge among educators and laypersons. A study in Georgia revealed that interviewed principals said that they perceived recess in a positive manner, found it very beneficial for its students, and found it to be essential for children to have within an educational experience (Morrison, 2006). However, principals did seem to gain at least some knowledge about the role of outdoor play in children's learning and the importance of educators taking an active role in providing outdoor learning experiences, such as during recess time. This suggests that although principals do understand the importance of outdoor play in general, that they may need additional information about how outdoor play can provide a complement to information that children are learning in the classroom. These results also suggest that it is of primary importance to help principals understand the role that they play in bringing the benefits of recess to fruition, particularly if they are unclear about the role that they play. This is in accordance with the finding that school site communication between administrators and teachers is vital in planning good quality outdoor experiences for children (Burriss & Burriss, 2011) and that recess provides a necessary break in the day to help optimize a child's behavior while in class (Barros, Silver, & Stein, 2009).

An interesting finding in this study is that although principals did seem to understand the importance of outdoor play prior to watching the video, they appeared to gain new information about the importance of academics and grades to children's development. When comparing the initial and post questionnaire means from the two questions related to this topic (i.e., "Are academics and grades in school important for children in grades K-3?" and "Are academics and grades in school important for children in grades 4-6?") there was an interesting finding. The principals ranked these issues as less important after watching the video. This change in pre- and post-test scores indicates that grades/academics were less important to the participants after watching the video. This was not expected and shows that perhaps the principals knew less about the importance of outdoor play and recess than initially thought. As we know, since the introduction of No Child Left Behind and the Common Core Standards, grades and academics have become very important in a school setting and recess often takes a back seat (Elkind, 2008; Louv, 2008; Sobel, 2016). Movements such as these drive schools to make sure that students are working hard and succeeding and places primary importance on grades, test scores, and academics. Even if principals believe in the importance of play, they exist in a school culture that has been created over time and touts test scores and grades. The culture of a school is a distinct one. A school culture is created by those who are directly apart of it. It is constantly changing and includes teacher, parents, students, administrators, and the community itself. It is defined as "traditions and rituals that have been

built up over time as teachers, students, parents, and administrators work together and deal with crises and accomplishments” (p. 4) (Deal & Peterson, 1999). An example of school culture, as noted above, is the emphasis that the K-12 system places on academic instruction (Cooney, 1994). This suggests that even if principals believe in the importance of recess and outdoor activity that the school culture may shape what they think, feel, do, and believe and lead administrators to place an undue emphasis on academics and grades (Lieberman, 1990) (Deal & Peterson, 2009). The results of this project are exciting in that they demonstrate that even a short video may be enough to create a cultural shift with regard to feelings about the importance of academics over recess.

Second, it was expected that the participants would reevaluate their role as an advocate for recess and make strides towards improving recess at their schools after watching the video. When principals were asked if they were going to make strides towards improving recess at their schools, all four of the principals answered “yes’. The results indicated that after watching the video not only were the principals planning on extending their role, but that they all had a plan on how they would take on this role as an advocate for recess by making improvements to their schools. As noted in the literature review, to date, recess intervention programs have not targeted administrators and helped them to understand the role that they play in increasing and improving recess time. This project provided a missing piece and helped to spread awareness about the

importance of recess by targeting the administration. The results of the post-questionnaire shows that the participants now understand and are aware of how beneficial recess can be for the children's well-being, and that they plan to use this information to make changes at their school and educate others about this importance. This was a main goal of this project, to encourage principals to advocate for recess.

