

PERCEPTIONS OF THE ROLE PHYSICAL ACTIVITY PLAYS IN EARLY CHILDHOOD
EDUCATION

by

Martha Robertson Swirzinski

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Kathie Morgan, Ed.D, Committee Chair

Gina Thomason, Ed.D, Committee Member

Anita Tieman, Ed.D, Committee Member

ABSTRACT

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. The theory guiding this study was the social constructivist theory by Lev Vygotsky (1978) which maintains that each individual has a different perspective about any given experience based on their prior experiences and all experiences build upon themselves to create knowledge. The constructivist theory suggests learners must interact with their environments to gain new knowledge (Ogunnaike, 2015). The basic research question focused on the perceptions that selected educators have on the role physical activity plays in the preschool classroom. Data was collected through observations, semi-structured interviews, and review of documents. Data analysis strategies included detailed descriptions of the cases, analysis of each case for themes and then cross case analysis for common themes or differences. Data analysis generated key themes, which include: expending energy, cognitive and physical development, professional development, experience with physical activity, facility/director support and required physical activity. The study ended with assertions to provide interpretation of the data as well as recommendations for future research.

Keywords: physical activity, preschoolers, constructivist theory, fundamental motor skills, early childhood educators

Dedication

I dedicate this work to Our Lord and Savior, Jesus Christ. I know that without His guidance and grace none of this would have been possible. I look back and I can see His hand in every part of this long journey.

I am forever grateful for my family, my husband Michael and my two amazing daughters Hannah and Ava. They have put up with years of hearing, “Not now I’m writing on my paper.” Thank you for loving me, supporting me and believing in me. You have no idea how much that has meant and continues to mean to me. Each one of you is such a blessing in my life.

A special thank you goes out to Nina. Thank you for your support, your laughter, and your guidance in my writing. You are such a blessing to my family. Thank you for all you have done and continue to do. I love you.

I also want to dedicate this to my mom and dad. Both of them received their doctorate degree and instilled in me a love of education, a desire to pursue higher learning and a belief that I could achieve anything. Watching my mom when I was a child go after her doctorate degree while taking care of three young children and working was an inspiration. I drew on those memories of her working late at night and knew that I too could overcome the obstacles of being a working mom while achieving my dreams at the same time.

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List of Abbreviations

Center for Disease Control (CDC)

Institutional Review Board (IRB)

Moderate to Vigorous Physical Activity (MVPA)

National Association for the Education of Young Children (NAEYC)

National Association for Sport and Physical Education (NASPE)

Physical education (PE)

Professional development (PD)

System for Observing Fitness Instruction Time for Preschoolers (SOFIT)

Virginia Star Quality Initiative (VSQI)

Zone of Proximal Development (ZPD)

CHAPTER ONE: INTRODUCTION

Overview

Physical activity, movement education, physical education (PE), gym class, and even recess; it has many names but is not fully valued or understood for all of its benefits. There are numerous studies pointing to the benefits of getting children up and moving not only for development in the physical domain but also in the social, emotional, and cognitive domains (Goldfield, Harvey, Grattan, & Adamo, 2012; Tremblay, Boudreau-Lariviere, & Cimon-Lambert, 2012; Serpentino, 2011). Studies suggest test scores, reading ability, concentration, self-esteem, and health improve when children are allowed time to be active (Becker, McClelland, Loprinzi, & Trost, 2014; Donnelly & Lambourne, 2011). Research has indicated that early childhood is an important time for children to participate in physical activity (Lemos, Avigo, & Barela, 2012; Robinson, Wadsworth, & Peoples, 2012). Research has also indicated that students do not get the required amount of time to be physically active in school. Teachers are cutting down the amount of time spent in physical activity to concentrate more on academic subjects (Bornstein, Beets, Byun, & McIver, 2011).

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in select schools in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. This chapter discusses the significance of the study and provides the reader with the problem statement, research plan, and research questions. Also discussed is my motivation for conducting this research, delimitations and limitations of the study, and definitions pertinent to the topic.

Background

Preschool children are not safe from the epidemic of obesity. Children have shown increased incidences of type 2 diabetes, hyperlipidemia, and hypertension, underscoring the detrimental effects obesity has on their physical health (Hoelscher, Kirk, Ritchie, & Cunningham-Sabo, 2013). Unfortunately, the damage does not stop with just the children's physical health, but it also negatively affects the social, emotional, and cognitive health of preschoolers as well (Goldfield et al., 2012). The intentional incorporation of physical activity has become very limited in the preschool setting. Academics have taken top precedence even at the preschool level and as a consequence has limited the amount of time given to physical activity. Schools and teachers are taking away opportunities for physical activity rather than ensuring children meet the national guidelines and standards for physical education (Copeland, Kendeigh, Saelens, Kalkwarf, & Sherman, 2012).

The National Association of Sports and Physical Education (NASPE) established physical activity guidelines for early childhood educators to follow to highlight the importance that children ages three to five have the opportunity to be physically active throughout the day. These guidelines are focused on the amount of time students should spend in physical activity and what types of movement they should be achieving (see Appendix J). Unfortunately, many preschool teachers believe their students are getting enough physical activity; however, studies have shown students are not meeting the national recommendations for this age group (Colley et al., 2013; De Decker, et al., 2013; Sharma, Chuang, & Skala, 2011). In addition to having a misperception about the amount of physical activity students are getting, teachers perceive several obstacles to providing physical activity which include lack of equipment, insufficient space and time, as well as lack of knowledge on how to provide physical activity (De Decker, et

al., 2013; Tucker, Zandvoort, Burke, & Irwin, 2011). Copeland et al. (2012) discovered that one of the many barriers teachers face when providing physical activity to their students is the belief that children are out of control when they are active.

Despite the research which indicates that physical activity is frequently being limited in the preschool setting, there are still those teachers who intentionally provide physical activity time to their students regardless of the barriers present. Research is lacking which investigates this set of early childhood educators and this phenomenon. Understanding the teachers' perceptions of the role physical activity plays in early childhood education will help lead to a better understanding of this phenomenon.

Situation to Self

The motivation for researching this topic was to understand the perceptions about the role physical activity plays in teaching preschoolers held by early childhood educators. I have been involved with physical education for many years, and I am fascinated by the perceptions held by early childhood educators about physical activity because it impacts students in all of their developmental domains.

For this multiple case study I embraced the ontological assumption that "reality is multiple as seen through many views" (Creswell, 2013, p. 21). Guided by this assumption, I designed a study that accounted for the various perspectives held by selected educators and identified themes that developed from the findings. The paradigm on which I based my study was social constructivism by Vygotsky (1978). My focus was to gather the participants' perceptions and experiences as related to the research topic. Creswell (2013) discussed the use of social constructivism by stating, "The goal of research, then, is to rely as much as possible on the participants' views of the situation" (p. 24).

Problem Statement

Children from birth to age five learn and develop at brisk rates (Chukwbikem, 2013). All of the developmental domains (cognitive, physical, social and emotional) are affected in positive ways when children are physically active (Serpentino, 2011). However, children do not naturally learn the fundamental movement skills that are necessary for optimal development. These skills must be taught just like all other subjects (Goldfield et al., 2012). It is so important that students ages three to five engage in daily structured movement that national standards and guidelines were established for physical movement in preschool settings (see Appendix J). An abundance of quantitative research focuses on the amount of time students spend moving during the day (Colley et al., 2013; Hinkley, Salmon, Okely, Hesketh, & Crawford, 2012; Obeid, Nguyen, Gabel, & Timmons, 2011). Additionally, there is qualitative research that examined the perceived barriers to implementing physical activity (Copeland et al., 2012; De Decker, et al., 2013; Robinson, Webster, Logan, Lucas, & Barber, 2012; Sandseter, 2012). However, previous research has failed to examine the perceptions early childhood educators who intentionally implement physical activity into their class day have about the role physical activity plays in early childhood education.

Purpose Statement

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. Physical activity will be generally defined as any activity that requires the student to expend energy by engaging in one of the fundamental motor skills of early childhood (National Association for Sport and Physical Education [NASPE], 2009a).

The theory that guided this study was Vygotsky's (1978) social constructivist theory which maintains that, based on prior experiences, each individual has a different perspective about an experience and all experiences build upon themselves to create new knowledge. According to constructivist theory, learners must interact with their environments in order to gain new knowledge (Ogunnaike, 2015). The social constructivist theory provides the framework to explore how previous experiences of early childhood educators influenced their perceptions about the role physical activity plays in early childhood education.

Significance of the Study

This qualitative multiple case study is significant because it provides an in-depth examination into the perceptions of early childhood educators in select schools in Eastern Virginia about the use of physical activity as part of their regular class day. At this time there exists a significant lack of research in the area of early childhood educators' perceptions on the role physical activity plays in early childhood education. The data collected from this study provides greater insight to professional development providers in the field of education who may then develop professional development topics to specifically identified needs in the area of physical activity in the preschool setting. It is imperative that early childhood educators have a deep understanding of the connection between physical activity and the development in all domains. Valentini, Troiano, and Balzano (2012) reported that physical activity has a positive effect on a child's self-esteem and divergent thinking. They found that students who were physically active during the day developed a higher level of independence than students who were not physically active. Donnelly and Lambourne (2011) found a link between physical activity and academic achievement. Results showed that utilizing physical activity as a tool to teach academic lessons improved standardized test scores by as much as 6%. Physical activity is

linked to development in all domains, and educators should have sufficient knowledge of the connection between physical activity and learning in other developmental domains (Serpentino, 2011). Wilcox-Herzog, McLaren, Ward, & Wong (2013) found

The best way to increase quality of care is to train and educate teachers to provide exceptional caregiving environments and to work in a maximally effective way with all children. Studies indicate that when teachers have more specialized training and education in early childhood, they are more sensitive, playful and involved, they provide better activities, and tend to provide higher quality care overall. (p. 336)

This study provides insight into how physical activity in the preschool classroom is viewed by early childhood educators so teacher educator programs can emphasize the importance of physical activity as a teaching tool in their classrooms. Educational directors and teachers will also benefit from learning what their peers are doing with regards to physical activity, and this information may reflect on the efficacy of their own teaching practices. Overall, discovering what perceptions and practices exist in early childhood education about physical education will provide an avenue to enhance student learning and development in all developmental domains. The data gathered in this study should lead to a greater understanding of this phenomenon, which is not addressed in current literature. Physical activity for preschoolers is best performed within the context of their social environment. Activity encourages students to interact, cooperate, encourage one another, and use their imagination (Ogunnaike, 2015). Vygotsky's (1978) social constructivist theory posits that students must interact with their environment in order for them to learn. Eckhoff and Urbach (2008) stated, "Basic principles underlying a Vygotskian framework include understanding that development cannot be separated from its social context" (p. 180). The teacher's task is to develop lessons that facilitate learning

in all developmental domains. Physical activity lends itself to the social constructivist theory because physical activity needs to be planned in such a way that it connects with the learners' previous knowledge. The social aspect of physical activity fosters student interaction, cooperation, and use of their imaginations. The nature of physical activity invites students to problem solve, make decisions, and challenge themselves. Creating a classroom where physical activities are focused toward developmental levels allows students to learn at their own rate. Supporting students when they solve problems, make choices, and challenge themselves so they can progress to the next level of development is essential to early childhood education (Glassman, 2001; Jaramillo, 1996). The data collected from this study will extend educators' knowledge about utilizing social constructivist theory as part of their daily routines and the role of the teacher in the classroom. Findings may also contribute to the development of a new theory or novel application of existing theory relevant to early childhood education.

Research Questions

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in select schools in Eastern Virginia have regarding using physical activity with preschoolers ages three to five. The following research questions will guide this study:

Central Question

How do early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education?

Guiding Questions

Research Question 1: What role/purpose do selected early childhood educators believe physical activity provides the students in early childhood education? Copeland et al. (2012) discussed the fact that many caregivers do not fully understand the importance of allowing children time to participate in physical activity. They found in their study that some teachers viewed physical activity time as nothing more than free time for themselves or time to talk to colleagues. This question helps to identify the early childhood educators' understanding about the role or purpose that physical activity fulfills in early childhood education.

Research Question 2: What experiences contribute to early childhood educators' knowledge about physical activity in early childhood? According to Derscheid, Kim, Zittel, Umoren and Henry (2014), "Preschool teachers have varying levels of teacher preparation regarding nutrition or motor development" (p. 262). This question focuses on how teachers obtained the knowledge to incorporate physical activity in early childhood classrooms. In constructivist theory, educator's experiences vary and could include anything from knowledge gained in their own childhood physical education class, continuing professional development they have attended, or a course they took or are taking in college.

Research Question 3: What experiences influence the early childhood educators' choice to implement physical activity during their class day?

Adults (e.g., teachers) are often in power positions to make choices that influenced the physical activity behaviors of children. For example, teaching physical education or staying in the classroom to teach one of several other subjects is a choice teachers are faced with every day. A teacher's perspective of the reinforcing value and the

accessibility of each option is essential to understand the choices made. (Sherman, Tran & Alves, 2010, p. 4)

This question focuses on what influenced the early childhood educators to choose to implement physical activity into their class day. This could include anything from support from the preschool director and/or parents to include physical activity during the class day to positive experiences they had participating in physical activity themselves.

Research Plan

This study used a qualitative multiple case study design to generate in-depth data about the participants and the phenomenon. Choosing a multiple case study design provided multiple perspectives of the phenomenon (Stake, 1995). The participants were early childhood educators who indicated in the survey (see Appendix A) that they intentionally included the use of physical activity during the day when teaching children ages three to five in a preschool setting in Eastern Virginia. Each of the 10 participants varied according to ages taught, years of teaching experience, and levels of education. The five educational sites varied according to location in Eastern Virginia, licensure, and accreditation. Data collection occurred following Institutional Review Board (IRB) approval. The data collected were documents, observations, and one-on-one, semi-structured interviews. The documents that were collected included information regarding physical activity on the school website, school brochures, two to four weeks of teacher lesson plans, schedules of class time posted in the classroom, and parent newsletters. Interview questions (see Appendix I) were structured based on the literature, observations, and document analysis. The following areas were the focus of the interview questions.

Definition of Physical Activity

Questions were used to investigate how early childhood education teachers define physical activity. Do they see physical activity as only a way to expend energy or do they see it as a useful tool in teaching the whole child or a combination of both? Do they believe it is any type of movement such as fine motor skills or do they view it as engaging in one of the fundamental motor skills of early childhood? Do the teachers use a balanced approach to physical education, which focuses on “learning skill, sport, dance, and exercise through innovative physical activities” (Ennis, 2011, p. 5) and not focusing on just increasing the student’s heart rate? Additional themes may emerge from this question.

Benefits of Physical Activity

Physical activity has multiple positive consequences in all developmental domains of early childhood (Goldfield et al., 2012). Ennis (2011) stated,

Physical education can have an important role in brain functioning when it supplements both physical activity and cognitive elasticity that can arise from physically active experiences that enhance challenge, fluidity, versatility, and adaptability. Some approaches to curriculum available today, use physical activity both as an opportunity to increase intensity and expend calories *and* to challenge an integrated mind and body to solve meaningful problems associated with the effects of exercise on the body. (p.13)

Appropriate Practices in Physical Education

NASPE has established national guidelines and standards as well as appropriate practices for early childhood with regards to implementation of physical activity. The National Association for the Education of Young Children (NAEYC) supports and encourages the adherence to these standards in early childcare facilities.

Developmentally appropriate practices in movement programs are those that recognize

children's differing movement capabilities and that promote learning experiences that challenge each child to move to the next level of his/her individual development.

Effective teachers of movement use the National Standards for Physical Education in conjunction with existing curriculum to design appropriate programs for children.

(National Association for Sport and Physical Education [NASPE], 2009b, p. 3)

Professional Development

Professional development has been identified by teachers as a way to help them provide physical activity lessons in their classroom (Tucker et al., 2011). Professional development will equip teachers with the knowledge to provide physical activity opportunities appropriate to preschoolers. Sherman, Tran, and Alves (2010) stated, "Researchers and practitioners have documented the benefits of well-designed professional development programs to reduce classroom teachers' resistance to teaching physical education" (p. 2). Questions in this category will focus on where the teachers obtained their knowledge with regards to physical development and education.

Data analysis began with describing the cases (each teacher is considered a case) in depth. The next step was to look for emerging themes within each case. Cross case analysis was used to look for similarities and differences in the data. Lastly, findings from the research provided an interpretation of the data collected (Creswell, 2013).

Delimitations and Limitations

Delimitations describe the boundaries I placed on the study. I limited this study to only early childhood educators who identified in the initial survey (see Appendix A) that they included physical activity during their class day, because I wanted to focus on the perceptions of those who use physical activity. I did not look at those who did not use physical activity, as many

studies exist on their perceived barriers to providing it. Another delimitation that was selected was only early childhood educators who teach children aged three to five. This allowed me to focus on a specific age group defined by the NASPE as preschoolers. This is significant because early childhood can be defined as birth to age five, and my intent was to focus on the age group that would most likely be in a preschool setting where a teacher has prepared lessons they follow.

Limitations of this study that may affect the ability to generalize or transfer the results to other preschools or K-12 settings is that it only examined preschools in Eastern Virginia. Also, this study focused on ages three to five within the preschool setting, so results may not be transferable to ages zero to two in the preschool setting. Another limitation that may affect the study is the fact that prior to my observations, the teachers were aware of my study and its focus on physical activity and therefore may or may not change their normal pattern of behavior.

Definitions

Definitions are part of the NASPE (2009a) physical activity guidelines and standards for children birth to five years.

1. *Developmentally appropriate* – describes the appropriateness of the activity, instruction and equipment for the ability level of the student.
2. *Early childhood education* - involves the use of activities and experiences that are designed to promote developmental changes in children prior to attending elementary school.
3. *Fundamental motor skills* – the foundational movements that are a precursor to more complex movement skills used in various sports and physical activity.

4. *Locomotor skills* – movement that allows an individual to move from one place to another. Ex. Crawling, walking, running, jumping, hopping, skipping, sliding, and galloping.
5. *Manipulative skills* – describes those movements which control an object with the hands or feet. Ex. Catching, throwing, kicking, volleying, striking, dribbling.
6. *Moderate physical activity* – describes any activity that increases the heart rate and breathing but is easily performed.
7. *Nonlocomotor skills* – describes those movements where the individual's base of support (usually feet) do not move. These movements involve the individual to move other body parts while maintaining balance. Ex. bending, and twisting.
8. *Physical activity* - moving the body so that it results in energy expenditure.
9. *Preschoolers* - children three to five years of age.
10. *Structured activity* - a time of physical activity that is planned and directed by the caregiver.
11. *Unstructured physical activity* - when the child explores movement without the direction of a caregiver.
12. *Vigorous physical activity* – describes any activity where the heart rate and breathing are elevated and produce fatigue.
13. *Role of physical activity* – The teacher may view the role of physical activity in one or more of the following ways
 - a. Play – a time when children explore using movement and imagination but do not have to result in major expenditure of energy.

- b. Physical fitness – activities which result in experiences that improve the cardiovascular and muscular system.
- c. Motor skillfulness – activities that are focused on a specific physical goal.
- d. Social interaction – activities that promote social interaction using movement.
- e. Brain development - physical activities that promote cognitive learning in a specific area.

Summary

This qualitative multiple case study investigated the perceived role of physical activity used by early childhood educators in five preschool settings in Eastern Virginia. While many quantitative studies examined physical activity in preschools (Colley et al., 2013; Jones et al., 2011; Hinkley et al., 2012; Kulinna, 2012; Obeid et al., 2011), very little qualitative research has been conducted. Previous research has failed to examine the perceptions early childhood educators who intentionally implement physical activity have about the role physical activity plays in early childhood education.

Chapter One provides a framework for the study being conducted and gives the reader a foundation of the problem and why this study is needed. Background information regarding the phenomenon is explored with current literature to support the significance of the study. The research questions are provided with a description and discussion of each question. In addition, Chapter One contains a discussion of the limitations and delimitations to the research and a list of pertinent definitions.