The third expected result was that the participants would better understand barriers they may encounter and how to resolve these barriers. The results showed that when the participants were asked in the initial questionnaire if they have experienced barriers in trying to provide for or implement children's recess time, all of the principals answered "no". The principals who participated in this project may have answered no to this question because they believed that they have not encountered barriers, but perhaps they didn't have a good understanding of what types of barriers exist in relation to providing adequate, engaging recess time for children. They may have also answered no because there aren't absolute barriers to the provision of recess at their schools, just more information needed about what makes a good recess session. This is evidenced by the fact that, after watching the video, and learning more about ways in which to improve recess time, all of the principals who participated provided ways in which they good improve recess at their schools. As stated in the literature view, there is a lack of research that shows that school administration is not only knowledgeable but make any strides in the favor of recess for children. This

change could be also slowed by due to the emphasis on academic curriculum within schools. If more administration were aware, big changes could potentially be made.

Limitations

After taking the initial questionnaire, and watching the video, the principals were asked to take a post questionnaire. Overall, from the feedback given, the principals found the video to be useful and commented positively on the video itself. Two of the principals commented that they found the research, and the perspective of how our environment and national initiatives have impacted outdoor time, to be useful.

Although the video served its purpose to educate and highlight the importance of outdoor recess for children, there were some limitations. The first is the lack of principals who participated. Due to the recent pandemic and the closure of schools, principals were sent home and unable to go to work. This made it hard to get into contact with them via visiting in person or even calling them on the phone. The only way to communicate with them and ask for their participation was through emailing them and hoping for a response. Additionally, since the principals were working from home, due to the pandemic, it was hard to assure that all of the participants that agreed to participate would. Since the only form of communication was through email, there was no other way to contact and remind them to participate. Out of the seven principles that agreed to participate,

only 4 of them responded via email and participated by taking the questionnaires and watching the video. Having such a low number of participants makes the findings of the initial and post questionnaires tenuous. Adding some type of incentive or reward for participation may have increased participation.

Another limitation was the population of principals themselves. Their experience working with children was very high for each of the four principals. The information provided in the video may have been more relevant and novel to a more diverse set of participant principals, particularly those with less experience working with children. Chances are that the participants, given their many years of experience, knew much of the information presented and had already thought about how their position sets the tone for all aspects of practice at their school.

Another possible limitation is related to the project findings. Upon examination of the survey responses, there are potential concerns with the wording provided for two of the questions on the post questionnaire. The questions were as followed:

“What’s the average length (in time) of recess for grades K-3 at your school?”

and “What’s the average length (in time) of recess for grades 4-

6 at your school?” Answers ranged from 15 to 45 minutes. The answers given, suggest that some of the principals may have provided the amount of time given at their school for one single recess period, while others may have given the total

amount of time children receive for recess across a single day. Participant's answers to this question (both the variability and the large amount of recess time given by some) suggest that the principals who participated may not have fully understood what was being asked.

Another limitation was the use of a video, rather than Zoom or in-person sessions. Having face to face contact, even virtually, may have been a better way to give knowledge about outdoor recess to the participants. In the future, other forms of presentation may be used instead of a video platform. Although the video was an expedient vehicle with which to disseminate information, the use of a video was limited in that it was not a face to face session that may have facilitated the exchange of ideas and discussion. To rectify these issues other presentation venues could include on site meetings with multiple principals with a presentation of some type, an active group session where principals provide opinions and ideas shared with the facilitator and amongst themselves, or even a video shot with the examples of principals and recess. Principals also commented that the video needed links to be able to see helpful sites or even programs that could help them implement changes at their school. This would be much more helpful in order to see active change resonate.

Future Directions

In the future, a larger participant group would be helpful in truly examining the knowledge of this group and the usefulness of providing this type of

information. To have a participation group of at least 15 principals from different physical locations would be ideal. It would also be helpful to see variation within the population of principals chosen. Bringing in principals from multiple school districts that aren't so close together would provide some diversity. Also, in an environment where we are not in a national pandemic, it would be great to have a collaborative meeting between all of the principals in order to stimulate discussion on what could be done to help facilitate recess for young children. The principals could discuss examples of what happens at their school and work together to form an action plan to make recess a better experience for children. This video could be shown to other school administration and even teachers to help spread the knowledge of how important recess is. The video could be screened for the entire staff at an elementary school. Another idea is that this video could be shown to the parents of the children. If parents were to watch the video and become an advocate for their children's recess, they could potentially spark a movement to making changes not only on the school scale, but possibly on a county or even state level. Finally, the methods used in this project could constitute the basis of a pilot project to learn more about this important topic. With the lack of research involving administrators, additional research targeting school administration to learn more about their understanding of play, recess, and academics could prove fruitful.

Conclusion

The purpose of this project was to help elementary school principals gain knowledge of how important outdoor recess is for children and their well-being, as well as present them with ways to become an advocate to invoke change for recess at their schools. The goal was to create a video that highlighted facts and interesting information that the principals may not have known about recess. Although the principals did show that they had a good amount of knowledge of the importance of recess, the video was helpful, as the scores from the initial and post questionnaires did show that principals did increase their knowledge about the importance of recess to learning and how important their role is in promoting recess at their school sites. This was evidenced, in part, by the fact that the principals commented that the video was helpful and that they were going to make a change at their school involving outdoor recess. The need for other projects like this is imperative to help recess become more importance and give knowledge to school faculty that may not know of its importance. This project gave information and knowledge to elementary school principals that may lead to positive change when it comes to recess.

APPENDIX A
INITIAL QUESTIONNAIRE

Initial Questionnaire

For the following questions, please answer using the 5 point scales provided.

1. Does outdoor recess aid in the development of the whole child in grades K-3?
1) Not at all 2 3) Somewhat 4 5)
Very much
2. Does outdoor recess aid in the development of the whole child in grades 4-6?
1) Not at all 2 3) Somewhat 4 5)
Very much
3. Do mental breaks throughout the school day benefit children in grades K-3?
1) Not at all 2 3) Somewhat 4 5)
Very much
4. Do mental breaks throughout the school day benefit children in grades 4-6?
1) Not at all 2 3) Somewhat 4 5)
Very much
5. Are there social-emotional consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
6. Are there cognitive-language consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
7. Are there physical consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
8. Is it important for administrators to act as an advocate for children's outdoor recess?
1) Not at all 2 3) Somewhat 4 5)
Very much

9. Is standardized achievement test taking important for children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
10. Is standardized achievement test taking important for children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
11. Are academics and grades in school important for children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
12. Are academics and grades in school important for children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
13. Is it important to provide outdoor recess during the school day to children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
14. Is it important to provide outdoor recess during the school day to children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
15. Do children learn while outdoors?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
16. Is it important for children to spend time in outdoor environments outside of school?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
17. Is it important for you (the principal) to be involved in implementing a good outdoor recess environment?
 1) Not at all 2 3) Somewhat 4 5)
 Very much

18. Is it important for all school staff to understand how beneficial recess is for children?

- 1) Not at all 2 3) Somewhat 4 5)
Very much

For the following questions, please indicate how likely your staff are to do the following at your Elementary school.

19. How often do your staff engage with children in grades K-3 in play during recess?

- 1) Not at all 2 3) Somewhat 4 5)
Very much

20. How often do your staff engage with children in grades 4-6 in play during recess?

- 1) Not at all 2 3) Somewhat 4 5)
Very much

21. How often does your staff work to make recess a better experience for children?

- 1) Not at all 2 3) Somewhat 4 5)
Very much

22. How often do your staff evaluate children during recess?

- 1) Never 2 3) Often 4 5)
Consistently

23. Have you experienced barriers in trying to provide for or implement children's outdoor recess time?

- Yes No

24. If you answered yes to question 19, what barriers have you experienced?

25. What's the average length of recess for grades K-3 at your school?

26. What's the average length of recess for grades 4-6 at your school?

Structured recess is when activities or games are intentionally planned out and directed by an adult during recess. Unstructured recess is when play is child initiated without any formal guidelines.