CHAPTER TWO: LITERATURE REVIEW

Overview

Children ages three to five are spending more time in structured educational settings due to an increase in families with both parents working (Christensen, Schneider, & Butler, 2011). Taking into consideration this increase in the time children are spending in a structured educational setting, it is necessary that important aspects of program curriculum such as physical education be investigated. As more of a child's time is spent in a structured educational environment where academic pursuits are often seen as paramount, it is necessary to intentionally plan developmental opportunities within the physical domain. Research supports that allowing students in early childhood settings to participate in physical activity promotes development in the physical, social, emotional, and cognitive domains (Donnelly & Lambourne, 2011; Serpentino, 2011). This chapter focused on the theoretical framework of the study and a literature review of the relevant topics. The theoretical framework is based on the social constructivist theory by Vygotsky (1978). The literature review addresses various topics that pertain to physical education in early childhood settings. These topics include (a) early childhood education settings, (b) physical education standards, (c) importance of physical activity in early childhood, (d) perceptions regarding physical activity, (e) potential for physical education during the school day, and (f) professional development opportunities for early childcare educators.

Theoretical Framework

The theoretical framework is used in case study research to provide a structure that helps explain why the research problem exists. It helps guide the process of the study and introduces and describes the theory (Swanson, 2013).

The social constructivist theory by Vygotsky (1978) provides the theoretical framework for this multiple case study. Jaramillo (1996) stated, “Vygotsky wrote extensively about learning by doing. In his theory of experience, he notes that meaning is gleaned from experience” (p. 137). The theory by Vygotsky provides the framework to guide the exploration of how previous experiences of early childhood educators influenced their perceptions about the role physical activity plays in early childhood education.

Constructivist Theory

One cannot discuss the constructivist theory without mentioning Piaget and Inhelder’s (1969) contribution to cognitive constructivism. Learning, according to cognitive constructivism, is “the ability of learners to take abstract concepts and actively make meaning of them via concrete experiences that focus primarily on an individual’s intellectual development” (Wright, Grenier, & Seaman, 2010, p. 204). Piaget believed that children constructed new knowledge through assimilation and accommodation. Assimilation is defined as “the filtering or modification of the input” and accommodation is defined as “the modification of internal schemes to fit reality” (Piaget & Inhelder, 1969, p. 6). This occurs through the four stages of development that Piaget developed; they include: Sensorimotor (ages 0-2), preoperational (ages 2-7), concrete operational (ages 7-11), and formal operational (ages 11-adult) (Piaget & Inhelder, 1969). Piaget recognized that children would learn at various rates through each of these stages. Teachers facilitating constructivist learning will need to observe students and understand where they are in their learning process to better assist them in their educational journey (Powell & Kalina, 2009).

In cognitive constructivism, ideas are constructed in individuals through a personal process, as opposed to social constructivism where ideas are constructed through

interaction with the teacher and other students. While they are fundamentally different both types will ultimately form overall constructivism or constructed learning elements for students to easily grasp; the main concept being that ideas are constructed from experience to have a personal meaning for the student. (Powell & Kalina, 2009, p. 241)

Social Constructivist Theory

Powell and Kalina (2009), described Vygotsky's theory of social constructivism by stating,

Lev Vygotsky, the founding father of social constructivism believed in social interaction and that it was an integral part of learning. Social constructivism is based on the social interactions a student in the classroom along with a personal critical thinking process. (p. 243)

Vygotsky (1978) believed that students must interact with their environment in order to learn, and the quality of those interactions helped, in part, to determine the quality of their learning. Vygotsky's theory maintains that individuals are a product of both their biology and environment, not just one or the other. "We have seen that the individual's own experience is the only teacher capable of forming new reactions in the individual. Only those relations are real for an individual that are given to him in his personal experience" (Vygotsky, 1997, p. 47). Each student's interactions build upon themselves to create an ever-expanding body of knowledge. This process of forming new knowledge based on one's experiences is no less true for students in a teacher education program than it is for a preschool student (Nyikos & Hashimoto, 1997). What a teacher brings to the classroom, from their perceptions about the role of physical activity during childhood to their decision to include or not include structured physical activity in their classrooms, is focused and formulated by their own experiences, knowledge, and meaning

related to the importance of incorporating physical activity into early childhood education (Gross & Gilbert, 2011).

Additionally, since each student holds a different perspective about any given interaction based on his or her previous experiences, all interactions build upon themselves to create new, individual-specific knowledge. Teachers bring to their classrooms, as many different approaches, interventions and techniques as there are teachers. There is no one specific formula for incorporating movement into a classroom because each teacher's experiences are different. This ongoing process of development and knowledge acquisition that occurs as students learn from his or her own interactions with the environment may begin in childhood but, as a cyclical process, continues throughout life. Students are often viewed as passive learners. Students are taught, lectured to, and are seen as recipients of teacher-directed lesson plans. However, the social constructivist theory, as posited by Vygotsky, suggests that students, whatever their level of learning, be viewed more than passive learners; they need to interact with their environment and the people within their environment in order to learn.

Zone of Proximal Development

Vygotsky (1978) developed the concept of the zone of proximal development (ZPD), the “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). The ZPD occurs when a teacher, parent, or advanced peer aids the student's understanding of new knowledge or skills. Vygotsky saw the ZPD as an instrument to further childhood development. Since learning occurs as students interact with their environments, the opportunity to increase knowledge is enhanced

when placed in a mentoring environment. The goal is to stretch students out of their academic comfort zone. Jaramillo (1996) stated,

Teachers activate this zone when they teach students concepts that are just above their current skills and knowledge level, which motivates them to excel beyond their current skills level. To prompt students to attain the additional skills needed to reach this zone, teachers encourage them to learn by doing an activity. (p. 137)

Ogunnaike (2015) discussed how learning in the ZPD is often easier for students because it involves others. The ZPD is an ever-evolving process for each individual student. Once a student masters the goal of the activity then their zone grows so that they begin work within a more advanced zone.

The implications for teachers are that learning is facilitated and guided by the teacher when providing an environment that promotes discovery. The role of the teacher is to facilitate learning by providing resources and guiding learners as they attempt to assimilate new knowledge to old and to modify the old to accommodate the new. Teachers must take into account the knowledge the learner currently holds when deciding how to construct the curriculum and to present new material (Ogunnaike, 2015). “It is therefore important for teachers/mentors to be a proactive force and take greater control in the educational process...” (Glassman, 2001, p. 12). However, Glassman (2001) went on to discuss how important it is that the teachers’ role remains less dominant and focuses more on being a facilitator to help aid the student’s mastery. The social constructivist theory depends on the inseparability of the interactions between the individual and their environment. Whether through the experiences of formal education, on-the-scene training, or continuing education opportunities, the scope and breadth of physical activity in the classroom is influenced by the teacher’s previous experience

with physical activity as part of the curriculum. Again, constructivist theory depends on the inseparability of the interactions between the individual student and their environment.

The social constructivist theory by Vygotsky provides the framework for this study; it guides the exploration of how the previous experiences of early childhood educators have influenced their perceptions about the role physical activity plays in early childhood education.

Related Literature

The purpose of this qualitative multiple case study was to describe the perceptions held by early childhood educators who intentionally implemented physical activity during the school day in select schools in Eastern Virginia with regards to the role physical activity plays in early childhood education. Due to the purpose of the study, a thorough review of literature was conducted to explore factors related to the perceptions held by early childhood educators who use physical activity during the class day in Eastern Virginia with regards to the role physical activity fulfills in early childhood education. The literature review looked at the following topics, (a) early childcare education settings, (b) physical education standards, (c) importance of physical activity in early childhood, (d) perceptions regarding physical activity, and (e) potential for physical education during the school day.

Early Childcare Settings

Early childhood programs come in many different forms in an effort to meet the varying needs of families, as they strive to provide their children with effective and affordable educational opportunities. These settings can be categorized into four primary groupings: (a) traditional nursery/preschool, (b) universal preschool, (c) child care centers, and (d) family childcare. Educational instruction can be half day or full day, and the programs and can serve children ranging in age between zero and five years old. Actual instruction can be held in a wide

variety of settings such as homes, hospitals, churches, college campuses, free standing buildings, and even within businesses. The programs may be offered on a year round basis or can be designed to correspond with the public school schedule (Gordon & Browne, 2014). Many programs are accredited or licensed but there is no standard that requires that they have to be.

Gordon and Browne (2014) stated,

There are no national standards or policies regarding licensing of child care facilities in the United States. Many local and state governments require licensing of childcare centers and family childcare homes, but there is no central licensing agency in every state. (p. 47)

There are, however, options for facilities to voluntarily become licensed and/or accredited.

Electing to be licensed and/or accredited demonstrates the facility's willingness and ability to adhere to standards that provide high quality programming. According to the National Association for the Education of Young Children (NAEYC) position statement, "High-quality early childhood education can promote intellectual, language, physical, social, and emotional development, creating school readiness and building a foundation for later academic and social competence" (National Association for the Education of Young Children [NAEYC], 2002, p. 2).

To become NAEYC accredited, a school must voluntarily seek accreditation and successfully complete a four-step process which includes:

1. Align your program with the 10 NAEYC early childhood program standards.
2. Compile evidence on how your program meets the 10 NAEYC early childhood program standards.
3. Demonstrate key components of high quality programming and preparedness for site visit.

4. Demonstrate how your program meets the standards by allowing a NAEYC assessor to observe your program in action and review evidence collected in self-assessment. (National Association of Education for Young Children [NAEYC], 2014)

The 10 early childhood program standards of NAEYC accreditation cover relationships, teaching, health, curriculum, assessment, teachers, community relationships, physical environment, families, and leadership. Specifically related to conducting physical activity programming, a NAEYC accredited facility has education requirements for the qualifications of the lead teachers; NAEYC requires the curriculum to promote learning and development in the physical domain, teachers to use multiple instructional strategies to enhance the student's opportunities for learning, and the promotion of health and wellness to include teaching the students about making healthy choices (NAEYC, 2014).

Licensing in the Commonwealth of Virginia is required for most childcare facilities but not all. According to the Virginia department of Social Services,

Child care, day care, family day homes, preschools, before and after school care, and other forms of care must be licensed by the Commonwealth of Virginia. In accordance to Code of Virginia licensing standards: A child day center is defined as a program offered to (i) two or more children under the age of 13 in a facility that is not the residence of the provider or of any of the children in care, or (ii) 13 or more children at any location. A child day program includes both child day centers and family day homes and is defined as a regularly operating service arrangement for children where, during the absence of a parent or guardian, a person or organization has agreed to assume responsibility for the supervision, protection, and well-being of a child under the age of 13 for less than a 24-

hour period. Religious entities which will provide child care and which desire religious exemption from State licensure must still meet the requirements of the Virginia Uniform Statewide Building Code, must meet minimum health and fire safety requirements, and must comply with the requirements of the Code of Virginia. (City of Virginia Beach, n.d., p. 2).

Specifically related to physical activity, licensure in the Commonwealth of Virginia requires staff training that includes playground safety procedures. Furthermore, each class is required to have a schedule that allows for outdoor activity from a minimum of 15 minutes to a maximum of one hour per day depending on the amount of time the children are in the center. Teachers are required to provide the opportunity for large motor activities during the day. Lead teachers must meet specified educational requirements and must complete at least 16 professional development hours each year which can include both physical and non-physical activity topic areas (Virginia Department of Social Services, 2012).

In addition to NAEYC accreditation and licensure by the Commonwealth of Virginia, a third option exists for identifying viable early childhood education programs. Facilities can become Virginia Star Quality Initiative (VSQI) rated. Obtaining this rating is a voluntary process by which a program is assessed and given a rating of one to five. The program is rated on four standards:

Standard 1: Education, qualifications, and training

Standard 2: Interactions

Standard 3: Structure

Standard 4: Environment and Instruction (Taking Part in VSQI, 2014).

As the standards relate to physical activity, lead teachers must meet educational requirements,

including ongoing professional development requirements. Additionally, teachers are expected to use movement as an independent teaching modality during class time. With regards to the teaching environment, adequate space both indoors and outdoors must be maintained for gross motor play as well as providing enough gross motor equipment for each child to use without a long wait. There is also an instructional section devoted to meeting the expectation of the use of music and movement in the classroom (Harms, Clifford, & Cryer, 2015). The literature makes it clear that the means for incorporating physical activity into the classroom curriculum in early childhood education classes is not standardized or highly regulated. However, mechanisms do exist such as NAEYC accreditation, state licensure, and VSQI star rating that assists families in identifying facilities whose programs meet sound educational standards.

Physical Education Standards

Providing both structured and unstructured physical activity within the regular school curriculum should be a priority in a child's day just like reading, writing, and arithmetic. Physical activity is so important in early childhood that the National Association for Sports and Physical Education (2009a) has established national standards and guidelines concerning physical activity. The guidelines for children ages three to five years of age focus on (a) the types of activity, (b) the physical environment, and (c) the educators in charge of the activity. These guidelines are meant to assist early childhood educators in making decisions with regards to incorporating educationally sound physical activities into their curriculum. NASPE (2009a) has established guidelines for the following ages: infants, toddlers, and preschoolers. The following are guidelines identified for preschoolers.

Guideline 1. Preschoolers should accumulate at least 60 minutes of structured physical activity each day. (p. 13)

Guideline 2. Preschoolers should engage in at least 60 minutes -- and up to several hours -- of unstructured physical activity each day, and should not be sedentary for more than 60 minutes at a time, except when sleeping. (p. 14)

Guideline 3. Preschoolers should be encouraged to develop competence in fundamental motor skills that will serve as the building blocks for future motor skillfulness and physical activity. (p. 15)

Guideline 4. Preschoolers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities. (p. 16)

Guideline 5. Caregivers and parents in charge of preschoolers' health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity. (p. 17)

Not only should students be offered unstructured physical activity such as recess, but caregivers are responsible for providing structured time for students to be active as well. This means that teachers must do more than take the students to the playground for an allotted amount of time. Educators should have a formal plan based on the developmentally appropriate movement skills identified for their students' age group. Planned activities that target each of the fundamental movement skills should be a daily occurrence for all students. Instruction does not always have to come within the context of a formal physical education class taught by a certified physical education teacher. Orłowski, Lorson, Lyon and Minoughan, (2013) stated, "Students spend more time in the classroom than in any other school setting or environment. Thus, the classroom teacher is a critical player in the creation of physically active students in an activity-friendly environment" (p. 47).

NASPE (2009b) developed a position statement focused on appropriate practices in movement programs for young children.

NASPE advocates the belief that the most appropriate approach for this age group is to focus holistically on acquiring fundamental motor skills, learning basic movement concepts and instilling the joy of moving to assist children's motor, cognitive, emotional and social development. Quality programs for young children view movement as an integral part of the overall learning process. Movement experiences take many forms, including structured physical education classes, movement opportunities integrated within other curricular areas and unstructured play during recess. (p. 3)

These practices provide a broad overview with which to define and establish quality programming for preschool children with regards to age appropriate physical activity. The practices are divided into 5 sections: a) learning environment, b) instructional strategies, c) curriculum, d) assessment, e) professionalism. Each section lists examples of appropriate as well as inappropriate practices for teachers to use as a guide.

Importance of Physical Activity in Early Childhood

Physical activity is more than just about being physically fit. Early childhood is a critical time for growth in all of the developmental domains, which include physical, cognitive, social, and emotional. The time between birth and five years of age is a crucial period for children learning and developing in each of the domains. Engaging in physical activity on a routine basis can produce multiple benefits in all of the developmental domains (Chukwbikem, 2013). The preschool setting has been identified as an important component in addressing physical activity in early childhood (Pfeiffer et al., 2013; Sterdt et al., 2013). In light of the rise in the number of families seeking structured early childhood educational settings due to the increase in the number

of two parent working households, incorporating physical activity into this venue is vital (Fox, Wen-Jui, Ruhm, & Waldfogel, 2013; Liu, 2015).

Physical benefits. The rise in childhood obesity has negative outcomes on vital body systems such as orthopedic, pulmonary, gastrointestinal, endocrine, and cardiovascular. This negative impact translates into an increase in premature illness and an increased risk for premature death in adulthood. Illnesses related to childhood obesity include, but may not be limited to, an increase in heart disease, diabetes, body mass index, joint problems, asthma, sleep apnea, and cancer related diseases (Morgan, 2013; Vidoni & Ignico, 2011). The Center for Disease Control (CDC) (2013) estimates that health expenses associated with childhood obesity and related diseases are at \$98 billion. Childhood obesity in the United States has tripled in the past 30 years and is causing numerous financial, social and personal costs. The CDC also has found that children who are obese are 70% more likely to be obese as an adult. So great is the obesity problem that the First Lady, Michelle Obama, started a national campaign to address the obesity issue. The *Let's Move* campaign has a variety of goals to help reduce childhood obesity. One of the goals is focusing on increasing physical activity during the school day by empowering the teachers to provide physical activity opportunities (Lytle, 2012). The Center for Disease Control (2013) also recommended that schools are the perfect place to help reverse the obesity epidemic because: (a) 95% of all children attend school, (b) “well-designed, well-implemented school programs can effectively promote physical activity and healthy eating,” (p. 3) (c) physically active children show an increase in academic performance, and (d) good physical habits that are formed early on are more likely to remain with a child as they grow.

Fundamental movement skills are considered the crucial elements to more advanced physical skills. These skills include but are not limited to: jumping, throwing, catching, running,

and balancing. Young children do not naturally learn the fundamental movement skills; instead they must be taught how to move. Just like other subjects in school, children need to be taught the foundational skills so that they may develop and grow (Robinson, 2011). Various quantitative studies have found a significant, positive correlation between the time spent in physical activity and motor skill development. These results point to the necessity for preschools to dedicate time and resources to help encourage teachers to provide opportunity for children to learn the fundamental movement skills (Alhassan et al., 2012; Logan, Robinson, Wilson, & Lucas, 2012; Robinson et al., 2012). Teaching fundamental movement skills and instilling movement confidence is key to lifelong fitness and development (Chen, Welk, & Joens-Matre, 2014; Overdorf & Coker, 2013).

Social and emotional benefits. Physical activity is not only beneficial for children's physical health but their social and emotional health as well. Archer and Kostrzewa (2012) stated,

Physical exercise reduces stress, negative affect, anxiety, and depression, as well as self-destructive behavior; it is also linked with a decrease in negative behaviors (e.g., bad conduct), poor impulse control and inattentiveness, and has thereby proved beneficial for alleviation of ADHD symptom profiles. (p. 203)

Providing the opportunities to be physically active on a regular basis aids in the development of a healthy lifestyle and results in the increase of psychological well-being and quality of life (Williams et al., 2013). When engaging in physical activity, students are given the chance to socialize, have fun, express their feelings, and move in different ways. Additionally children are given the opportunity to learn to negotiate differences, the fundamentals of teamwork, and rules of play. This type of freedom is part of what makes being physically active fun, enjoyable, and

beneficial for all children (Brockman, Jago, & Fox, 2011).

Another benefit found when allowing children to be physically active is the connection they make to fellow students and teachers. Gehris, Gooze and Whitaker (2015) found that when teachers were active with their students teachers felt it helped formed personal bonds. The teachers also thought that children were more motivated to be physically active if they saw their teacher being physically active. Not only do children get the chance to build a closer relationship with the teacher, but the study also showed that physical activity helps children build social skills with the other students. This supports Vygotsky's premise that learning is enhanced when it occurs under the guidance of an adult or an advanced peer. Allowing children to help one another heightens the experience for both children.