27. Does your school offer unstructured recess, structured recess, or both? If so, how much time of each?

Due to the recent impact of COVID, recess may look far different than before when schools are reopened.

28. How do you think recess will be different?

If you have any questions/concerns I would gladly address them in the video I will be sending you in a week.

Developed by Kayla Villanueva

APPENDIX B
POST QUESTIONNAIRE

Post Questionnaire

For the following questions, please answer using the 5 point scales provided.

1. Does outdoor recess aid in the development of the whole child in grades K-3?
1) Not at all 2 3) Somewhat 4 5)
Very much
2. Does outdoor recess aid in the development of the whole child in grades 4-6?
1) Not at all 2 3) Somewhat 4 5)
Very much
3. Do mental breaks throughout the school day benefit children in grades K-3?
1) Not at all 2 3) Somewhat 4 5)
Very much
4. Do mental breaks throughout the school day benefit children in grades 4-6?
1) Not at all 2 3) Somewhat 4 5)
Very much
5. Are there social-emotional consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
6. Are there cognitive-language consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
7. Are there physical consequences for children when they don't spend enough time in outdoor environments?
1) Not at all 2 3) Somewhat 4 5)
Very much
8. Is it important for administrators to act as an advocate for children's outdoor recess?
1) Not at all 2 3) Somewhat 4 5)
Very much

9. Is standardized achievement test taking important for children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
10. Is standardized achievement test taking important for children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
11. Are academics and grades in school important for children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
12. Are academics and grades in school important for children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
13. Is it important to provide outdoor recess during the school day to children in grades K-3?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
14. Is it important to provide outdoor recess during the school day to children in grades 4-6?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
15. Do children learn while outdoors?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
16. Is it important for children to spend time in outdoor environments outside of school?
 1) Not at all 2 3) Somewhat 4 5)
 Very much
17. Is it important for you (the principal) to be involved in implementing a good outdoor recess environment?
 1) Not at all 2 3) Somewhat 4 5)
 Very much

18. Is it important for all school staff to understand how beneficial recess is for children?

1) Not at all 2 3) Somewhat 4 5)
Very much

19. How useful did you find the video?

1) Not at all 2 3) Somewhat 4 5)
Very much

20. What did you find the most helpful about the video?

21. What did you find least useful about the video?

22. What would you like to see added to the video?

23. To what extent will you use the information from this video to help enhance the outdoor recess experience at your school?

1) Not at all 2 3) Somewhat 4 5)
Very much

24. Do you have a better understanding of the importance of outdoor recess is for children? (yes or no)

Yes
 No

25. Do you have a better understanding of how to navigate barriers to providing recess for children?

Yes
 No

26. If yes to #7, how will you navigate barriers?

27. Will you (as principal) make strides towards improving recess at your school?

Yes No

28. If yes to #9, how: _____

Developed by Kayla Villanueva

APPENDIX C
DEMOGRAPHIC INFORMATION

Background Information (Demographics)

1. Age _____
2. Sex: _____ female _____ male _____ other
3. Ethnicity: ___Asian ___Hispanic ___Caucasian ___ African American
___Pacific Islander ___Middle Eastern ___Bi-racial
Other: _____
4. Level of Education (select one)
 - Some high school
 - High School Diploma
 - Some college
 - Associate's Degree
 - Bachelor's Degree
 - Some Graduate Studies
 - Master's Degree
 - Some post-graduate studies
 - PhD
5. How long (months/years) have you worked with children?

6. What age groups of children have you worked with?
 - A. Infants and toddlers
 - B. Preschoolers
 - C. School age children
 - D. Middle school age children
 - E. High school age children
7. How many years have you served as an Elementary School Principal?

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APPENDIX D

“RECESS: AN IMPORTANT PART OF A CHILD’S DAILY LIFE” VIDEO SCRIPT

Recess: An Important Part of a Child's Daily Life

By: Kayla Villanueva

The purpose of this video is to share information about the importance of outdoor play, reasons why children do not play outdoors, and how schools can work to increase children's access to this vital developmental resource.