Decreased self-esteem and low body esteem among children as young as five all the way through adults is among the growing social consequences of obesity (Chen et al., 2014; Taylor, Wilson, Slater, & Mohr, 2012; Williams et al., 2013). Williams et al. (2013) stated,

Body esteem is the facet of self-concept that has been most consistently associated with weight, and includes the attitudes, evaluations and feelings an individual holds about his or her own body. Low body esteem has implications for children's health and well-being, including its role in the etiology of disordered eating and depressive symptomatology. (p. 825)

High self-esteem is an important part in the psychological development of children and is greatly influenced by their environment. This includes time spent in school and with peers. Self-esteem can be increased when children feel confident in their skills and are successful at their attempts (Cryz & Toriola, 2012). Confidence and high self-esteem in one area often spills over into other areas of a child's life (Hosogi, Okada, Fujii, Noguchi, & Watanabe, 2012). Gehris et

al. (2015) stated, “The teachers noted that when children were successful in achieving new motor skills, they developed self-confidence, which helped them learn non-motor skills they needed for school and life” (p. 126).

Cognitive benefits. Academic achievement and cognitive development have been linked to physical activity and its use in the classroom (Gehris et al., 2015). Donnelly and Lambourne (2011) conducted a study examining the connection between physical activity and academic achievement. Results showed that physical activity, as a teaching tool in lessons, did improve standardized test scores by as much as 6%. Early literacy and phonological awareness have been found to be significantly improved and maintained by using physical activity as a way to teach academic lessons with regards to literacy (Kirk, Vizcarra, Looney, & Kirk, E., 2014). Reed et al. (2010) conducted a study focusing on the effects of integrating physical activity into academic lessons. They found, “The current investigation provides further evidence that movement can positively influence fluid intelligence of youth, and should be considered an essential element to promote cognitive development...” (p. 349). Physical activity is a perfect tool to use among preschoolers to enhance their imagination. Acting like animals, acting out feelings as well as role playing are all ways to tap into the child’s imagination while at the same time letting them experience it through movement of the body.

Besides its importance for maintaining weight and reducing health risks during a childhood obesity epidemic, physical activity may prove to be a simple, important method of enhancing aspects of children's mental functioning that are central to cognitive development. This information may persuade educators to implement vigorous physical activity. (Davis et al., 2011, p. 91)

Perceptions Concerning Physical Activity

The early childhood educator holds a crucial role in facilitating a student's physical activity opportunities. Regardless of the space available or plethora of equipment provided, many teachers still decide not to provide physical activity opportunities to their students based on their perceptions of physical activity (Chow, McKenzie, & Louie, 2015; Copeland et al., 2012; Gagne, & Harnois, 2014). A study by Lanigan (2014) found that changing the negative beliefs held by many early childcare providers with regards to physical activity was a critical step in implementing any type of program to increase physical activity. Many studies have examined perceived barriers of providing physical activity. Commonly perceived barriers such as lack of space, lack of time, lack of resources, or financial cost of including physical activity in the curriculum must be addressed in a positive problem-solving manner (Sharma et al., 2011; Tucker et al., 2011). In a study done by Tucker et al., (2011) it was discovered that one of the barriers was that teachers believed their students were active during the school day up to as many as two to three hours per day. However, other studies have found that preschoolers actually spend most of their day in light physical activity and do not meet the recommendations for moderate to vigorous physical activity (Sharma et al., 2011).

Copeland et al. (2012) conducted a qualitative study to determine what early childhood educators perceived as benefits and barriers to providing physical activity. One significant finding was that no matter how many resources a facility had it was still the teacher who determined whether or not the students got the opportunity to be physically active. Copeland et al. (2012) stated, "These findings suggest that children could have very different gross motor experiences even within the same facility (with presumably the same environment and policies), based on the beliefs, attitudes, creativity and level of engagement of their teacher" (p. 97).

Teachers are not the only ones who have opinions about physical activity; parents and administrators weigh in on the topic as well. Sevimli-Celik, Kirazci, and Ince (2011) focused on the perceptions of administrators and parents with regard to physical activity in a preschool. Findings indicated a lack of knowledge among the administrators and parents about the importance of physical activity and what it should consist of. Many participants in the study thought that physical activity was participation in sports, and that most physical activity should be done outside of school.

Barriers to providing physical activity. The developmental domains (cognitive, physical, social and emotional) are positively influenced when children are allowed opportunities to be physically active (Goldfield et al., 2012; Serpentino, 2011). Disappointingly, a large number of educators do not provide adequate time for physical activities. There are a number of barriers that teachers claim keep them from providing time for their students to be physically active. These barriers include: not having the proper equipment, not having enough space to be active, not enough time in the schedule, and having too many students to teach. Classroom teachers believed these barriers were simply too great and; therefore, they could not offer their students time to be active (Beighle, & Morrow, 2014; Sharma et al., 2011; Tucker et al., 2011; Webster, Erwin, & Parks, 2013). Parrish, Yeatman, Iverson and Russell (2012) exposed the finding that some of the teachers surveyed in their study punished students for various reasons by not allowing them to participate in physical activities. This seems to indicate that a lack of knowledge of the importance of physical activity may be a barrier teachers have in regard to providing physical in addition to academic work. Due to the lack of training about how to implement developmentally-appropriate physical activities for their students, teachers do not think they are prepared to design and implement physical activity lessons (Fletcher, Mandigo, &

Kosnik, 2013; Mwonga & Wanyama, 2012; Sandseter, 2012; Robinson et al., 2012). Copeland et al. (2012) discovered in their study that a number of teachers hold the belief that children are out of control children when they are being physically active and; therefore, prefer not to allow opportunities for physical activities. Sometimes barriers are attitudes from parents and coworkers. Froehlich-Chow and Humbert (2011) found that a lack of awareness and support from coworkers and parents made it difficult to provide physical activity opportunities. In a study by Kerkez, Tatal, and Akcinar (2013), it was found that parents believed their children were active enough and did not need to spend more time being physically active in school. They believed their children would get sweaty and possibly injured if physically active and preferred they not engage in such activities.

Perceived amount of physical activity. Many parents, teachers, and directors believe that their children are being active. They see them moving around the school setting or cutting and coloring and count this as activity. However, studies show that the perceived and actual amount of time children are engaged in physical activity is quite different. Teachers report their students are physically active many hours out of each day when, in fact, they are not (De Decker et al., 2012; Tucker et al., 2011). Sharma et al. (2011) conducted a study using the System for Observing Fitness Instruction Time for Preschoolers (SOFIT), a tool used to measure the actual amount of time the students spent in moderate to vigorous physical activity (MVPA). They found that “preschoolers spent the majority of their day in light physical activity 77.1% and only 22.9% of their time in MVPA” (p. 264). A study by Vale et al. (2013) found that preschool girls who had low daily MVPA were more likely to be obese. Parents have also been found to believe that their children are active enough during the day and believe the teacher’s knowledge on the subject is sufficient (Kerkez et al., 2013).

Opportunities for Physical Education During the School Day

The National Association for Sport and Physical Education (NASPE) has established national guidelines and standards for the amount of physical activity students are to obtain and have made recommendations for best practices. According to a recent study, most students enrolled in preschools in the United States are still not getting the correct amount of time devoted to being physically active (Van Cauwenberghe et al., 2012). With increased demands for more strident academic performance, research shows that a major barrier to including movement in the curriculum is that many teachers appear to have determined there is not enough time in the day to meet the academic demands and still offer physical activity (Beighle & Morrow, 2014; Sharma et al., 2011; Tucker et al., 2011; Webster et al., 2013). However, there are a variety of ways in which teachers can introduce physical activity into their student's day simply by expanding their view of the role and nature of movement. These include but are not limited to: the traditional physical education class, brain breaks, and recess.

Physical education class. A structured physical education (PE) class can be run by a certified physical education teacher or by the classroom teacher who has had training in movement education. Physical education classes can last anywhere from 30 minutes in length, which is recommended for the preschool population, to 50-60 minutes in length for the elementary population. During a structured physical education class, the time is generally broken up into a warm-up period, followed by two to three activities that focus on fundamental movement skills such as flexibility, sports related activities and/or gymnastic, and ending with a cool down period (Vale, Santos, Soares-Miranda, Silva, & Mota, 2011).

Physical education is the cornerstone of a comprehensive approach to promoting physical activity through schools. All students, from pre-kindergarten through grade 12, should

participate in quality physical education classes every school day. Physical education not only provides opportunities for students to be active during the school day, but also helps them develop the knowledge, attitudes, skills, behaviors, and confidence needed to be physically active for life. (Center For Disease Control, 2013, p.7)

Physical education classes provide students the opportunity to learn the fundamental movement skills that are crucial to physical development. These skills include but are not limited to: jumping, throwing, catching, running, hopping, skipping, and balancing. Fundamental movement skills do not naturally develop in young children. These skills must be taught to the students; they must be modeled correctly, and each student must be given the opportunity to practice the skills in order for them to master the skills (Robinson, 2011). Not only do structured physical education classes provide an opportunity for students to master basic physical skills, such classes also provide students the much-needed time to spend in moderate to vigorous physical activity (MVPA). Studies have shown that students increase their MVPA when they are enrolled in those schools that provide physical education to their students on a daily basis (Chen et al., 2014; Senlin, Youngwon, Zan, 2014; Vale et al., 2011). Dauenhauer and Keating (2011) conducted research that found students have a greater amount of accumulated step count during the week at school versus their step count on the weekend. This unfortunately shows that students are not being active while at home. This study suggests that children should be given the opportunity to be physically active during the school day. “Physical activity in early childhood is positively correlated with physical fitness in adolescence, supporting the importance of pedagogical practices in physical education that promote the physiological and psychological embedding of behaviors which encourage physical activity” (Reillo, Vlahov, Bohren, Leppo, & Davis, 2010, p. 3).

Brain breaks. Brain breaks are physical activity breaks that not only provide the students a change of pace from their normal academic routine in a non-competitive nature, but they can also be used to get students moving while learning academic concepts (Chen, 2015; Bershwiner & Brusseau, 2012). Brain breaks are used to refocus and reenergize students in a very short period of time. A simple example is the 6,5,4,3,2,1 activity where students are asked to do six different movements with a descending number of repetitions. The teacher would instruct the students to touch their toes six times, and the teacher counts as the students touch their toes. The teacher continues to give students a movement task and count the number requested, for example: jump five times, hop on your left foot four times, hop on your right foot three times, turn in a circle two times, and jump as high as you can one time while clapping your hands. The variations on this one activity are endless. Brain breaks can involve numbers, letters, shapes, colors, sizes, or an infinite number of concepts. The quality and quantity of brain break activities are limited only by the teacher's imagination. Of equal importance to the wide variety of activities is the no to low cost of including brain breaks in the curriculum. Likewise, little or no equipment is needed to incorporate movement into a student's regular school day. Being low cost, requiring little to no equipment, and being able to do the activities in a limited amount of space are crucial in overcoming teachers' perceived barriers in providing them during the class day (McMullen, Kulinna, & Cothran, 2014). Brain breaks, which are designed to include short bouts of structured physical activity, have been shown to increase the amount of time students spend in MVPA (Alhassan et al., 2012; Meyer et al., 2014; Tumynaite et al., 2014; Wadsworth, Robinson, Beckham, & Webster, 2012). Adding a 10-minute physical activity break to the students' day can contribute a significant increase to the students' overall step count, up to as much as 33% (Erwin, Beighle, Morgan, & Noland, 2011; Murtagh, Mulvihill and Markey,

2013). Wadsworth et al. (2012) found in their study that brain breaks accounted for as much as 90% of the MVPA in certain centers and this was “even though preschoolers engaged in outdoor, free play for approximately 45-90 min per day” (p. 393). Providing regular physical activity breaks throughout the school day has also been shown to have a positive effect on students when they are out of school. A study by Tumynaite et al. (2014) found that by incorporating brain breaks into the school day students decreased their sedentary behaviors while at home by as much as 24 minutes. “Integrating movement into transitions or breaks between lessons can energize and refocus students for the upcoming lesson, while also reducing sitting and waiting time that can often lead to off-task behavior” (Orlowski et al., 2013, p.48). Camahalan & Ipock (2015) discovered in their study that incorporating brain breaks into academic lessons contributed to a reduction in fidgeting and off task behavior. They stated, “The decrease in fidgeting seemed to affect the atmosphere of the entire classroom. It was interesting to watch the shift of pencil tappers and desk diggers to calm and engaged students” (p. 296). In a study by McMullen et al. (2014) that focused on the use of activity breaks in the classroom, which incorporated the classes academic content they found,

Some of the teachers mentioned that their students were able to learn the content more effectively when they were incorporated into an activity break. In her first interview, Amber explained this by saying, “I definitely think that the movement is helping them retain information and be more interested in what they are doing.” (p. 518)

Preschools are the perfect place to increase the students’ daily levels of physical activity, and providing brain breaks is an effective technique that does not require lots of space, equipment, or time. Brain breaks should not take the place of recess or a structured physical education class but be used in addition to time spent in recess and PE (Bershwiner & Brusseau,

2012). Brain breaks can be incorporated multiple times throughout the day. It is important that early childhood educators play an active role in the brain breaks and that they role model being physical active to the children (Wadsworth et al., 2012).

This learning style is beneficial to all students, especially boys, children with Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), or Learning Disability (LD), as well as our increasing population of obese children. This program is a win-win situation—students learn by doing, and children are motivated to learn advanced concepts in an active environment. Integrating movement across the curriculum helps children experience physically active, hands-on teaching with academics. (Jones, 2012, p. 6)

Recess. Recess is an unstructured period of time where the teacher allows the students to be physically active and interact with peers on playground equipment as they desire (Chen, 2015). Playground equipment may include, for example, fixed equipment such as swing sets, climbing walls and rope ladders, or portable equipment such as balls, jump ropes, flying discs, or chalk for hop scotch. Unstructured does not mean the absence of equipment, but that activities are not teacher directed. Since students determine what they will do during recess, the amount of time spent in actual physical activity is not evenly distributed among the students (Woods, Graber, & Daum, 2012). Findings suggest that students who were more skilled in fundamental movements were more active than their less skilled peers (Erwin et al., 2012). Recess does not offer the opportunity to learn the fundamental skills only to practice them. Mastering fundamental movement skills is a crucial element in advancing to more complex physical skills. Young children do not naturally know how to properly execute the fundamental movement skills; instead they must be taught these skills in a structured environment (Robinson, 2011).

Gender differences are evident when examining the amount of movement that occurs during recess. Boys were found to be more active during recess than their female peers. Boys spent more time in MVPA and used more of the fundamental movement skills than female students (Saint-Maurice, Welk, Silva, Siahpush, & Huberty, 2011; Woods et al., 2012). Due to the findings, which suggest that many children do not achieve the recommended amount of time in moderate to vigorous physical activity during recess alone, educators and administrators need to assure that recess is not the only form of physical activity available to their students. Rather, the rightful place of recess is as a useful tool to be used on a daily basis in conjunction with PE classes. However, for those students that are active during this unstructured period of time, recess becomes a positive opportunity for them to accumulate additional time spent in MVPA. Students who choose to be active can spend as much as 17%-44% of their total MVPA during recess (Erwin et al., 2012; Ridgers, Saint-Maurice, Welk, Siahpush, & Huberty, 2011). Recess is an essential part of the National Association of Sport and Physical Education's (2009a) guidelines, which state, "Preschoolers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping" (p.14).

Not only does recess provide opportunities for active play, but it also allows time for students to interact with their peers and to learn and practice much needed social skills such as conflict resolution, turn taking, following rules, cooperation, sharing, and problem solving (American Academy of Pediatrics, 2013; Erwin et al., 2012). The American Academy of Pediatrics (2013) has established a list of recommendations concerning recess. They are as follows:

1. Recess is a necessary break in the day for optimizing a child's social, emotional,

physical, and cognitive development. In essence, recess should be considered a child's personal time, and it should not be withheld for academic or punitive reasons.

2. Cognitive processing and academic performance depend on regular breaks from concentrated class- room work. This applies equally to adolescents and to younger children. To be effective, the frequency and duration of breaks should be sufficient to allow the student to mentally decompress.
3. Recess is a complement to, but not a replacement for, physical education. Physical education is an academic discipline. Whereas both have the potential to promote activity and a healthy lifestyle, only recess (particularly unstructured recess) provides the creative, social, and emotional benefits of play.
4. Recess can serve as a counterbalance to sedentary time and contribute to the recommended 60 minutes of moderate to vigorous activity per day, a standard strongly supported by AAP policy as a means to lessen risk of overweight.
5. Whether structured or unstructured, recess should be safe and well supervised. Although schools should ban games and activities that are unsafe, they should not discontinue recess altogether just because of concerns connected with child safety. Environmental conditions, well-maintained playground equipment, and well-trained supervisors are the critical components of safe recess.
6. Peer interactions during recess are a unique complement to the classroom. The lifelong skills acquired for communication, negotiation, cooperation, sharing, problem solving, and coping are not only foundations for healthy development but also fundamental measures of the school experience. (p. 186)

Professional Development

Professional development has been identified as a productive means of enacting higher standards; however, there are barriers that teachers must overcome in order to both engage in professional development opportunities and implement what they have learned. One barrier that Mwonga and Wanyama (2012) identified in their study of 35 early childhood education teachers was the lack of available professional development opportunities. The time, cost, and proximity of professional development opportunities are always of concern. Professional development activities must be designed to meet the practical needs of the largest number of educators possible. Additionally, before early childhood educators can be expected to incorporate high quality movement education instruction into their classroom curricula, educators must understand why this developmental domain is important and how they can go about implementing new ideas into their daily classroom routine. As stated earlier, teachers have limited time and resources to attend professional development. Opportunities for professional development must be both accessible and economical. The need for documenting 24 hours of professional development a year can place a burden on many educators, so ways must be found to provide affordable professional development for every teacher.

The need for professional development (PD) within the early childhood education field to include workshops in movement education is ever present. Many reasons for this need exist and include (a) the importance of movement to the developing brain and body in the early years (b) the importance of providing teachers with the knowledge and skills to provide developmentally-sound, structured physical activity in their classrooms, and (c) an increased emphasis on educational standards. Early childhood is considered the most critical time for development in the physical, cognitive, social, and emotional domains. The focus of early childhood education

must include the opportunity for children to develop in all of the domains. Children's bodies and brains are learning and developing at rapid rates (Chukwbikem, 2013). In order for young children to be prepared, it is imperative that early childhood educators have a deep understanding of how young children develop in each of the domains (Banerjee & Rude, 2013; Whitebook, Phillips, & Howes, 2014). Teachers are expected to have the skills as well as the knowledge to teach students so that they will develop and excel in all developmental domains. Wilcox-Herzog et al. (2013) found

The best way to increase quality of care is to train and educate teachers to provide exceptional caregiving environments and to work in a maximally effective way with all children. Studies indicate that when teachers have more specialized training and education in early childhood, they are more sensitive, playful and involved, they provide better activities, and tend to provide higher quality care overall (p. 336).

The early childhood setting has been recognized as an integral part in addressing increased physical activity during the preschool years (Pfeiffer et al., 2013; Sterdt et al., 2013). Vidoni and Ignico (2011) discussed in their findings how the rise in obesity in even the youngest population is having unrecognized consequences. They posited that the negative outcomes include, but may not be limited to, an increase in heart disease, diabetes, BMI, and cancer related diseases. A lack of physical activity cannot be seen as the only cause for the rise in childhood obesity; however, it is one in which early childhood educators, given adequate training, could impact favorably. Positive outcomes that support including movement-based programs were found by Valentini et al. (2012). Their findings suggest that physical activity boosts students' self-esteem and divergent thinking. They also found that students who were given the opportunity to be physically active during the day became more independent and did not shy

away from new experiences. Academic achievement has also been linked to classes that include physical activity as a teaching tool (Donnelly & Lambourne, 2011). Unfortunately, even with all of the evidence on the benefits that physical activity provides, Christensen et al. (2011) found that with the majority of families having both parents working, more and more children are spending their days in an early childcare setting. If physical activities are not included in early childhood classrooms, a child's time for physical activity is becoming increasingly limited, if not on a practical level, nonexistent. Due to this it is imperative that early childhood educators are knowledgeable in providing age appropriate physical activity. However, while early childhood educators often feel unable to properly plan and implement physical activity lessons, they appear to agree that professional development is an effective means to gaining knowledge in this area (Robinson et al., 2012; Webster et al., 2013). Tucker et al. (2011) conducted research that also identified professional development as a factor that teachers felt would help them in providing physical activity lessons in their classroom. Professional development will afford teachers the opportunity to gain the knowledge needed to incorporate effective movement education in their everyday curriculums. Sherman et al. (2010) stated, "Researchers and practitioners have documented the benefits of well-designed professional development programs to reduce classroom teachers' resistance to teaching physical education" (p. 2).