How Do Children Spend Their Time?

Children spend their time **indoors**.

- A study by Klepeis, Nelson, Ott, Robinson, Tsang, Switzer, Behar, Hern, and Engelmann (2001) found that people spend 90% of their time in indoor settings.
- Over the last 20 years, American children, aged 6-17, have shown an increase in time spent indoors (Juster, Ono, & Stafford, 2004).
- According to the National Recreation and Parks Association, children are only playing in outdoor environments and engaging in unstructured play for an average of four to seven minutes a day, while most children are averaging about seven and a half hours of screen time on electronic media a day.

Why are children spending all of their time indoors?

Three main factors are:

1. Technology
2. Test scores
3. Environmental dangers and parental concerns

Did You Know?

- The AAP recommends no more than 1-2 hours of screen time for a child a day.
- However, the average child spends up to 8 hours occupied by technology (Sobel, 2016).

Technology

- Social media, television, the internet, video games, and cell phones now play a vital role in how children learn and behave.
- Youth between the ages of 8 and 18 spend about seven hours and thirty-eight minutes a day using technology (Rideout, Foehr, & Roberts, 2010).
- Outdoor learning experiences ARE being replaced and children are learning indirectly through machines

Test Scores

- When examining children in the United States, in comparison to children in other developed countries, U.S. children rank very low on academic performance (Organization for Economic Co-operation and Development, 2010).
- In 2001, the No Child Left behind Act (NCLBA) was passed and education systems shifted to an emphasis on increasing test scores.
- This movement led to cutting recess time (Elkind, 2008; Louv, 2008).

- Since the implementation of the NCLB Act, schools have seen a 28% decrease in recess and a 35% decrease in the time devoted to physical education (Siedentop, 2009).
- This was further exacerbated when Common Core was developed, due to a rationalization that less time outdoors at recess would leave more time for productivity within the classroom (Louv, 2008; Sobel, 2016).
- According to the 2016 Shape of the Nation Report, only 16% of states require daily recess from elementary schools.

Environmental Dangers and Issues

Children spend much of their out of school time inside. Here are a few contributing factors as to why children spend their leisure time outside of school predominately indoors:

- According to the Trust for Public Land, only 30 percent of people are within walking distance of a park. Children are less likely to play outdoors if they don't have close resources to do so.
- Traffic and dangerous accidents encourage parents to keep children indoors (Rivkin, 1998).
- Parents have taken away or limited the unrestricted childhoods that generations before experienced (Louv, 2008; Rivkin, 1998) due to their fear of stranger danger and child abduction (Louv, 2005).

Due to the lack of children's outdoor play while at home, it is even more crucial that children get some type of outdoor play during the day at school.

According to the School Health Policies and Programs Study (SHPPS), data from 2000-2014 showed that regularly scheduled recess decreased from 42.3 percent in 2000 to 26.2 percent in 2014.

Outdoor play is important!

- Being outdoors regularly is very important to children's health and wellbeing (Armitage, 2009).

National Wildlife Federation (NWF)

According to the National Wildlife Federation's report, outdoor play gives children a plethora of benefits for their well-being:

- Builds healthy bodies
- Exposes children to Vitamin D
- Helps strengthen children's immune systems
- Lowers children's stress levels
- Improves their mood
- Enhances social interactions among peers

The importance of the outdoors has been recognized theoretically in the fields of education and child development.

John Dewey



- He was a philosopher and educator and emphasized the importance of children being present in local outdoor environments.
- He believed that children needed to experience an untouched natural outdoor environment at home and at school.

Maria Montessori



- She saw the potential in children learning while outdoors and that the outdoors automatically invigorated children's senses.
- Her goal for education was to allow the optimal development (intellectual, physical, emotional, and social) of a child to unfold naturally (Montessori, 1912).