Higher educational standards affect all levels of education from preschool to adult learners. According to Parkay, Anctil, and Hass (2010), "Typically, "higher standards" was interpreted by parents, the public, and lawmakers to mean that teachers should expect more of their students" (p.253). Just as teachers should come to expect more of their students, so too, individuals are demanding higher standards of the teachers. This drive for higher standards has resulted in curricular reforms, which have taken place nationwide with all states having

implemented standards of learning for their students. These standards reflect what knowledge students should have and should be able to do. Due to the expectation of having to meet higher standards, some teachers have a good deal of skepticism when being told they have to implement a new set of standards. Au and Boyd (2103) stated, “Teachers sometimes have the impression that each new standards document requires a total overhaul of their existing curriculum, when in actuality, standards documents are much more likely to reflect incremental improvements than major shifts” (p. 537). With higher standards in place there follows a greater focus on accountability. This means that teachers and schools are evaluated on how well students perform (Parkay et al., 2010). In the area of early childhood education there are requirements for the number of hours a teacher must obtain with regards to professional development. In a position statement presented in 1993, The National Association of Education for Young Children (NAEYC) stated,

All early childhood professionals—no matter how qualified—need to continue to incorporate into their professional repertoire new knowledge and skills related to working with young children and their families. NAEYC recommends that all early childhood professionals complete 24 clock hours of ongoing professional development each year.

(p. 7)

In order to meet the standards that have been set teachers need professional development opportunities to insure that they meet the standards. To effectively implement new or existing standards teachers need guidance and instruction, which cannot be gained on their own.

Providing professional development is only the first step in working towards having teachers meet the higher standards that have been set. Simply engaging in any professional development option does not guarantee that teachers will implement what they have learned.

Implementation comes from the teachers and in order for this to occur and be effective, the teachers must understand the ideas and believe in the new ideas (Mwonga & Wanyama, 2012). There are many barriers that teachers face with regards to implementing what they have learned in professional development classes. Brown and Inglis (2013) found in their case study with early childhood educators that the teachers who attended professional development classes needed to feel supported by their directors to make changes. They were encouraged to continue to apply their new knowledge when they could actually see changes taking place in their students. Another barrier they encountered in the study was teachers who tried to implement more than one item at a time. When this happened, teachers saw their attempts as unsuccessful and abandoned their efforts to implement the new ideas. French and Wagner (2010) found in their mixed method study of early childhood educators that support by a supervisor and being able to see student change was key to implementing change. However, they also found “Teachers’ perceptions of their work environments interacted with the professional development experience in ways that either sustained or undermined their attempts to change their practice. Salient subcategories included support, choice/control, and collegiality” (p.164).

An often-ignored barrier to adding a movement-based component to the early childhood curriculum is teacher attitude. Any change creates a period of uncertainty; it upsets the known status quo and unbalances the existing structure. Successful change requires not only the support of administration but also that attention be paid to the attitudes of the teachers who will implement the changes. Teacher attitudes must be as much a part of professional development opportunities as curriculum content, teaching strategies, and implementation (Mwonga & Wanyama, 2012). There is no doubt that sound professional development must meet the needs and concerns of the teacher for whom it is intended. Additionally, effective professional

development should allow implementation by teachers with minimum disruption. A rarely discussed barrier to adding a structured movement program to the classroom seems to be that movement education takes too much time and too much space. Teachers could have a difficult time envisioning a meaningful program that costs little and, if need be, could be done standing next to a classroom desk. Tucker et al. (2011) conducted a qualitative study with 35 early childhood educators that investigated what early childhood educators would suggest for improving the amount of physical activity time in their classrooms. They found teachers held the attitude that they did not have enough equipment, time in the day to schedule physical education lessons, or space for the children to be active. Other more personal barriers include feeling that the children were out of control when engaging in physical activity, the teacher's own lack of desire to be outside, and not feeling as though there was sufficient time or energy to get the young children ready for outside play, especially in the colder months (Copeland et al., 2012). Safety is another barrier that teachers state keeps them from implementing any physical activity lessons. A study by Sandseter (2012) found that if a teacher perceived any activity or play to be risky, they were more apt to not allow the students to engage in that activity. They are not comfortable with their students in active play and therefore, do not provide these types of opportunities to the students. Educating early childhood teachers on creative, simple, space-limited physical activities is a fertile topic for professional development.

There are many elements that go into designing high quality professional development opportunities for early childhood educators. Providing professional development can assist teachers in obtaining the necessary skills and knowledge to provide implementation of movement education into the classroom. Teachers as well as directors would benefit by educating themselves on existing guidelines. Administration must assure that effective

professional development is provided to the staff so that they are confident and empowered to fully engage students in developmentally appropriate physical activity opportunities.

Summary

With the health of the youngest of the nation's population at stake, it is imperative that opportunities are provided to those children who spend the bulk of their day in childcare settings (Alkon et al., 2014). Studies have focused on how much students participate in physical activity during their regular school day and the benefits that such participation provides to the physical, social, emotional, and cognitive domains of early childhood (Chukwbikem, 2013; Serpentino, 2011). Other studies have examined reasons why teachers do not provide physical activity in the early childcare setting (Beighle & Morrow, 2014; Sharma et al., 2011; Tucker et al., 2011). However, at this time there exists a very little research in the area of early childhood educators who do provide physical activity opportunities and their perceptions on the role physical activity plays in early childhood education.

By shedding light on the role physical activity plays in the preschool classroom, the field of physical education and early childhood education can construct a more complete understanding of this phenomenon. Changes in the way this population of teachers is educated on the importance of physical activity as a teaching tool in early childhood can be made. Overall, discovering what perceptions and practices exist in the early childhood classroom will provide an avenue to enhance student learning and development in all developmental domains. The data gathered in this study will lead to a greater understanding of this phenomenon, which is not covered in current literature. The data collected from this study will extend the knowledge about the utilization of the social constructivist theory and the role of the teacher and physical activity in early childhood education.

CHAPTER THREE: METHODS

Overview

This qualitative multiple case study addresses an identified gap in the current literature by examining the perceptions held by early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia about the role of physical activity in early childhood education. The theoretical framework for this study is Vygotsky's (1978) social constructivist theory; this maintains that individuals are not passive learners, but that students must interact with their environments to learn. Social constructivism also maintains that each person holds a different perspective about an experience based on his or her previous experiences and these experiences build upon themselves to create new knowledge. The following sections are provided to give a clear description of the research conducted: design, research questions, setting, participants, procedures, researcher's role, data collection, data analysis, trustworthiness, and ethical considerations.

Design

This study utilized a qualitative multiple case study design. By selecting a qualitative design I had the opportunity to explore the phenomenon of the perceptions held by early childhood educators in Eastern Virginia about the role physical activity plays in early childhood education. Creswell (2013) stated, "Qualitative researchers gather up-close information by actually talking directly to people and seeing them behave and act within their context" (p. 45). A qualitative study is the most appropriate approach for this study because it allowed me to gather multiple perspectives from multiple data sources to develop a detailed picture of the phenomenon.

A case study design was selected because I looked at a phenomenon where I had no control over the behavioral events of the participants; I studied a contemporary phenomenon and I sought to answer the question of how (Yin, 2014). The nature of case studies is to closely examine the phenomenon that exists. Yin (2014) stated, “A case study is an empirical inquiry that investigates a contemporary phenomenon (the “case”) in depth and with in its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident” (p.16). The cases in this study are the early childhood educators at each site.

Choosing to use multiple cases helped illustrate the issue and provide for a greater understanding by providing multiple perspectives that were analyzed within cases and across cases (Creswell, 2013; Yin, 2014). The case is the main focus of the study and is represented in this study by early childhood educators who intentionally implement physical activity during their class day.

Research Questions

The purpose of this qualitative multiple case study was to describe the perceptions held by selected early childhood educators in select schools in Eastern Virginia about the role of physical activity in early childhood education. These early childhood educators provided opportunities for physical activity during their class time based on the presurvey results. The following research questions guided this study:

Central Question

How do early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education?

Guiding Questions

Research Question 1. What role/purpose do selected early childhood educators believe physical activity provides the students in early childhood education?

Research Question 2. What experiences contribute to early childhood educators' knowledge about physical activity in early childhood?

Research Question 3. What experiences influence the early childhood educators' choice to implement physical activity during their class time?

Sites

The setting for this multiple case study was Eastern Virginia, specifically, the areas of Virginia Beach, Norfolk, Hampton, Portsmouth, and Chesapeake. One school from each area was selected, and the schools varied according to level of accreditation/licensure. The sites may or may not be licensed through the state of Virginia, accredited by the National Association for the Education of Young Children (NAEYC), and/or rated by the Virginia Star Quality Initiative (VSQI). Some sites may have multiple accreditations. By selecting multiple sites “the overall study is therefore regarded as being more robust” (Yin, 2014, p. 57). The reason behind selecting the multiple sites was to allow analysis within each setting and across settings (Stake, 2006).

An important reason for doing the multicase study is to examine how the program or phenomenon performs in different environments. This often means that cases in both typical and atypical settings should be selected. When cases are selected carefully, the design of a study can incorporate a diversity of contexts. (Stake, 2006, p. 23)

This study's research focus was the early childhood educators' perceptions of physical activity in early childhood education. While the participating teachers were the cases that were

studied, the preschools were the natural choice as site locations.

The five sites that were chosen were (a) Whitten Preschool in Hampton, Virginia, (b) Nantucket Preschool in Norfolk, Virginia, (c) Children's Port Preschool in Portsmouth, Virginia, (d) Poplar Day Preschool in Virginia Beach, Virginia, and (e) Great Beginnings Preschool in Chesapeake, Virginia. Pseudonyms were used for each site.

Whitten Preschool in Hampton, Virginia is a religiously exempt center and does not require a license from the Virginia Department of Social Services. The program does participate in Virginia's Star Quality Initiative (VSQI) and received a four-star rating. The city of Hampton has a population of 136,879 and is 49.8% African American, 43.3% Caucasian, and 2.4% Asian. The median household income is \$50,705 (State and County Quick Facts, 2015).

Nantucket Preschool is a preschool program and child development lab. They recently partnered with Norfolk City Public Schools and enrolled at risk children. They are accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia's Star Quality Initiative (VSQI) and has four-star rating. The city of Norfolk has a population of 245,428 and is 49.2% Caucasian, 42.7% African American, and 3.7% Asian. The median household income is \$44,747 (State and County Quick Facts, 2015).

Popular Day Preschool in Virginia Beach, Virginia is Christian child development program. They are accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia's Star Quality Initiative (VSQI) and received a four-star rating. The city of Virginia Beach has a population of 450,980 and is 68.6% Caucasian, 20% African American, and 6.8% Asian. The median household income is \$65,219 (State and County Quick Facts, 2015).

Children's Port Preschool in Portsmouth, Virginia is a non-profit certified United Way agency. They are NAEYC accredited and participate in Virginia's Star Quality Initiative (VSQI) and received a three-star rating. The city of Portsmouth has a population of 96,004 with 41.6% Caucasian, 53.3% African American, and 1.1% Asian. The media household income is \$46,166 (State and County Quick Facts, 2015).

Great Beginnings Preschool in Chesapeake, Virginia is a full-day NAEYC accredited early childhood program. They also participate in Virginia's Star Quality Initiative and received a four-star rating. The city of Chesapeake has a population of 233,371 with 62.6% Caucasian, 29.8% African American, and 2.9% Asian. The median household income is \$69,743 (State and County Quick Facts, 2015).

Participants

Purposeful sampling was used to select preschool teachers at the sites presented above in Eastern Virginia who were the lead teacher for either three, four, or five year olds. Purposeful sampling "selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study" (Creswell, 2013, p. 156). Maximum variation was used to capture a wide range of perspectives. Teachers varied according to the ages of students they taught, years of teaching experience, and level of education. Two teachers from each site were sampled to work towards the best possible understanding of the phenomenon. Stake (2006) stated, "The benefits of multicase study will be limited if fewer than, say, 4 cases are chosen, or more than 10" (p. 22). Ten teachers total, two from each site, allowed saturation of the data to occur (Stake, 2006). Surveys were used to aid in selecting only those teachers who provided students the opportunity to participate in physical activity during the class day. The selection survey (see Appendix A) contained demographic

questions as well as those focused on the use of physical activity. The questions addressing physical activity helped to determine if they, at any time during the school day other than the scheduled recess time, provided opportunity for their students to engage in either structured or unstructured physical activity. If they did allow time in physical activity, then they were selected. If they did not allow any physical activity other than the normally scheduled recess time, they were not a part of the study. Demographic results of the survey showed that 100% of the participants were female, and 50% were African American and 50% were Caucasian. Table 1 provides a summary of the participant's school where they teach, age, highest level of education, and years of teaching experience.

Table 1

Participant Characteristics

Name Pseudonym	School	Age	Highest level of education	Years of Teaching Experience	Ethnicity
Linda	Nantucket Preschool	50	Bachelors degree	7 years	African American
June	Poplar Day Preschool	36	Bachelors degree	8 years	Caucasian
Charlotte	Whitten Preschool	44	Associate degree	16 years	African American
Kendra	Whitten Preschool	35	Bachelors degree	10 years	Caucasian
Veronica	Poplar Day Preschool	51	Vocational	20 years	Caucasian
Natalie	Nantucket Preschool	38	Masters degree	18 years	African American
Kylie	Great Beginnings	28	Bachelors degree	5 years	Caucasian
Cindy	Great Beginnings	64	Masters degree	42 years	Caucasian
Abbey	Children's Port	50	Bachelors degree	25 years	African American
Suzie	Children's Port	61	Bachelors degree	32 years	African American

Procedures

Approval from Liberty University's Institutional Review Board (IRB) was obtained before any data collection occurred (see Appendix M). Following IRB approval, teachers from each of the five sites who taught three, four, or five year olds were given the survey (see Appendix A) to see if they were eligible to be part of the study. After the teachers were identified, I had them fill out the consent form (see Appendix H).

Prior to data collection, participating educators were given the opportunity to pick a pseudonym, and the school was given a pseudonym. Times were then determined with each teacher for observations to be conducted and for interviews to take place. Data collection began with the collection and analysis of documents. The documents analyzed for information regarding physical activity included two to four weeks of daily lesson plans, the school website, school brochures, schedules of class time posted in the classroom, and parent newsletters. Observations took place before interviews so that I would not influence or bias the teachers with the physical activity-oriented interview questions. Unscheduled observations in a predetermined time frame were performed on various days and at various times based on the classroom schedules. Before the formal interviews took place, six experts reviewed the interview questions to help ensure the questions were focused on the investigated topic. The questions were piloted with a small sample meeting the criteria outside of the study to ensure clarity of wording. Interviews were held in the schools at locations determined by the teachers and/or directors. I recorded and transcribed verbatim the interviews. Member checks were used to validate the data collected. Member checks allowed the participants to verify the interview transcripts and gave them the opportunity to add, delete, or change anything (Creswell, 2013).

The Researcher's Role

I am an associate professor in the physical education department at a community college in Eastern Virginia and have been a certified personal trainer for 22 years. Having taught in the preschool setting as a movement education resource teacher, I felt the need to conduct presentations on movement education at various conferences and school systems. Due to my career path, I have become deeply interested in understanding the perceptions held by early childhood educators who implement physical activity into their class day.

I pursued this qualitative study as a human instrument (Creswell, 2013) and conducted the teacher interviews, observed the teachers, and reviewed the class documents. I had no previous connections with the teachers. I kept my background and professional status out of the information given to them so as not to influence their answers or behavior. My role in the setting was that of a non-participant during any observation time in the classroom. Creswell (2013) stated, “Qualitative researchers need to ‘position’ themselves in their writing. This is the concept of reflexivity in which the writer is conscious of the biases, values, and experiences that he or she brings to a qualitative research study” (p. 216). It was important for me to be aware of my assumptions and biases as I was conducting the data collection, analysis, and interpretation. The way in which I became more aware was to provide self-disclosure statement (see Appendix B), which is an identification of assumptions, interests, and experiences that could influence the study (Creswell, 2013).

Data Collection

Data was collected through three different means and included document analysis, observations and one-on-one semi -structured interviews. No data was collected until IRB approval was obtained. Using three different data collection methods allowed for triangulation and increased credibility of the study (Yin, 2014).

Documents

The documents that were collected included information regarding physical activity on the school website, school brochures, two to four weeks of teacher lesson plans, schedules of class time posted in the classroom, and parent newsletters. Information obtained that focused on physical activity from the document analysis assisted me during observations and when addressing the interview questions. Document analysis is also an important part of triangulating

the data (Yin, 2014). Document analysis began with coding which allowed me to organize the data and identify themes within the cases.

Observations

Each teacher was observed in their classroom two times. Stake (1995) stated, “Observations work the researcher toward greater understanding of the case” (p. 60). Dates and times were determined based on the class schedule. Observations consisted of scheduled and unscheduled times during the class day. Three sets of notes were gathered using an observation protocol (see Appendix K) : raw data, interpretation and personal. Observations focused on the amount of time spent in physical activity and the type of physical activity performed. My role was that of a non-participant observer in the classroom. Creswell (2013) discusses that a nonparticipant observer’s role is to perform observations and take notes without direct involvement with the participants. While being visible to students may cause some disruption, the goal was to remain as unobtrusive as possible.

Interviews

After the observation data and documents were analyzed, interviews with each of the teachers were conducted in a one-on-one semi -structured format. Interviews occurred at the site and were conducted as needed to reach saturation of the data. Interview questions were structured based on the literature, observations and document analysis. Prior to the interviews a team of interrater experts from the field reviewed the questions to ensure they were focused on the topic and offered suggestions (Appendix O). The interraters included:

- A professor of teacher education and curriculum and instruction in the department of Kinesiology at the University of North Carolina at Greensboro.

- An elementary school principal who received her doctorate degree in education from Regent University.
- An associate professor in the health department for a community college who received her doctorate degree in health and urban studies.
- A psychologist with a master's degree in physical education and doctorate in education
- An assistant principal who received her doctorate in education and a masters in early childhood education.
- An instructor in the physical education department at the community college who received her doctorate in anthropology of human movement. Her master's degree was earned in dance and teaching certification.

The interview questions (Appendix I) focused on various aspects of physical activity, physical education and professional development. The purpose of these questions was to gather information regarding the educators' perspectives on the role physical activity plays in early childhood education.

Data Analysis

Stake (1995) stated "There is no particular moment when data analysis begins. Analysis is a matter of giving meaning to first impressions as well as to final compilations" (p. 71). During data analysis, I used Stake's (2006) worksheets to analyze the findings. There were various steps taken during data analysis for each individual case and across cases. However, before I began analyzing the cases, I first provided a self-disclosure statement, which is an identification of assumptions, interests, and experiences that could influence the study (Creswell, 2013). A self-disclosure statement is located in Appendix B.

Within Case Analysis

A detailed description of each case (teacher) studied was written. Providing a rich description of each case allows the reader to visualize and experience the participants in their setting (Stake, 1995). Each case was analyzed for themes, which emerged from the documents, observations, and interviews. During case analysis coding occurred. “The process of coding involves aggregating the text or visual data into small categories of information, seeking evidence for the code from different data bases being used in a study, and then assigning a label to the code” (Creswell, 2013, p. 184). The coding allowed organization of the data and identified themes within the cases. Specifically, I made notes in the margins, underlined, and used color-coding when reviewing the participants’ interviews as well as the observations and documents reviewed. I looked for similarities in the participants’ responses as well as differences. Words, phrases, and quotes were noted to assist in analysis (Stake, 2006)

Triangulation increased assurance that the data collected was free from biases and painted as clear a picture as possible of the cases. Stake (2006) stated, “The process of triangulation occurs throughout the field work and analysis. It means being redundant and skeptical in seeing, hearing, coding, analyzing, and writing” (p. 77). Gathering data from multiple sources (interviews, observations, and documents) and being meticulous about taking notes and coding allowed for greater triangulation (Yin, 2014).

Cross Case Analysis

Cross case analysis occurred next, allowing any emerged themes across the cases to be examined for commonalties and differences. Worksheets by Stake (2006) were used to help identify the themes of each case as well as similarities and differences within the cases. Stake offers a number of worksheets to use in multiple case studies. Worksheet 2 (see Appendix C)

focused on the themes/research questions of the study. I numbered the themes/research questions in order of “their value in adding to the understanding of the Quintain” (Stake, 2006, p. 43). Stake (2006) defined a Quintain as “an object or phenomenon or condition to be studied- a target, but not a bull’s eye” (p. 6). Worksheet 3 (see Appendix D) focused on the researcher’s notes while examining the case reports. Each case was given its own Worksheet 3 where a synopsis, case findings, uniqueness of case, relevance of case for cross case themes, and commentary were discussed. Worksheet 4 (see Appendix E) focused on the “expected utility of each case for each theme” (Stake, 2006, p. 49). The utility refers to the usefulness of the case for developing the specific theme. Worksheet 5B (see Appendix F) is a matrix that helped in developing assertions based on the theme from the merged findings (Stake, 2006).

Assertions

Lastly, assertions were provided as an interpretation of the data collected in terms of my personal views as well as in terms of the literature (Stake, 2006). Worksheet 6 (see Appendix G) provided a visual for developing assertions from the findings. Stake (2006) discussed assertions and stated, “They will take evidence from the case studies to show how uniformity or disparity characterizes the Quintain” (p. 40).

Trustworthiness

Multiple methods for establishing trustworthiness were used in this study. Credibility was increased through triangulation. According to Yin (2014), triangulation is “the convergence of data collected from different sources, to determine the consistency of a finding” (p. 241). The three sources of data collection that were used for triangulation were observations, interviews, and document analysis. Member checks were done during the data collection, most specifically after interviews to increase credibility of the study. Lincoln and Guba (1985) stated, “Member

checking is both informal and formal, and it occurs continuously. Many opportunities for member checks arise daily in the course of the investigation” (p. 314). Member checks allowed the participants to verify the interview transcripts and give them the opportunity to add, delete, or change anything. After members received their interview transcripts, a few responded via email that everything looked correct and they did not see the need for any changes. Of the ones that did not respond phone calls were placed to get the participants’ feedback. Each participant responded that the interview transcripts were correct and did not require any edits. Reflexivity is another way to increase the credibility of the study; this involves discussing one’s biases and assumptions that are brought to the study. I discussed in the section titled “Researchers Role” my background and experiences that could bring about potential biases.

One of the methods used in this study to increase transferability was using thick, descriptive data. This method has the researcher using detail when describing the setting and the participants as well as in the methods used. The reader can then make the transfer of information to other settings based on the data (Lincoln & Guba, 1985). Maximum variation among the sites and participants increases opportunities for transferability of the findings to other settings. By having participants who vary according to years of teaching, ages taught, level of education, and race, the findings will have increased transferability.

Using an audit trail and an external auditor increased the dependability/confirmability of this study. The audit trail was the documentation of all aspects of the study. This included raw data, data reduction, data reconstruction, process notes, personal notes, and instrument development (Lincoln & Guba, 1985). Detailed collection of documentation allowed the external auditor to review all parts of the study. The external auditor for this multiple case study was a health professor at the local community college who has a Ph.D. in Urban Services Leadership

with a concentration in Health Promotion and Education from Virginia Commonwealth University. After reviewing this multiple case study the external auditor stated,

My broad stroke comments are: Data is plural, but many accept it as singular so I would not stress you to go back and revise. In your methodology section, I just suggest you put every detail so someone else can replicate the study. I also would encourage the use of pseudonyms. Your methodology was solid and the analysis was thorough and appropriate for the multiple case study design.

Ethical Considerations

The ethical considerations addressed for this study started prior to any data collection. First, IRB approval was obtained, and then after site approval participants signed a consent form explaining their rights as participants. The informed consent form also explained the purpose of the study. While there was no deception in the explanation of the purpose of the study, I did keep my background and professional status concealed so as not to influence their answers or behavior. While collecting data, all electronic information was kept on password-protected files. All other data was kept in a locked filing cabinet. All recorded interviews were destroyed at the end of the study. Pseudonyms for the sites and participants were used in all reporting of the data to provide anonymity (Creswell, 2013). The list of sites, participants, and their pseudonyms was kept on a password-protected file on my personally-used computer

Summary

Chapter Three gives details of this qualitative multiple case study. The section on research design explained why the multiple case study was selected. Discussion of the purposive sampling of early childhood educators was given and the sites were described in detail. The researcher's role in the study and how it might affect the design and data collection were

discussed. Data collection consisted of document analysis, observations and interviews with the teachers. Data analysis was outlined to give the reader an insight into how the study was conducted. Ways in which trustworthiness would be established were outlined and ethical considerations were explored concerning the participants and sites that were used in the study.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this chapter is to present the analysis of data, which includes: observations, interviews, and documents. The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. By discussing the role physical activity plays in the preschool classroom, the field of physical education and early childhood education can construct a more complete understanding of this phenomenon. Each school and participant were provided pseudonyms to maintain confidentiality. An initial survey was sent out to teachers of three to five year olds at each site to determine if they qualified for the study. After teachers were identified for the study, document collection, observations, and interviews took place.

The questions that guided this multiple case study were:

Central Question

How do early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education?

Guiding Questions

Research Question 1. What role/purpose do selected early childhood educators believe physical activity provides the students in early childhood education?

Research Question 2. What experiences contribute to early childhood educators' knowledge about physical activity in early childhood?

Research Question 3. What experiences influence the early childhood educators' choice to implement physical activity during their class time?

Cases

Kendra

Kendra is a 35-year-old teacher who teaches four and five year olds at Whitten Preschool in Hampton, Virginia. The school is a religiously exempt center and does not require a license from the Virginia Department of Social Services. The program does participate in Virginia's Star Quality Initiative (VSQI) and received a four star rating. Kendra has been teaching preschool for 10 years and has been at Whitten for the last two years. There were 18 students in her class, and they attend five days a week from 9am to 12pm. She has an assistant with her each day to assist with the students. Her survey answers showed that she is required to make lesson plans and that she does promote physical activity inside and outside the classroom. She commented in her survey that physical activity inside the classroom is structured and lasts for 30 minutes, and outside the classroom is free time and lasts for 30 minutes. There are no outside resource aides or teachers that come in and offer movement education to the students. Kendra is responsible for any and all physical activity provided to her students. Whitten preschool has a large playground outside with swings, climbing equipment, slides, and room to run around. There is also a large activity room inside the preschool where teachers can take their students on rainy days for recess. Parachutes, balls, music, balance beams, beanbags, and riding toys are provided. Kendra's classroom has two large areas where the students can move around freely.

Charlotte

Charlotte is a 44-year-old teacher who teaches the three year olds at Whitten Preschool in Hampton, Virginia. Whitten is a religiously exempt center and does not require a license from

the Virginia Department of Social Services. The program does participate in Virginia's Star Quality Initiative (VSQI) and received a four star rating. Charlotte has been teaching in the preschool setting for 16 years and has been at Whitten for the last three years. There were 14 students in her class, and they attend from 9am-12pm. Each student was different in that they may or may not have attended five days. Some students attended three days and some attended all five days. Charlotte did have an assistant to assist her each day. Her survey answers showed that she is required to make lesson plans and that she does promote physical activity inside and outside of the classroom. The time devoted to physical activity inside and outside of the classroom is both structured and free time. The amount of time she feels children are being physically active both inside and outside the classroom is 30-45 minutes. There are no outside resource aides or teachers that come in and offer movement education to the students. Charlotte is responsible for any and all physical activity for her students. Whitten preschool has a large playground outside with swings, climbing equipment, slides, and room to run around. There is also a large activity room inside the preschool where teachers can take their students on rainy days for recess. Parachutes, balls, music, balance beams, beanbags, and riding toys are provided. Charlotte's classroom is very small and only has one 8-by-10 area where she has room for the students to move around freely.

June

June is a 36-year-old teacher who has been teaching preschool for eight years, and the last four years have been at Popular Day Preschool. Popular Day Preschool in Virginia Beach, Virginia is a Christian child development program. They are accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia's Star Quality Initiative (VSQI) and

received a four star rating. June teaches the four and five year olds and has 15 students in her class. Her class meets five days a week from 9:20 am-12:20 pm. She has an assistant that helps her each day. Her survey results show that she is required to make lesson plans. When asked about promoting physical activity inside of the classroom her response was “Sometimes”. She stated in her survey that the physical activity in the classroom is both structured and free time. Her response to how much time the students are physically active inside the classroom was, “They are active for most of the time they are here.” Her survey stated she does promote physical activity outside of the classroom and it is both structured and free time. The amount of time students spend in physical activity on the playground is 45 minutes. Popular Day does provide movement education once a week for 30 minutes to her students. The preschool has a large outdoor area for recess including swings, climbing equipment, balance logs, riding area, and lots of room to run freely. Popular Day also has a large indoor area for teachers to use on rainy days. Equipment such as parachutes, balls, music, balance beams, beanbags, and more are provided for the teacher to use. June’s room is not set up for students to have room to be physically active. The room has learning stations set up with desks and chairs that take up much of the space. There is an 8-by-10 rug that students are allowed to use for dancing.

Veronica

Veronica is a 51-year-old teacher who has been teaching in the preschool setting for 20 years and has been at Poplar Day Preschool for the last three years. Popular Day Preschool in Virginia Beach, Virginia is a Christian child development program accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia’s Star Quality Initiative (VSQI) and received a four star rating. Veronica teaches the four year olds and has 15 students in her class.

Her class meets five days a week from 9:20 am-12:20 pm. She has an assistant to help her during the day. Her survey results show that she is required to make lesson plans and that it helps her “set learning goals for the children.” Veronica’s survey indicated that she does promote both structured and free time physical activity both inside and outside of the classroom. Her survey answers showed that her students spend about 20 minutes in the classroom being physically active. Outside the classroom she has them spend about 10 minutes of the 30 minutes required to be outside in structured activity. Popular Day does provide movement education once a week for 30 minutes to her students. Popular Day has a large outdoor area for recess including swings, climbing equipment, balance logs, riding area, and lots of room to run freely. Popular Day also has a large indoor area for teachers to use on rainy days. Equipment such as parachutes, balls, music, balance beams, beanbags, and more are provided for the teacher to use. Veronica’s room is not set up for students to have room to be physically active. The room has learning stations set up desks and chairs take up much of the space. There is an 8-by-10 rug that students are allowed to dance to music on, do their morning exercises, and sit down for circle time.

Natalie

Natalie is a 38-year-old teacher who has been teaching preschool for 18 years. She has been at Nantucket Preschool for the last four years. Nantucket Preschool is a preschool program and child development lab. They recently partnered with Norfolk City Public Schools and enroll at-risk children. They are accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia’s Star Quality Initiative (VSQI) and has a four-star rating. Natalie teaches the four-year-old class. She had 13 students in her class. They attend five days a week from 7:30 am-5:30 pm. Natalie is required to make lesson plans and stated, “They help to implement

content and skills.” Her survey results show that she does promote physical activity inside the classroom and it is allowed during free time. She also promotes physical activity outside the classroom both structured and free time. She did not respond to how much time students are physically active in the classroom. Outside the classroom she responded they are active about one hour a day. She had an assistant teacher each day. Nantucket Preschool has kinesiotherapy interns throughout the school year coming into the classroom to work with the students. They provide indoor and outdoor gross motor activities three times a day for 15-45 minutes. Nantucket preschool has an outdoor playground with slides and climbing equipment. Inside they have a large hallway where they can ride their trikes, play games, and be physically active. The classroom is quite large, and there are multiple carpeted areas where the students can move about freely.

Linda

Linda is a 50-year-old teacher who teaches the three-year-old class at Nantucket Preschool. Nantucket Preschool is a preschool program and child development lab. They recently partnered with Norfolk City Public Schools and enrolled at-risk children. They are accredited by the National Association for the Education of Young Children (NAEYC) and by the Virginia Department of Social Services. The program also participates in Virginia’s Star Quality Initiative (VSQI) and has a four-star rating. Linda has been teaching 17 years. She worked for the public school system prior to her time at Nantucket. She has been with Nantucket for seven years. Her class consists of eight students. She does not have a full time assistant. She does, however, have student teachers that are completing their practicum that come in each semester and assist her. She is required to write lesson plans but comments that “Plans are made but not used daily”. Her survey responses showed that she does promote structured and free time physical activity inside

and outside of the classroom. Inside the classroom, physical activity can be up to one hour and 15 minutes accumulated throughout the day. Outside physical activity can be up to 45 minutes. Nantucket Preschool has kinesiotherapy interns throughout the school year coming into the classroom to work with the students. They provide indoor and outdoor gross motor activities three times a day for 15-45 minutes. Nantucket preschool has an outdoor playground with slides, and climbing equipment. Inside they have a large hallway where they can ride their trikes, play games, and be physically active. The classroom is not as large as the adjacent four-year-old classroom. There is one carpeted area they use for movement and music.

Abbey

Abbey is a 50-year-old preschool teacher for Children's Port Preschool. Children's Port Preschool in Portsmouth, Virginia is a non-profit certified United Way agency. They are NAECY accredited and participate in Virginia's Star Quality Initiative (VSQI) and received a three-star rating. Abbey has been teaching preschool for 25 years and has been at Children's Port for two years. She teaches the four and five year olds and has 10 students in her class. She does not have an assistant teacher. The students attend preschool five days a week and are there from 7:30 am- 6pm. She is required to make lesson plans. Her survey results showed that she does promote physical activity inside and outside the classroom, but she did not comment whether it was structured or free time. Her response to how much physical activity is promoted inside is 15 minutes and outside is 30 minutes. There are no outside resource teachers or aides who come in and offer movement education to the students. Abbey is responsible for any and all physical activity for her students. Children's Port has a large outside area for recess. It has swings, climbing equipment, slides, and trikes to ride on as well as a large grassy area for free play. Her

classroom has one carpeted 8-by-10 area where students can gather for music and movement. The rest of the classroom is set up with tables and chairs and learning stations.

Suzie

Suzie is a 61-year-old teacher at Children's Port Preschool in Portsmouth, Virginia. Children's Port Preschool is a non-profit certified United Way agency. They are NAECY accredited and participate in Virginia's Star Quality Initiative (VSQI) and received a three-star rating. She has been teaching for 32 years and has been at Children's Port for the last 10 years. She teaches the three year olds and has 11 students in her class. She has a full-time assistant to help her in the classroom. She is required to make lesson plans and comments in her survey that "It helps with classroom management." She also commented that she promotes both structured and free time physical activity inside and outside of the classroom. She commented that students are active for about 30 minutes a day outside and 30 minutes a day inside. There are no outside resource teachers or aides that come in and offer movement education to the students. Suzie is responsible for any and all physical activity for her students. Children's Port has a large outside area for recess. It has swings, climbing equipment, slides, and trikes to ride on as well as a large grassy area for free play. Her classroom has one carpeted 8-by-10 area where students can gather for music and movement. The rest of the classroom is set up with tables and chairs and learning stations.

Cindy

Cindy is a 64-year-old teacher at Great Beginnings Preschool. Great Beginnings Preschool in Chesapeake, Virginia is a full-day, NAECY-accredited early childhood program. They also participate in Virginia's Star Quality Initiative and received a four-star rating. Cindy has been teaching in the preschool setting for only three years but has been a teacher in the

public school system since 1974 teaching K-5. She has been with Great Beginnings for the last two years. At Great Beginnings she teaches the three year olds and has 16 students in her classroom. She has two full time assistants to help her each day. The students attend five days a week and are there from 8 am-12:30 pm. According to her survey results, she is required to make lesson plans and commented, "It [lesson plans] helps me monitor/pace myself as well as my students." Her survey results also showed that she promotes structured and free time physical activity inside and outside of the classroom. Inside the classroom she commented that her students are being active from two and a half hours to two hours and 45 minutes. Outside physical activity time is unstructured for 30 minutes. Great Beginnings has two separate companies come in each week and provide physical activities for the students. One company provides 30 minutes of yoga to the students each week, and another company comes every other week and provides 30 minutes of physical activity in the form of games and music to the students. The lead teachers are not required to be present during these classes, and the teachers use this time for setting up for their next academic lesson. The outside play area provides swings, slides, and climbing equipment. There is not a large area for free play or running around. On rainy days there is no area to take the students to. Her classroom has one carpeted area where the students gather for circle time and dance to music she provides. The rest of the classroom is set up with tables, chairs, and learning stations.

Kylie

Kylie is a 28-year-old teacher at Great Beginnings Preschool. Great Beginnings Preschool in Chesapeake, Virginia is a full-day, NAECY-accredited early childhood program. They also participate in Virginia's Star Quality Initiative and received a four-star rating. She has been teaching in the preschool setting for five years, and the last three have been at Great

Beginnings. She teaches the four and five year olds and has 15 students in her classroom. She had a full time assistant to help in the classroom. Her students attend five days a week from 8 am- 12:30 pm. She is required to make lesson plans and commented on her survey that, “Having a lesson plan makes the day go smoothly and makes sure that all topics are covered. It also ensures that the teacher is prepared for the day.” She also commented in her survey that she does promote physical activity inside and outside of the classroom. Inside the classroom, her physical activity is both structured and free time, and the students are active about a half hour each day. Physical activity outside lasts for a half hour and she comments, “The physical activity outside the classroom is our time on the playground which is always a free time for the students to explore and make their own games.” Great Beginnings has two separate companies come in each week and provide activities for the students. One company provides a half hour of yoga each week and the other company comes every other week and provides a half hour of physical activity in the form of games and music. The outside play area provides swings, slides, and climbing equipment. On rainy days there is no area to take the students to. Her classroom has one carpeted area where the students gather for circle time and dance to music she provides. The rest of the classroom is set up with tables, chairs, and learning stations.

Results

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in select schools in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. Data was collected through surveys, interviews, observations, and document collection. The cases were analyzed for themes, which developed from the documents, observations, and interviews. Coding was conducted during case analysis. This allowed

organization of the data and identified themes within the cases. Notes were made in the margins, and color-coding was used when reviewing the participants' interviews, observations, and documents. Similarities in the participants' responses as well as differences were established. The next step was cross case analysis, which allowed any emerged themes across the cases to be examined for commonalities and differences. Worksheets by Stake (2006) were used to help identify the themes of each case as well as similarities and differences within the cases. The last step was to provide assertions as an interpretation of the data collected. Assertions were made within the cases and across cases.

The following is a summary of findings based on the research questions that guided this study.

Central Question

How do early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education? The following research questions one through three all contribute in answering the central research question.

Research Question 1 (RQ1). What role/purpose do selected early childhood educators believe physical activity provides the students in early childhood education? This question helps to identify the early childhood educators' understanding about the role or purpose that physical activity fulfills in early childhood education. Through observations, interviews, and document collection, three major themes emerged regarding RQ1. They included: (a) expending energy, (b) cognitive development, and (c) physical development. Each of these are discussed in the following section.