Richard Louv

- Prominent theorist and child advocate expert who coined the term nature-deficit disorder (NDD)
- NDD occurs when children lack of outdoor time, which causes their senses diminish and leads children to struggle with attention difficulties
- He states that the cure for NDD is simply to have children spend time outdoors (2008).
- Outdoor experiences for children support whole children's development

Specific Developmental Benefits of Outdoor Play

- Children gain confidence and learn responsibility
- Playing outdoors fosters imaginary play
- Playing outdoors helps get children physically active
 - Childhood obesity has almost tripled since the 1970's with a rise in cholesterol and blood pressure (Waite-Stupiansky and Findlay, 2001)
- Gain increased coordination and balance
- Better stress moderation and fewer attention issues
- Better social relationships

One Way to Increase Children's Outdoor Time is to Provide Access to Recess While at School

What is Recess?

According to the American Academy of Pediatrics, recess is described as “a necessary break in the day for optimizing a child’s social, emotional, physical, and cognitive development.”

Joseph Lee, father of the playground movement, said that “it is the supreme seriousness of play that gives it its educational importance.”

- According to the National Association of Early Childhood Specialists in State Departments of Education, recess **IS** a necessary component of the education system.
- The National Association for Sport and Physical education (NASPE) states that all elementary school aged children **SHOULD** be given at least one session of recess for at least 20 minutes every day.

Recess provides play-based opportunities while children are in school

- According to the CDC and SHAPE America, recess provides children with benefits that include increasing physical activity levels, improving social and emotional development, and even reducing disruptive behavior in the classroom (2017).
- It gives children multiple opportunities to play and learn about themselves and others.
- According to a study by Tom Jambor (1994), children at recess have meaningful social experiences.
- They learn self-restraint, taking turns, sharing, and simply getting along (Glover, 1999).

- Recess is the **best** essential plan of action in increasing physical activity for children (Wood Johnson, 2007).
- According to the office of the United Nations High Commissioner for Human Rights, play is a right of all children (2002).

Heading in the Right Direction

Schoolyard Habitats

- This program works with schools to create better outdoor environments on school campuses. In conjunction with children and school staff, this program helps schools to create or restore natural spaces on school grounds. This program has over 5000 schools certified all over the United States

Playworks

- Playworks works with schools and helps them to rethink recess in three major categories: Safety, Engagement, and Empowerment. They do this by giving professional development resources, consultative support, and even on site staffing. So far Playworks has helped over 1,500,000 students and 2,500 schools nationwide

Peaceful Playgrounds

- This program helps recess run smoothly for both teachers and administration, as well as children . They provide training and help for school personnel to ensure that recess is a successful school activity.

So What Comes Next?

Due to the recent National pandemic, the importance for outdoor play is higher than ever!

What can Schools Do?

Structure recess differently to maximize children's developmental outcomes.

- a) Help staff/ teachers (during recess) create games or activities for children to play while at recess
- b) Encourage movement and physical activity for children
- c) Scaffolding is a helpful way to show children that the staff are interested in playing with them

Provide recess-type games and good equipment on the playground

- a) Small equipment, such as balls, jump ropes, and hula-hoops can be bought to give children options for play
- b) Playground marking can be added on the blacktop to encourage games such as foursquare, hopscotch, and mazes
- c) Investing in age appropriate equipment with a good design to foster play

Involve parents and caregivers in the conversation

- a) Discuss the importance of recess and even outdoor play at home with parents and caregivers so they can have conversations with the children and provide opportunities outside of school

Implement recess daily and work with other schools in their area to create school district policies favorable to recess

- a) Always provide recess. Have plans for recess when the weather becomes a factor
- b) Team up with other schools within the district to create better and more favorable policies towards recess

There are many barriers that will be encountered. This includes time restraints that are set by the district and budgets that don't allow schools to create the environment needed.

Despite this, it is important to do all you can to help make recess the best experience possible experience for children.

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