Expending energy. All of the teachers mentioned “getting the wiggles out,” “getting them tired,” or “burn some energy off,” during the teacher interviews when asked what is your purpose for providing physical activity in early childhood. Abbey explained, “Sometimes, I can tell, okay, we need to go and get some muscles moving and get you guys to release a little bit.” Veronica stated, “Well, just to burn some energy off to calm them down.” Suzie discussed how children this age are meant to move. She remarked, “Physical activity is very important because they can’t sit still. They have to move.” Charlotte kept her students active throughout the day with physical activities. She stated, “The other day I just let them run so they could get themselves tired because most of them were staying all day. I want them to go to sleep when they go upstairs.” Kylie mentioned in her interview, “So I like to get them moving because as for five year olds, they don’t sit very long. So the purpose of physical activity is they need to move.” While each and every teacher interviewed for this study mentioned that physical activity was important since their students, especially because of their age, needed to move and to expend energy, this verbally-identified theme did not emerge during all of the observations and document collection. For instance Kendra stated, “I don’t want them sitting the whole time.” However, during observations she did not have her students perform physical activities other than the required 30 minutes at recess. Kendra’s class time was structured around academic subjects and did not involve any physical activity. June was another teacher that during her interview stated, “My purpose to provide physical movement is because they need it. They are four and are meant to be in constant motion.” However, during observations she did not offer any physical activity other than the required recess time each day and the time spent once a week with the movement education resource teacher. From an administrative perspective, none of the

selected schools websites or documents discussed physical activity as a means to assist students in expending energy.

Cognitive development. Seven out of the 10 teachers discussed the importance of physical activity as a way to help students become better focused on their work, better behaved, and as a way to connect to their academic lessons. June remarked, “You will have better learners if they are able to release their pent up energy.” However, June was one of the teachers who did not provide additional physical activity in the school day other than the required recess time. Natalie was one of the teachers who intentionally planned for her students to be very physically active during the school day, and her reply to the question, “Why is physical activity important?” was, “Physical activity engagement plays a critical role in educating the whole child. It is essential to the development of the body and mind. A physically active student is more likely to be academically motivated alert and successful.” Abbey from Children’s Port preschool did not specifically mention any of the developmental domains in her interview, but she was one of the teachers who used physical activity to teach academic lessons. For instance, an observation of her class on the playground found Abbey throwing out letters, numbers, shapes, and colors over the designated play area. She connected academic learning with movement by having the children use different locomotor skills to find the correct number, letter, shape or color. Suzie was another teacher who used physical activity to enhance academic learning; in this instance to help children recognize the spelling of their last names. Suzie placed cards on which the students’ last names were written around the room. She then instructed students to perform a variety of locomotor skills around the room to find their names. Suzie also had her students play a variation of musical chairs where, when the music stopped, they could only sit in the chair that had their middle name. Cindy stated,

I was into teaching ten years before I realized they got to move. They can get up and put movement in science, social studies whatever it is they got to move. You realize they could handle science and move or they could handle literature and move. I realized I was doing myself a favor because they were better behaved children.

Cindy had at least one station during center time that was physically active. This station required the children to practice the manipulative skill of catching. She also had them jumping up and down, kicking, and singing during circle time. Kylie, who teaches at the same school as Cindy, also felt that kids need to move to help connect with learning. She stated, “Well I guess the value is that it really connects things for them. It’s an easier way to understand a concept. By being actively involved in it they really get a true meaning and understanding of it.”

Physical development. Only one of the teachers discussed the importance of physical development directly as a reason for providing physical activity to their students. Natalie described the importance of physical activity as a way “To acquire and develop new skills. It is essential to the development of the body and mind.” Some teachers did mention how the students love to move but did not specifically address that as a way to enhance physical development. Documents from the schools and the classrooms did make the case for physical activity as a means to facilitate physical development. Children’s Port Preschool posts the curriculum goals in each classroom and they state: “To develop and practice fine and gross motor skills: Children learn how to control their body’s movements. The muscles learn to respond to the child’s mental commands.” Their teachers are also required to fill out a section in their lesson plans titled gross motor activity. Great Beginnings Preschool does not mention physical development in their documents but does provide yoga once a week for their students and a movement education program every other week. Whitten preschool stated on their website, “...supports physical

development of every child.” Lesson plans submitted by Whitten teachers must include activities that develop large motor skills and contain movement and music education. Popular Day Preschool stated on their website, “Their large motor will be experienced through indoor and outdoor activities planned to reach such milestones as standing on one foot for more than 9 seconds, hopping, climbing, throwing and catching and kicking balls and pedaling tricycle.” Popular Day also sent out parent newsletters and in one issue it stated,

We know how important outside play is for our children every day and will continue to go outside and explore. It not only promotes their physical growth through gross motor development but also offers cognitive social and emotional development as well.

Nantucket Preschool did not mention physical activity on their website, but the school has many handouts for parents on the importance of physical activity. The teacher’s lesson plans are required to have a section for structured physical activity.

Research Question 2 (RQ2). What experiences contribute to early childhood educators’ knowledge about physical activity in early childhood? In keeping with constructivist theory (Vygotsky, 1978), educators’ experiences vary and could include anything from knowledge that was gained while participating in their own childhood physical education class, skills learned in continuing professional development they have attended, or a formal course they took or are taking in college. Through scheduled interviews two major themes emerged regarding RQ2. They include: (a) professional development/education and (b) experience with physical activity.

Professional development/education. All of the preschools require their teachers to obtain a certain number of professional development hours each year. No such requirements exist regarding the topics that have to be taken so teachers may, if they wish, never take a workshop or class that deals with physical activity in early childhood. Two mentioned they have

not taken any workshops or classes but have read a book on the subject. June mentioned, “I have not attended anything formally but have read up on the subject a lot lately.” Linda also explained that she had not taken any professional development regarding physical activity in early childhood but revealed, “I was reading a book and it talked about the children that don’t do anything and all and how to get the children to move around.” Only one teacher, Abbey, stated that a class she took while getting her degree focused on the physical domain of early childhood education. Abbey also seeks out workshops on the topic. She remarked, “I’m always into different workshops, I love to learn something new.” Five out of the 10 teachers commented that they had not taken any workshops or classes on the topic of physical activity in early childhood education. Veronica stated, “If I take a training I want it to be on how to teach them so they are ready for Kindergarten. I don’t look for anything about physical movement.” Of the remaining five who did take workshops that focused on physical education, three stated it was because the training was brought into their school and provided for them. Kylie responded, “So at the beginning of the year during our teacher week, they came in and taught the teachers some games that we could play with the kids using their different muscles.” Cindy mentioned, “She [the director] provides everything we need. She pays for everything [training] and brings it in at least three times a year.” Natalie shared that much of her knowledge came from “Several workshops at the local and state level as well as the kinesiotherapy interns that work in our classroom.” Suzie explained, “We are always in training and always being taught things. We have all kinds of literature and books that we read that tells us they need this physical activity.”

Experience with physical activity. Seven out of the 10 teachers discussed the theme of having some past personal experience with physical activity when asked about their experiences that would have contributed to their knowledge of physical activity. Their past experience varied

from participating in sports when they were younger to coaching as an adult. Kendra explained, “I used to be a coach, and I coached field hockey. Coaching really helped me in learning how to respond to them[students].” Another teacher, Charlotte, also felt that her experience in past jobs has influenced her decision to provide physical activity. She stated, “I started out as a recreation aid, then I became an assistant director and then director. I learned a lot while I was there.” Five out of the seven teachers expressed that their experiences being part of sports teams and physical activities growing up really shaped their value of physical activity. Kylie responded, “I grew up taking dance classes so I know that the role of movement is so important to them.” Cindy remarked, “My parents exposed me to a lot of it [physical activity], and they always had me doing something. I think that was instilled in me by my parents.” Abbey, Linda, and Natalie all discussed the sports they played as young children and how they still love to stay active today. Linda stated, “In school I ran track and cheered. I also like to play basketball. I’m a hands-on person, and I believe that the children should get lots of hands-on activities.” Abbey discussed how both her childhood and work experience played a role in her knowledge of physical activity. She reported, “When I was young I always played sports: baseball, softball, and basketball. Also, in elementary school when I taught we always got them out to play to make sure that we increased their skills in physical activity.”

Research Question 3 (RQ 3). What experiences influence the early childhood educators’ choice to implement physical activity during their class day? In keeping with Vygotsky’s (1978) social constructivist theory that knowledge grows out of personal experience, the parameters of RQ3 depend on the varied experiences of the interviewed teachers. Examples could be, but are not limited to, support from the preschool director and/or parents, physical activity during the class day, or positive experiences they had participating in physical activity themselves. Through

observations, interviews, and document collection, two major themes emerged regarding RQ3. They were identified as: (a) facility/director support and (b) required physical activity.

Facility/director support. Several of the teachers commented on how supportive their directors were in helping them provide physical activity to their students. Additional comments were made about the importance of the director's supporting opportunities for their teachers to learn about physical activity. Kendra mentioned, "She [the director] is very big on songs and dancing, and sometimes I forget that we've got to dance and move a lot so she comes in to my class a lot and it reminds me." Charlotte who works with Kendra stated this about their director, "Miss Sally [pseudonym] has every CD you could ever want. We have the parachute, beanbags, and more." Each of the selected schools provided an outdoor playground with swings, slides, and climbing equipment. Three out of the five sites had large indoor areas where the children could go for recess if it was raining. Equipment such as parachutes, balls, beanbags, riding equipment, and balance beams were provided at each of the indoor areas. The remaining two sites required that the teachers have recess time in their rooms on rainy days. All ten classrooms had a least one space where students could move about which was usually an 8-by-10 area. Nantucket Preschool was the only school with multiple 8-by-10 areas for the students to be active. Existing space limitations required that the teachers get creative with recess time when held indoors. Great Beginnings Preschool supports their teachers by providing outside resources to come in every week and provide physical activity. Yoga is provided once a week for all of the students, and a movement education company comes in every other week to provide physical activity opportunities to the students. Kylie stated this about her director,

I think it's just mostly the support. Because like our director Miss Kathy [pseudonym] is very supportive of whatever we choose to do in the classrooms. She's so supportive of

whatever it is that we need or want to do and I think that's where it really comes into play is that support. Because without her support if she was just saying you have to do exactly what's here we wouldn't have the freedom to do all the things I do with them. I mean she really has supported us and so wonderfully that she has brought so many different activities to us that we were able to either facilitate or there is another person coming into facilitate them.

Popular Day Preschool has a movement education specialist on site that provides a half hour of movement education once a week to all of the students. Popular Day's parent newsletter also has a section devoted to news from the movement education specialist.

Required physical activity. Each school in this study had a required 30 minutes during which students must be allowed recess. Even on rainy days when children cannot go outside, recess time is still required. Four out of the five school websites specifically stated that their program supported physical development of their students. Some of the websites went into great detail describing the milestones they would reach. Popular Day stated on their website, " Their large motor[skills] will be experienced through indoor and outdoor activities planned to reach such milestones as standing on one foot for more than 9 seconds, hopping, climbing, throwing and catching and kicking balls and pedaling a tricycle." Whitten, Nantucket, Popular Day, and Children's Port Preschool all require that the teachers include on their daily lesson plans a section for large motor or gross motor skills. Teachers are only required to list the skill they will focus on that day. Nantucket preschool's lesson plans are very detailed with regards to the fundamental movement skills students are to be learning. Teachers not only list they will be teaching, but also the activity used to facilitate the learning of the skills. If any music is planned, they must list the songs and the skills on which they will focus.

Through observations during their required physical activity time, it was noted that six out of the 10 teachers provided their students with activities that focused on one or more of the fundamental movement skills. The remaining four teachers provided unstructured movement such as dancing to music.

Summary

This study sought to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in select schools in Eastern Virginia have with regards to using physical activity with preschooler's ages three to five. Interviews, observations, and document collection were conducted and each case was analyzed. During data analysis, I used Stake's (2006) worksheets to analyze the findings. After identifying themes for each case, cross case analysis began. This allowed any emerged themes across the cases to be examined for commonalties and differences. Assertions were then provided as an interpretation of the data collected in terms of my personal views as well as in consideration of the literature (Stake, 2006). Worksheet 6 (see Appendix G) provided a visual for developing assertions from the findings. The assertions that emerged were: expending energy, cognitive development, physical development, professional development/education, experience with physical activity, facility/director support, and required physical activity.

All of the teachers were required to provide unstructured recess time, and a few were required to provide gross motor movement in addition to scheduled recess time. However, despite the obstacles, some of them still went above and beyond what was required by using physical activity throughout their day to allow their students to expend energy, learn gross motor skills, and reinforce academic learning through the use of movement. Even though most of the classrooms were not set up for large motor movements, the teachers found ways around the

obstacles of limited time and space to provide physical activity. This points back to the teachers' perceptions that physical activity plays an important role in their classroom whether it is expending energy, assisting in cognitive or physical development, or aiding in making a connection to the lessons of the day.

CHAPTER FIVE: DISCUSSION

Overview

The purpose of this qualitative multiple case study was to describe the perceptions early childhood educators who intentionally implement physical activity into their class day in select schools in Eastern Virginia have with regards to using physical activity with preschoolers ages three to five. In contrast to research, which indicates that physical activity is frequently being limited in the preschool setting, there are still those teachers who intentionally provide physical activity time to their students regardless of the barriers present. Extant research is lacking that investigates this set of early childhood educators and this phenomenon. Understanding the teachers' perceptions of the role physical activity plays in early childhood education will help lead to a better understanding of this phenomenon. Chapter Five discusses the research findings as they connect with current literature and Vygotsky's (1978) constructivist theory. Implications, limitations, and recommendations for future research are provided in this chapter.

Summary of Findings

To investigate the question, how do early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education, five sites were selected with two teachers being identified from each site to participate in the study. The teachers that were the cases for this study were purposefully selected based on their presurvey answers and then were observed and interviewed. Documents, which included lesson plans, newsletters, websites, and pamphlets were analyzed. The research questions and their findings are.

Research Question One

What role/purpose do the selected early childhood educators believe physical activity provides the students in early childhood education? Copeland et al. (2012) discussed the fact that many caregivers do not fully understand the importance of allowing children time to participate in physical activity. They found in their study that some teachers viewed time allocated for physical activity as nothing more than free time for themselves or as time to talk with colleagues.

Data collected pointed to three main roles that teachers perceived physical activity played in early childhood education. The first identified role of physical activity was to allow students to expend energy. All of the teachers mentioned this at some point during their interviews and expressed that physical activity allowed students to expend their energy or as several teachers put it “to get the wiggles out.” The second role that emerged through observations, document collection, and interviews was the physical development of students. School websites, newsletters, and lesson plans identified that administrators and teachers were supportive of physical activity as a means to support student’s physical development. The third role that emerged was that of enhancing cognitive development. Seven of the 10 teachers expressed that using physical activity helped by assisting students to connect with the lessons. Teachers posited that their students were more focused and learned better after being physically active and noted learning was fostered when physical activity was tied to a lesson.

Research Question Two

What experiences contribute to early childhood educators’ knowledge about physical activity in early childhood? According to Derscheid et al. (2014), “Preschool teachers have varying levels of teacher preparation regarding nutrition or motor development” (p. 262). This question focuses on how selected teachers obtained the knowledge to incorporate physical

activity into their early childhood classrooms. In keeping with constructivist theory, every educator's experiences vary and could include such things as knowledge gained in their own childhood physical education class, to skills learned in continuing professional development opportunities they have attended, to a course they took or are taking in college.

All of the preschools required their teachers to obtain a certain number of professional development hours each year. Five of the 10 teachers conveyed that taking workshops focusing on physical activity was the main contributing factor in their knowledge about using physical activity in their early childhood classrooms. Having some past experience with physical activity was a theme that seven of the 10 teachers discussed when asked about the experiences that would have contributed to their knowledge of physical activity. The past experiences of the teachers varied from being part of a sports team when they were younger to coaching children as an adult.

Research Question Three

What experiences influence the early childhood educators' choice to implement physical activity during their class day?

Adults (e.g., teachers) are often in power positions to make choices that influenced the physical activity behaviors of children. For example, teaching physical education or staying in the classroom to teach one of several other subjects is a choice teachers are faced with every day. A teacher's perspective of the reinforcing value and the accessibility of each option is essential to understand the choices made. (Sherman et al., 2010, p. 4)

This question focuses on what influenced the early childhood educators to choose to implement physical activity into their class day. Teachers are faced with obstacles every day to providing physical activity. Time, space, and equipment are some of the barriers to physical activity. When

asked why they take the time to provide physical activity for their students, the themes of facility/director support and required time in physical activity emerged.

Several of the teachers commented on how supportive their directors were in helping them provide physical activity. Teachers credited their directors with being supportive of the teacher's decision to use physical activity as a tool to teach lessons. This type of support allows teachers to be creative with their lesson plans. Kylie stated,

We have a curriculum but we are welcome to compliment it and add to it and supplement it because I find our curriculum kind of dull. So I always add more as she's so supportive of whatever it is that we need or want to do.

Along with director support the availability of space is another theme that emerged. All sites had outdoor areas where children could go for recess. Three out of the five sites had large, indoor areas where the children could go for recess if it was raining. Equipment was provided such as parachutes, balls, beanbags, riding equipment, and balance beams for these schools. The remaining schools without large indoor areas had at least one 8-by-10 area rug where students could dance and move around. Space was a barrier that some of the teachers found a way to overcome. A few of the teachers creatively used the space between desks and the hallways when getting the kids up and moving.

Physical activity time that was required by the school was one of the reasons teachers provided students with movement opportunities. All schools had a required minimum of 30 minutes of physical activity time. The expectation was that the teachers would take their students outside for unstructured recess. Even on rainy days when classes cannot go outside, it is required that teachers provide their students with recess. Four of the schools require that their teachers include structured physical activities on their daily lesson plans. Through observations during the

required physical activity time, it was noted that six out of the 10 teachers provided their students with activities that focused on the fundamental movement skills. The remaining four provided unstructured movement such as dancing to music.

Discussion

Early childhood is a key time for growth in all of the developmental domains. Between birth and five years of age, children are learning and developing in every domain. Participating in physical activity on a daily basis can produce numerous benefits in each and every domain (Chukwbikem, 2013). The preschools have been recognized as an important factor in physical activity in early childhood (Pfeiffer et al., 2013; Sterdt et al., 2013). This study's findings showed that early childhood teachers acknowledge that physical activity is important for development in more than just the physical domain. Davis et al. (2011) discussed in their study the importance of using physical activity as a tool to enhance students cognitive development. Some of the teachers in this study recognized the benefits of using physical activity as a tool to teach lessons and for enhancing development in the cognitive domain. Using physical activity to connect the lessons was mentioned in teacher interviews and observed in some of the classrooms. The results of a study by Donnelly and Lambourne (2011) showed that using physical activity as a tool to teach academic lessons aided in improving test scores. Although this study did not look at test scores, teachers did mention in interviews that students are better learners if they are allowed to be active.

Current studies point out that physical activity also plays a role in social and emotional development in young children, and they cited benefits such as: increased self esteem, decrease in stress, depression, and self-destructive behavior (Archer & Kostrzewa, 2012; Williams et al.,

2013). However, the participants in this study did not mention any social or emotional benefits of using physical activity with their students.

In the review of literature, some of the perceived barriers to providing physical activity included: lack of space, time, and resources (Sharma et al., 2011; Tucker et al., 2011). In this study two of the teachers specifically mentioned that they wish they had more time to devote to physical activity, but none of the teachers mentioned lack of equipment or space as an obstacle they faced. Of the teachers who did provide physical activity to their students contributed it to the support given by their directors in terms of professional development opportunities, encouragement, and resources provided. Having supportive directors that listen to and respect teacher ideas concerning teacher needs and that allow teachers to have creative input into the curriculum provides an environment that encourages teachers to include movement into their classroom day. Administrators and teachers working together to understand and implement physical activity is an important first step in the process.

Copeland et al.'s (2012) study found that even with a plethora of resources, it was still the teacher who decided whether or not to provide the students the opportunity to be physically active. Two of the schools in this study provided outside resources to come and provide physical activity classes for the students. These schools also had large playgrounds, equipment, and large indoor areas to move around. However, results of this study showed that it was these teachers who appeared to provide the least amount of physical activity time to their students.

The theoretical framework for this study was Vygotsky's (1978) social constructivist theory. Vygotsky upholds that individuals are not passive learners; they interact with their environments in order to learn. Each teacher holds a unique perspective about their experiences based on previous experiences, and these experiences build upon themselves to create new

knowledge. Teachers bring to their classrooms many different approaches and techniques. There are innumerable ways to incorporate physical activity into a classroom because every teacher has different experiences that add to their knowledge base and impact their willingness to provide their students with physical activity opportunities. The continuing process of interacting with one's environment and thereby, increasing knowledge begins in childhood and continues throughout life. The findings from this study support Vygotsky's theory. Many of the teachers felt their knowledge about physical education came from their own childhood experiences with physical activity or from participating in professional development through the years. Each experience they had added to the knowledge they have today and their beliefs on why physical activity is important.

This study adds to the growing volume of literature on physical activity in early childhood education settings by focusing on the perceptions held by early childhood educators who intentionally implement physical activity in their classroom. This study looked at the teachers who provide physical activity above and beyond the required recess time despite the obstacles found in current literature. It found that teachers see movement as a possible tool to foster academic learning. The findings show that while teachers do see physical activity as a means to more than just expending energy, that expenditure of energy is still a very influential factor in deciding to provide physical activity. It also shows that administrative support remains a motivating factor in providing physical activity. As Vygotsky's (1978) theory posits, past experiences do play a role in why teachers value physical activity as an important part of the class day. Directors, teachers, and professional development providers can all benefit from these findings, which in turn will benefit the preschool students.

Implications

This study offers practical implications for directors, teachers and professional development providers working in the early childhood field. Many studies have looked at how much time students spend being physically active and the obstacles teachers face in providing physical activity. This study adds to the existing body of knowledge by providing insight into how teachers perceive the role of physical activity. These findings contribute new information to the field of early childhood education.

Defining Physical Activity

Findings from this study showed that early childhood education teachers have varying responses to what they perceived as the role physical activity is in early childhood education. This difference happened within the same school and across schools. It appears that there is not a commonly held definition of physical activity among the teachers and schools. The absence of common definitions can be problematic not only for educators but also for administrators. The lack of a more standardized definition was noted when it was found that teachers did not necessarily embrace their own school's goals that focus on physical development. Physical development was mentioned in some of the school's literature, but there was no explanation of what physical development entailed. Teachers can find it difficult to meet school goals for physical development when they do not have specifics to guide their lesson planning. Parents can also be confused about the content of the curriculum when specific definitions are not given. These issues highlight the need for directors and teachers to work together to establish a consistent definition of what providing physical development to every child means. NASPE provides a definition of physical activity as well as offering best practices based on age appropriate physical development for early childhood education. Understanding and

implementing NASPE guidelines in a developmentally-sound curriculum would be a positive way for directors and teachers to work together in support of implementing intentional physical activity into their schools.

Professional Development Requirements

Teachers have a required number of professional development hours they must obtain each year. However, they can pick the topics they are most interested in. Many teachers mentioned when it comes to professional development they just pick what they like. They mentioned they tend to gravitate towards the same workshops and trainings. Many stated that they have never taken a workshop on movement education or physical activity. When asked about professional development geared towards physical activity, Kylie stated, “There’s not many geared specifically towards physical activity. I did a training about circle time and we talked about songs if that counts. But I’ve never been to a specific training on physical activity.”

NASPE guideline five states, “Caregivers and parents in charge of preschoolers' health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity” (National Association for Sport and Physical Education, 2009a, p. 24). Physical development in early childhood is an important topic that should be required professional development for all teachers. A focus on how physical activity is connected to each of the developmental domains would assist in the understanding of its importance to the development of the whole child. Physical education and how to use it as a tool to teach needs to be a required training topic for teachers on a yearly basis.

Implementation of Fundamental Movement Skills

One of the guidelines established by NASPE states, “Preschoolers should be encouraged to develop competence in fundamental motor skills that will serve as the building blocks for future motor skillfulness and physical activity” (National Association for Sport and Physical Education, 2009a, p. 24). This study identified that only four out of the 10 teachers included intentionally planned structured movement activities that focused on the fundamental movement skills. The structured physical activity was developmentally appropriate so that the knowledge of how to accomplish more advanced movements was soundly based in experience with less advanced movement.

Directors need to be aware of the national recommendations and work with their teachers to build it into their curriculum. Although recess is required at all the preschools in this study, not all of the students are physically active during that time. Many of the females only swing or play in the sand box, and therefore, are not practicing fundamental movement skills. It is important that students get the opportunity to explore all of the fundamental movement skills of early childhood in a structured activity on a daily basis. Opportunities need to be provided for teachers to learn what the fundamental movement skills are, how they are performed, and creative ways to incorporate them into the lessons.

Structured vs. Unstructured Physical Activity

Professional development providers need to be aware of the challenges teachers face when trying to provide physical activities to their students. Limited time, space, and equipment are common obstacles seen in current research and mentioned by participants in this study. NASPE guideline one states, “Preschoolers should accumulate at least 60 minutes of structured physical activity each day” (National Association for Sport and Physical Education, 2009a, p.

24). Not all of the teachers in the study provided structured physical activities. Of the ones that did, a few of them relied solely on songs to get the students moving. While this is a great activity once in awhile, it should not be the only form of structured physical activity. Based on this study's findings, teachers would benefit from learning the difference between structured and unstructured physical activity as well as the importance of providing structured physical activity to preschoolers. Professional development opportunities about ways to incorporate physical activity into their lessons will aid teachers in overcoming the obstacles to providing structured physical activity.

Limitations

I delimited this study to early childhood educators who identified in the initial survey (seen Appendix A) that they purposefully included physical activity during their class day. Another delimitation was only early childhood educators who taught children aged three to five were selected. This allowed me to focus on a specific age group, defined by NASPE as preschoolers. This is significant because early childhood can be defined as birth to age five, and my intent was to focus on the age group that would most likely be in a preschool setting where a teacher has prepared lessons they follow.

Limitations of this study that may affect the ability to generalize or transfer the results to other preschools or K-12 settings is that it only looked at preschools in Eastern Virginia. Two factors set Eastern Virginia apart from other population areas, which make the transferability of this study more difficult. First, all five military services operate in Hampton Roads as well as the only NATO command operating on American soil. Approximately one-fourth of all active duty military members are stationed in the area. The transient nature of military life presents distinct challenges for local school systems. Students enter and leave educational settings with increased

frequency, and students come to school having had a wide variety of educational experiences. Frequent moves affect academic readiness, attitudes towards entering a new educational setting, and social skills.

In addition to having a highly military presence, the Hampton Roads region of Eastern Virginia has a population that is geographically diverse. The region is made up of large cities such as Virginia Beach, Norfolk, Newport News, and Hampton and rural counties such as Surry and Isle of Wight. Availability of services varies widely within the region, making study results difficult to duplicate (Public Broadcast Station, 2009).

This study focused on ages three to five within the preschool setting, so results may not be transferable to ages zero to two in the preschool setting. Another limitation that may affect the study is the fact that prior to my observations the teachers were aware of my study and its focus on physical activity and therefore may or may not have changed their normal pattern of behavior.

Recommendations for Future Research

This qualitative multiple case study investigated the perceived role of physical activity used by early childhood educators in five preschool settings in Eastern Virginia. The findings were used to add to the little qualitative research that has been conducted in this area. Many quantitative studies have been conducted that examined physical activity in preschools (Colley et al., 2013; Jones et al., 2011; Hinkley et al., 2012; Kulinna, 2012; Obeid et al., 2011). However, previous research has failed to examine the perceptions early childhood educators who intentionally implement physical activity have about the role physical activity plays in early childhood education. This study sought to add to the research concerning early childhood education and physical activity. The following recommendations are suggested for future research that could increase the body of knowledge that relates to preschool physical activity.

Education Courses

The first recommendation is for researchers to conduct research that examines the content of college level education courses that early childhood education teachers take with regards to the physical education of young children. Based on the findings of this study, not every teacher was aware that providing physical activity to students not only contributed to development in the physical domain but also to the social, emotional, and cognitive domains as well. Many teachers were also not aware of what constitutes fundamental movement skills and how to incorporate them into their curriculum. By identifying the extent to which teachers are or are not getting physical education training focused on the value of movement in early childhood and how to incorporate movement into the school day, curriculum developers could design comprehensive early childhood education programs and better prepare and equip future educators in this critical area.

Baseline Knowledge

The second recommendation is for researchers to conduct a study designed to identify a baseline level of knowledge about the value of movement in early childhood education held by administrators, teachers, and parents. The current study found gaps in knowledge about the merits of an age-appropriate movement program, such as why such a movement program is vital to the development of the child as a whole and how to implement an effective program consistent with national guidelines.

Director Perceptions

The third recommendation is for researchers to conduct a study to better understand the perceptions directors and administrators of preschools have on the extent to which they believe their teachers are providing adequate movement opportunities to students as stated in the schools

mission statement as well as in their stated goals and objectives. A school's mission statement and its goals and objectives should reflect current guidelines for including appropriate movement education. One of the themes that emerged in this study was that some of the teachers were not supporting their schools mission statement or goals of providing opportunities for physical development and gross motor activity.

Professional Development

Another study that could add to the literature is one that focuses on professional development. Each teacher has a required number of hours each year they are expected to obtain of professional development. Most of the teachers could not think of a single training they had taken on the subject of physical activity in early childhood. June stated, "I have not attended anything formally but have read some on the subject." It is problematic to expect teachers to provide developmentally appropriate physical activity if they are not trained. Professional development providers could benefit from understanding why teachers do not seek out workshops on this topic, what their knowledge gaps are, and how to best meet teacher needs to implement a full range of intentional movement into the school day.

Parent Perceptions

Another stakeholder in early childhood education is the parent. The parent is often the one that determines which program best meets the needs of their child. Researchers could explore how important movement education in the curriculum is to parents when selecting an early childhood program. Research could also explore the parent's thoughts on the scope that physical activity should play in the course of the school day: recess only, a focus on fundamental movement skills, or using movement only to reinforce academics as well as the extent parents are more interested in academics at this stage of their child's development. A more basic

research inquiry is regarding parental awareness of the importance of physical activity for their children's total development. This type of information would benefit directors, teachers, and ultimately, the student.

Summary

The main goal of this multiple case study was to identify how early childhood educators who intentionally implement physical activity in select schools in Eastern Virginia perceive the role physical activity plays in early childhood education. The results found in this study can benefit directors, teachers, and professional development providers. Directors could use this data to understand the positive effects that supporting teachers has both in professional development and in classroom and lesson plans concerning physical activity. Teachers can benefit from these results by understanding that there may be a disconnection in their own school goals and the stated objectives, and that they could work to better align their lesson plans. Professional development providers can use this data to guide their workshops that focus on physical activity. Understanding the role teachers give physical activity can help them gear the workshops towards a greater and broader understanding of physical activity in early childhood education. Hopefully, the effect this study has on physical activity in early childhood education is that more directors and teachers will see the benefits of providing both structured and unstructured physical activity can have on development in all domains of early childhood.

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Appendix A: Teacher Survey

Teacher Name _____

Date _____

Age: _____

Gender: M or F

What is the highest level of education you have completed?

 High School or GED Some college credit, no degree Vocational/Technical School Associate degree Bachelor degree Masters degree Doctoral degree Other _____

Ethnicity origin (or Race): Please specify your ethnicity.

 Asian/Pacific Islander African American Caucasian Hispanic/Latino Native American or American Indian Would rather not comment Other _____

How long have you been teaching in the preschool/daycare setting? _____

How long have you been teaching at your current position? _____

How many students do you have in your class? _____

Is your class full day or half day? _____

What age are the students in your class? _____

Are you required to make lesson plans for each day? _____ If not, do you make lesson plans? _____, Why have you decided to make or not make lesson plans?

Do you promote physical activity inside of the classroom? _____

If so, is the physical activity allowed during free time or is it a structured activity?

If you do promote physical activity in the classroom how much time do you think the students are being active?

Do you promote physical activity outside of the classroom? _____

If so, is the physical activity allowed during free time or is it a structured activity?

If you do promote physical activity outside the classroom in a structured activity how much time do you think they are being active?

Appendix B: Self-Disclosure Statement

Certain experiences in my past may have biased this study. It is my intent to self disclose my experiences so that I may alert the reader to any possible biases that could negatively affect the research.

- Certified Therapeutic Recreation Specialist working with children and teens. I used physical activities as a way to teach coping skills and increase self esteem.
- Masters degree in kinesiology with an emphasis in curriculum and instruction.
- Certified personal trainer since 1994.
- Currently teach at community college in the physical education department.
- Taught in preschool as movement education teacher for four years to children ages 18 months – 6 years.
- Teach for a personal training certification school, WITS.
- Owned Jumping Jacks and Jills LLC where I provided movement education classes to students at various preschools in and around Atlanta Ga.
- Currently own Movement Plus LLC where I provide trainings to early childhood educators about the importance of Physical/Movement education
- Wrote three children's books that are focused on the fundamentals of movement.

Appendix C: Worksheet 2 The Themes (Research Questions) of the Multicase Study

Theme 1: How do early childhood educators who intentionally implement physical activity in select schools in Eastern Va. perceive the role physical activity plays in early childhood education?

Theme 2: What role/purpose do selected early childhood educators believe physical activity provides the students in early childhood education?

Theme 3: What experiences contribute to early childhood educators' knowledge about physical activity in early childhood?

Theme 4: What experiences influence the early childhood educators' choice to implement physical activity during their class day?

Stake's Worksheet 2 (p. 43)

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Appendix D: Worksheet 3 Analyst's Notes While Reading a Case Report

Case ID Kendra

<p>Synopsis of case:</p> <p>Based on observations, Kendra does not incorporate unscheduled PA into her day. She does state in her interview she has very little time for PA. She does give her students PA during scheduled recess. Rainy days it's structured and nice days it's unstructured.</p>	<p>Case Findings:</p> <p>I. RQ 2= Knowledge comes from past experience as a coach.</p> <p>II. RQ3=Gives director lots of credit for reason they can be active on rainy days and for motivating her to try movement more with her students.</p> <p>III. RQ1= getting wiggles out</p>
<p>Uniqueness of case situation for program/phenomenon: One of the only teachers who did not realize there were PA requirements at her school.</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 Recognizes director support Theme 2_Coached field hockey Theme 3_ Expend energy</p>	
<p>Commentary:</p> <p>"I used to be a coach too and I used to coach field hockey. Coaching really helped me in learning how to respond to them."</p> <p>" I don't want them sitting the whole time."</p> <p>"We have such a limited time. If we had the whole day it would be great, we could plan so much more stuff. You want to get the physical play in. At times, I wish that we had more time to do more fun stuff."</p> <p>"She {director} is very big on songs and dancing and sometimes I forget that we've got to dance and move a lot so she comes in to my class a lot and it reminds me."</p>	

Stake's Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Charlotte

<p>Synopsis of case:</p> <p>She was one of the teachers who incorporated lots of movement with the use of music. Knew her FMS and helped students on playground so they kept active.</p>	<p>Case Findings:</p> <p>RQI. Wanted to tire out the children so they would nap later</p> <p>RQII. Past work experience</p> <p>RQIII. Great indoor and outdoor areas, supportive director, lots of equipment</p>
<p>Uniqueness of case situation for program/phenomenon: Really knew her FMS. Did lots of movement but only if accompanied by music that lead it. Always moved with the students , very active teacher.</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 Prior work experience</p> <p>Theme 2 Supportive director _</p> <p>Theme 3 __ Expend energy</p>	
<p>Commentary:</p> <p>“The other day I just let them run so they could get themselves tired because most of the were staying all day. I want them to go to sleep when they go upstairs.”</p> <p>“I started out as a recreation aid, then I became an assistant director and then director. I learned a lot while I was there.”</p> <p>“Miss Sally {pseudonym} has every CD you could ever want. We have the parachute, beanbags and more.”</p>	

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID June

<p>Synopsis of case:</p> <p>Her school offers movement education via a resource teacher. She did not engage students in FMS or PA during observation time. During free time students could dance to music if they wanted. She</p>	<p>Case Findings:</p> <p>RQI. Expend energy and cognitive</p> <p>RQII. Said she read some on the subject</p> <p>RQIII. Great indoor and outdoor areas, , lots of equipment</p>
<p>Uniqueness of case situation for program/phenomenon: Discussed the importance of movement for physical and for cognitive but during observations she did not engage the students in FMS or PA other than what was required by the school.</p> <p>Survey shows she does offer PA</p>	

<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 ___ physical and cognitive development ___</p> <p>Theme 2 ___ support in terms of space, equipment and outside resources</p> <p>Theme 3 ___ past experiences</p>
<p>Commentary:</p> <p>“My purpose to provide physical movement is because they need it. They are four and are meant to be in constant motion.”</p> <p>“You will have better learners if they are able to release their pent up energy.”</p> <p>“I have not attended anything formally but have read up on the subject a lot lately.”</p> <p>In other schools I have worked at kids didn’t get outside time and they were more hyper and wild in class. They can’t control their movements and they can’t sit still.”</p>

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Veronica

<p>Synopsis of case:</p> <p>Veronica did incorporate some FMS and PA into her day even though she felt she did not do much. She felt overwhelmed by trying to get them prepared for Kindergarten. Saw PA as mostly a way to keep them calm</p>	<p>Case Findings:</p> <p>RQI. Calm them down, expend energy</p> <p>RQII. Could not think of how she got any knowledge on the subject</p> <p>RQIII. Indoor and outdoor areas, , lots of equipment, resource teacher</p>
<p>Uniqueness of case situation for program/phenomenon:</p> <p>Although she could not think of where her knowledge came from and states she felt she did not have much time for it. She did find ways to incorporate FMS and PA into her day: circle time with an exercise, makes them do locomotor skills at start of recess. Hula hoop game in class to promote problem solving and cooperation. Encourages them to dance during free time,</p>	
<p>Commentary:</p> <p>“If I take a training I want it to be on how to teach them so they are ready for Kindergarten. I don’t look for anything about physical movement.”</p> <p>“Well, just to burn some energy off to calm them down.”</p>	

“I wish I would take more time to do more of it cause I’m more on the academic side.”

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Natalie

<p>Synopsis of case:</p> <p>Very knowledgeable about benefits of PA, FMS, Engaged students in various FMS activities, role modeled correctly.</p>	<p>Case Findings:</p> <p>RQI. Cognitive, physical, whole child</p> <p>RQII. Past experiences and PD</p> <p>RQIII. Great indoor and outdoor areas, , lots of equipment. Supportive environment</p>
<p>Uniqueness of case situation for program/phenomenon: One of the only schools that had lots of handouts for the parents on the importance of PA. Used interns to promote PA, detailed lesson plans on using PA, Sought PD on the topic of PA</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 __physical and cognitive____</p> <p>Theme 2 __past experiences____</p> <p>Theme 3 __support via equipment and space as well as admin____</p>	
<p>Commentary:</p> <p>“Physical activity engagement plays a critical role in educating the whole child. It is essential to the development of the body and mind. A physically active student is more likely to be academically motivated alert and successful.”</p> <p>“To acquire and develop new skills. It is essential to the development of the body and mind.”</p> <p>“Several workshops at the local and state level as well as the kinesiotherapy interns that work in our classroom.”</p> <p>“They love and embrace any opportunity to move.”</p>	

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Linda

<p>Synopsis of case:</p> <p>Linda was not able to really describe what experiences influenced her decision to offer PA throughout the day other than she knows the students need to move. She knew her FMS and stayed active with her students using it to teach and have fun.</p>	<p>Case Findings:</p> <p>RQI. Expend energy</p> <p>RQII. Past experiences and reading on the subject</p> <p>RQIII. Great indoor and outdoor areas, , lots of equipment. Supportive environment</p>
<p>Uniqueness of case situation for program/phenomenon: although she could not think of any PD other than a book she read she was aware of FMS and modeled for children during games. Made detailed lesson plans.</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 _physical development_____</p> <p>Theme 2 _past experiences _____</p> <p>Theme 3 _supportive admin, interns, resources are available_____</p>	
<p>“I was reading a book and it talked about the children that don’t do anything and all and how to get the children to move around.”</p> <p>“In school I ran track and cheered. I also like to play basketball. I’m a hands on person and I believe that the children should get lots of hands on activities.”</p> <p>“I’m a hands on person and I believe that the children in this classroom is a lot of hands on. The experience that they get will always live forever with them because it is something that they are doing everyday.”</p>	

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Abbey

<p>Synopsis of case:</p> <p>Through the observations it was obvious she knew her FMS. She knew the names and role modeled them correctly.</p> <p>had them doing many songs that required movement. She participates as well. Outside time she had them doing structured movement. ABC hunt to locomotor skills, feeling heart rate, discussing hear rate,</p>	<p>Case Findings:</p> <p>RQI. Cognitive, expend energy</p> <p>RQII. Degree, workshops and past experience participating in sports</p> <p>RQIII. Large outside area with equipment to play on, bikes to ride and large area to run around in. Classroom has one area for students to move around in.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Races to fence and back using various locomotor skills,	
<p>Uniqueness of case situation for program/phenomenon: One of the few teachers who used physical activity to teach academic lessons. For instance, an observation of her class on the playground found Abbey throwing out letters, numbers, shapes and colors over the designated play area. Connecting academic learning with movement she then had the children use different locomotor skills to find the correct number, letter, shape or color.</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 __physical and cognitive development____ Theme 2 __PD, played in sports____ Theme 3 __resources available and support from admin____</p>	
<p>Commentary:</p> <p>“Sometimes, I can tell, okay, we need to go and get some muscles moving and get you guys to release a little bit.”</p> <p>“I’m always into different workshops, I love to learn something new.”</p> <p>“Just knowing that the children enjoy being outside and I just want them to learn various ways of learning activities not inside but outside as well.”</p> <p>“Today my vocabulary word was inclined so we went outside on the playground equipment and walked up down and slide down on the incline.”</p>	

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Suzie

<p>Synopsis of case:</p> <p>Used physical activity to enhance academic learning; Kept students very active. Role modeled correct FMS.</p>	<p>Case Findings:</p> <p>RQI. Expend energy, cognitive</p> <p>RQII. PD,</p> <p>RQIII. “Our philosophy is we learn through play; everything we do is fun.</p>
<p>Uniqueness of case situation for program/phenomenon: One of the ones who stated you just have to see the physical stuff in it you know a lot of people don’t.” She looks for the PA opportunities</p>	

<p>Relevance of case for cross-case Themes:</p> <p>Theme 1_ energy , cognitive _____</p> <p>Theme 2_ PD _____</p> <p>Theme 3_ support from admin in the form of equipment, areas, and philosophy _____</p>
<p>Commentary:</p> <p>“We are always in training and always being taught things. We have all kinds of literature and books that we read that tells us they need this physical activity.”</p> <p>“Physical activity is very important because they can’t sit still they have to move.”</p> <p>“...you have to incorporate the physical part because they need to jump because their bodies can’t sit, we are asking them to do something that they can not do.”</p> <p>“So they need to jump around and play around and then they can sit for a little while and you have to look at that and go ahead and give them what they need right then.”</p>

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Cindy

<p>Synopsis of case:</p> <p>Cindy is a retired schoolteacher and she is the only one who had two assistants. Director provides lots of outside resources and PD. Cindy herself did not provide much PA and did not observe any FMS</p>	<p>Case Findings:</p> <p>RQI. Expend energy, better behaved, more focused</p> <p>RQII . Past experience, PD</p> <p>RQIII. Director support</p>
<p>Uniqueness of case situation for program/phenomenon: Director is very supportive, two companies provide PA, PD is provided. Cindy is a retired public school teacher and has the most experience of all the participants.</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1_ expend energy _____</p> <p>Theme 2_ past experience, PD _____</p> <p>Theme 3_ resources available _____</p>	

Commentary:

“I was into teaching ten years before I realized they got to move. They can get up and put movement in science, social studies whatever it is they got to move. You realize they could handle science and move or they could handle literature and move. I realized I was doing myself a favor because they were better behaved children.”

“She {director} provides everything we need. She pays for everything {training} and brings it in at least three times a year.”

“We have something called STARS. She pays them to come every other Thursday.”

“My parents exposed me to a lot of it {physical activity} and they always had me doing something. I think that was instilled in me by my parents.”

Stake’s Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Case ID Kylie

<p>Synopsis of case:</p> <p>Talked a lot about PA but during observations No real FMS during class time other than one song during morning circle time where she had students jump up and clap to get them back on task. Lots of sitting</p> <p>Outside time is free time no structured activities.</p>	<p>Case Findings:</p> <p>RQI. Expend energy, connects lessons</p> <p>RQII. Past experience in sports, PD</p> <p>RQIII. Director support</p>
<p>Uniqueness of case situation for program/phenomenon: Spoke about using PA to connect learning but did not observe it. Also, Teacher reminded students to “hurry up” because they lost 5 minutes of recess for taking too long to clean up. (loss of PA as punishment)</p>	
<p>Relevance of case for cross-case Themes:</p> <p>Theme 1 __ energy, cognitive ____</p> <p>Theme 2 __ in sports, PD is provided ____</p> <p>Theme 3 __ director support, outside resources ____</p>	
<p>Commentary:</p> <p>“So I like to get them moving because as for five year olds they don’t sit very long. So the purpose of physical activity is they need to move.”</p> <p>“Well I guess the value is that it really connects things for them. It’s an easier way to understand a concept. By being actively involved in it they really get a true meaning and understanding of it.”</p>	

We have a curriculum but we are welcome to compliment it and add to it and supplement it because I find our curriculum kind of dull. So I always add more as she's so supportive of whatever it is that we need or want to do.

"There's not many geared specifically towards physical activity. I did a training about circle time and we talked about songs if that counts. But I've never been to a specific training on physical activity".

"So at the beginning of the year during our teacher week, they came in and taught the teachers some games that we could play with the kids using their different muscles."

"I grew up taking dance classes so I know that the role of movement is so important to them."

I think it's just mostly the support. Because like our director Miss Kathy {pseudonym} is very supportive of whatever we choose to do in the classrooms. She's so supportive of whatever it is that we need or want to do and I think that's where it really comes into play is that support. Because without her support if she was just saying you have to do exactly what's here we wouldn't have the freedom to do all the things I do with them. I mean she really has supported us and so wonderfully that she has brought so many different activities to us that we were able to either facilitate or there is another person coming into facilitate them.

Stake's Worksheet 3 (p. 45)

Stake, R. (2006). *Multiple case study analysis*. New York: The Guilford Press.

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Appendix E: Worksheet 4 Ratings of Expected Utility of Each Case for Each Theme

	Case A	Case B	Case C	Case D	Case E
Multicase Themes					
Expending Energy	H	H	M	H	H
Cognitive Development			H	H	H
Physical Development	L	H	L	M	H
Professional Development Education	L	H	L	M	H
Past Experience with Physical Activity	H	H	L	L	H
Facility/Director Support	H	H	M	H	H
Required Physical Activity	M	M	M	M	H
Student Success					H

	Case F	Case G	Case H	Case I	Case J
Multicase Themes					
Expending Energy	H	H	H	M	H
Cognitive Development		H	H	H	H
Physical Development	M	H	H	L	L
Professional Development Education	L	H	H	H	H
Past Experience with Physical Activity	H	H	L	H	H
Facility/ Director Support	H			H	H
Required Physical Activity	M	H	M	H	H
Student Success	L	L	L	L	

H = high manifestation; M = middling manifestation; L = low manifestation; blank= almost no manifestation.

Modified from Stake's Worksheet 4 (p. 49)

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Appendix F: Worksheet 5B A Matrix for Generating Theme-Based Assertions

Merged Findings	From Which Cases?	RQ1	RQ2	RQ3	Central Question
Expending Energy	All	Yes	No	No	Yes
Cognitive Development	All except A, B, F	Yes	No	No	Yes
Physical Development	All	Yes	No	No	Yes
Professional Development/ Education	All	No	Yes	No	Yes
Experience with PA	All	No	Yes	No	Yes
Facility/Director Support	All	No	No	Yes	Yes
Required PA	All	No	No	Yes	Yes
Student Success	Cases E, F, G H,I	No	No	Yes	Yes

Modified from Stake's Worksheet 5B (p. 59)

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Appendix G: Worksheet 6 Multi-case Assertions for the Final Report

#	Assertion	Evidence in Which Cases
1	Expending Energy	All
2	Cognitive Development	7 out of 10 cases
3	Physical Development	All
4	Professional Development/Education	All
5	Past Experience with Physical Activity	All
6	Facility/Director Support	All
7	Required Physical Activity	All

Modified from Stake's Worksheet 6 (p. 73)

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Appendix H: Informed Consent for Qualitative Study

You are invited to be a part of this study because of your experience in teaching in the preschool setting and using physical activity with your students during the class day.

Research Topic

A multiple case study investigating the perceptions early childhood educators have about the role physical activity plays in early childhood education.

Researcher

Martha Swirzinski is conducting the study for her dissertation research in the field of education at Liberty University.

Procedures

Observations of the participant will take place in their school setting. After observations one-on-one interviews will take place with the participant. Participants will have an opportunity to review the interviews to ensure the correct data has been collected.

Risks and Benefits

There are no known risks associated with participation in this study. Participants will not be compensated for their participation.

Right of Refusal and/or Withdrawal

Participation in this study is 100% voluntary and you may withdraw at any time during this study. All data that has been gathered from you will be destroyed if you decide to withdraw. You also have the right to refuse to answer any interview questions if you choose.

Confidentiality

There will be a number of measures used to insure confidentiality. The data collected will be kept under a pseudonym for both participant and the school in which they teach. All data stored electronically will be password protected. Any hard copies will be filed in a locked cabinet. All data will be destroyed three years after the study.

Contact Information

If you have any questions or concerns regarding participation in this study please feel free to contact Martha Swirzinski at (757) 816-1111 or email to mrswirzinski@Liberty.edu

Statement of Consent

I have read and understand the information in the consent form. I understand the participation in this study is voluntary and I may withdraw at any time. I understand that I will be interviewed and observed. I consent to be a participant in this study.

Participant's Name (Please Print) _____

Participant's Signature _____

Date _____

You will be given a copy of this consent form for your personal records.

Appendix I: Interview Questions

1. Tell me about your teaching background.
2. What educational opportunities do you try to provide for your students?
3. What are some ways in which you provide physical activity opportunities to your students?
4. How much time do you devote to providing physical activity to your students?
5. What is your purpose when you provide opportunities for physical activity to your students?
6. What value does physical activity engagement have on the total academic curriculum?
7. What experiences do you believe have contributed to your knowledge about physical activity in early childhood?
8. What experiences do you feel influence your choice to implement physical activity to your students?
9. What are the physical activity recommendations or requirements at your school?
10. What, if any, professional development opportunities have you attended that dealt with physical activity in early childhood education? Please describe what they were, where, and when.
11. Please share with me any additional information that you would like to provide regarding the incorporation of physical activity into your classroom.
12. What else do I need to know about children and physical activity in your class or at your school?

Appendix J: Guidelines for Preschoolers

- **Guideline 1:** Preschoolers should accumulate at least 60 minutes of structured physical activity each day.
- **Guideline 2:** Preschoolers should engage in at least 60 minutes -- and up to several hours -- of unstructured physical activity each day, and should not be sedentary for more than 60 minutes at a time, except when sleeping.
- **Guideline 3:** Preschoolers should be encouraged to develop competence in fundamental motor skills that will serve as the building blocks for future motor skillfulness and physical activity.
- **Guideline 4:** Preschoolers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.
- **Guideline 5:** Caregivers and parents in charge of preschoolers' health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity (National Association for Sport and Physical Education, 2009a, p. 24).

Appendix K: Observation Protocol

Date: _____ Time: _____

Site: _____ Teacher: _____

Raw Data	Interpretation Data	Personal Data

Observations will focus on the amount of time the students spend in physical activity, the type of activity and whether it is structured or unstructured. The following definitions are part of the NASPE (2009a) physical activity guidelines and standards for children birth to five years and will guide the observations.

1. Locomotor skills – movement that allows an individual to move from one place to another. E.g. Crawling, walking, running, jumping, hopping, skipping, sliding, and galloping.
2. Manipulative skills – describes those movements which control an object with the hands or feet. Ex. Catching, throwing, kicking, volleying, striking, dribbling.
3. Nonlocomotor skills – describes those movements where the individual’s base of support (usually feet) do not move. These movements involve the individual to move other body parts while maintaining balance. Ex. bending, and twisting
4. Structured activity - a time of physical activity that is planned and directed by the caregiver.
5. Unstructured physical activity - when the child is given the opportunity to explore movement without the direction of a caregiver.

Appendix L: Permission Letter

Dear Martha,

One-time non-exclusive world rights in the English language for print and electronic formats are granted for your requested use of the selections below in your dissertation to be published by Liberty University.

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This permission is subject to the following conditions:

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Best wishes,

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Appendix M: IRB Letters of Approval

IRB Change in Protocol Approval: IRB Approval 2514.050616: Perceptions of the Role Physical Activity Plays in Early Childhood Education

IRB, IRB

5/25/2016 Swirzinski, Martha Robertson; Morgan, Kathie May (School of Education); IRB, IRB

Good Afternoon Martha,

This email is to inform you that your request to include [REDACTED] as a research site for your study has been approved. Thank you for submitting documentation of permission from [REDACTED].

Thank you for complying with the IRB's requirements for making changes to your approved study. Please do not hesitate to contact us with any questions.

We wish you well as you continue with your research.

Best,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

The Graduate School

LIBERTY UNIVERSITY.

INSTITUTIONAL REVIEW BOARD

May 6, 2016

Martha Swirzinski
IRB Approval 2514.050616: Perceptions of the Role Physical Activity Plays in Early
Childhood Education

Dear Martha,

We are pleased to inform you that your study has been approved by the Liberty IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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Appendix N: Collected Documents

Site	Documents Collected	Information
Popular Day	Teacher's daily lesson plans and weekly schedule.	Schedule details what happens each hour of each day. Must describe on lesson plan fine motor skills, large motor skills, sensory, science, dramatic play and concepts used.
	Schools website	Mission statement, goals of school, accreditations, days and hours of operation, description of the various programs, staff, yearly calendar and resources
	School wide newsletters	Calendar of events, letter from director, letter from lead teacher of each age group taught, and letter from each resource teacher,
	Classroom newsletters	Basic recap of what has been happening in the classroom over the last month.
	Playground rules	List of the various playground equipment and how they should and should not be used
Whitten	Teacher's daily lesson plans, and daily schedule	Daily schedule is a highlight of what will happen each hour. Lesson plans are broken down into the various stations: blocks, art, dramatic play, library, toys/games and sand/water, science, music/movement and essential questions.
	Schools website	Mission statement, staff, class days and times, history, learning through play,
	School wide newsletters	Reminders of events coming up. Summary of what each grade is learning. What special things happened
	Classroom newsletters	Reminders of events coming up. Summary of what each grade is learning. What special things happened
Nantucket	Teacher's daily lesson plans and daily class schedule.	Daily schedule is a highlight of what will happen each hour.

	Weekly plan	Daily lesson plan is detailed into each hour but also the objectives, materials, motivation, procedures and notes. Weekly plan lays out the topic being explored for the week. Must include interest areas, large group, read aloud, small group, outdoor experiences, family partnerships and Wow experiences.
	Schools website	Staff, admission requirements, hours of operation, tuition, accreditation, about us section, calendar of events
	Parent handouts	Multiple handouts available for parents on nutrition, active play, healthy habits, motor skills
	Activity schedule for Kinesiotherapy interns	Daily schedule for interns and the activities they will do with the students
	Gross motor skills checklist	Checklist detailing gross motor skills for students depending on their age.
	Weekly Wrap-ups for school	Reminders, week highlights, calendar of events and character trait
	Classroom newsletter	Monthly newsletter highlighting what happened each week as well as home assignments and upcoming events.
Great Beginnings	Teacher's daily lesson plans, daily schedule,	Daily schedule is a highlight of what will happen each hour. Daily schedule is a detailed account of what will happen during each hour.
	Monthly calendar for parents	Calendar gives suggestions for fun things to do each day with your child.
	Schools website	Mission statement, accreditations, goals, description of each grade, admissions, staff, hours of operation, enrichment opportunities, FAQ for parents
	School newsletter	Directors note, special events highlights, enrichment notes, calendar of events
	Classroom newsletter	Reminders, what they did that week,

		what's coming up next week, breaking news and things to talk to your child about.
Children's Port	Teacher's daily lesson plans and monthly learning themes	Daily schedule details what happens each hour of each day. Must describe on lesson plan creative art, motor skills, large motor skills, sensory, and language art. Monthly learning themes are broken into: concepts, language arts, music, discovery, expanding the world, rhythm and movement and people
	Schools website	Mission and vision statement, philosophy, goals of school, accreditations, days and hours of operation, description of the various programs and the curriculum, staff, yearly calendar and a parent center.

Appendix O: Interrater Suggestions

Interraters	Suggestion
A professor of teacher education and curriculum and instruction in the department of Kinesiology at the University of North Carolina at Greensboro.	<p>“Suggestion: If you have time, you might consider asking a broad question such as “What educational opportunities do you try to provide for your students?” How many will actually consider PA as an educational opportunity? Or you could phrase it as “health opportunities You might consider replacing goals (academic/educational) with purposes (reasons/rationale) – or use a follow up probe with purposes to gain greater clarification.”</p>
An elementary school principal who received her doctorate degree in education from Regent University.	<p>“#6 sounds like it is intended for early childhood PE teachers only. Maybe something like “what role do you feel you play in helping students become physically educated?” Do you mean other than the required PE minutes? The state requires 150 minutes weekly. Are you referring to requirements for brain breaks or recess?”</p>
An associate professor in the health department for a community college who received her doctorate degree in health and urban studies.	<p>“You might be prepared to ask probing questions here, such as, “What factors during the school day can prevent students from receiving PA?” (Not student illness but other school-related factors beyond teacher’s control. – You might be able to identify barriers to PA that would be an important theme emerging from your data.”</p>
A psychologist with a master’s degree in physical education and doctorate in education	<p>“I really like these questions. They are thoughtful and worded very appropriately.”</p>
An instructor in the physical education department at the community college who received her doctorate in anthropology of human movement. Her master’s degree was earned in dance and teaching certification.	<p>“The only question that is confusing to me is Research Question 4. Are we assuming that in early childhood education that the classroom teacher is responsible for all physical education activity or is the teacher adding in additional activities that include movement to engage the brain? What grades are specified as early childhood? At our school, 2-8th, all students engage in physical activity on a daily basis with a certified physical educator. Maybe you can clarify that.</p>

	Otherwise, very compelling thoughts.”
An assistant principal who received her doctorate in education and a masters in early childhood education.	“Does it matter to you if it is planned or spontaneous? I am wondering if you want them to share any physical activity opportunities or physical activity opportunities that are a part of planned instruction. I am thinking of wiggle breaks: things that are sometimes just added in versus planned physical activities (e.g., the teacher who notices students need a break and lets them get up and wiggle vs. the teacher that has brain break (composite numbers/4 corners activity) in plans). It may not matter. What are some way in which you provide physical activity opportunities as part of planned instruction daily?”