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A comparison of full-day and half-day preschool: analyzing behavioral and social development

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A COMPARISON OF FULL-DAY AND HALF-DAY PRESCHOOL: ANALYZING
BEHAVIORAL AND SOCIAL DEVELOPMENT

by
Laura Miller

A Thesis

Submitted in partial fulfillment of the requirements of the
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of
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at
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ABSTRACT

Laura Miller

A COMPARISON OF FULL-DAY AND HALF-DAY PRESCHOOL: ANALYZING BEHAVIORAL AND SOCIAL DEVELOPMENT

2006/07

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Masters of Arts in School Psychology

The purpose of this study was to compare full-day and half-day preschool programs by analyzing behavioral and social development of three-year-old and four-year-old children. Data was collected from 31 participants enrolled in a preschool in Wilmington, Delaware that offered both full-day and half-day programs. Measures of social cooperation, social interaction, social independence, externalizing behavior, and internalizing behavior were obtained from the Preschool and Kindergarten Behavior Scales- Second Edition. Between-subjects analysis of variance tests revealed that the children in the half-day program displayed higher social skills. In addition, one half-day classroom displayed more problem behaviors. Implications for future research on comparing full-day and half-day preschool programs were also discussed.

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CHAPTER I: INTRODUCTION

Need

By the time the majority of five-year-old children have reached kindergarten most have experienced being away from their home for some or most of the day. Prior to kindergarten, children are accustomed to spending much of their day with peers as compared to children of past generations (Rothenberg 1984). Several factors have contributed to the increase of time children spend outside of their home. The demanding economy has forced many families to rely on two incomes, therefore making it difficult for a parent to stay home with a child even in the early years. There has also been an increased amount of attention on preparing children for later school success. This has been accomplished by exposing pre-kindergarten children to early academic, instructional, and social preparation such as early-childhood programs, day-care, or private preschools (Rothenberg 1984). Programs such as Head Start have also made preschool experience possible for families who have a lower income.

Preschools generally offer families different options; many preschool education centers have full-day or half-day programs. There are many advantages and disadvantages to both full-day and half-day programs. Full-day programs contain more academic instruction and allow children to socialize with their peers. Half-day programs cater to a young child's attention span and the children experience less stress (Rothenberg 1984). Preschool children in full-day and half-day programs experience their early educational years differently in terms of social skills and behavior.

Purpose

The purpose of this study was to examine and assess two different preschool programs for three and four-year-old children. One program was a full-day program and the other was a half-day program. Four differentiated classrooms were studied: half-day for three-year-olds, full-day for three-year-olds, half-day for four-year-olds, and full-day for four-year-olds. The children in these two programs were compared based on their social skills and behavior. The social skills measured consisted of social cooperation, social interaction, and social independence. The behavior subscales were externalizing problems and internalizing problems.

Hypothesis

It was hypothesized that the children who attended the full-day program would exhibit better social skills on the three subscales compared to the children who were enrolled in the half-day program. It was also hypothesized that the children who attended the full-day preschool program would display more problem behavior compared to the half-day preschool children. The final hypothesis was that the development of social skills would be greater for the older children as compared to the younger children.

Theory/Background

Preschools first began in London in 1907 and were attended by children from two to four years of age. Preschools did not receive public funds and had a mission to promote educational skills and social adjustment for children. One of the oldest preschools in the United States, The Eliot Pearson School, was established in 1920 and is still affiliated with Tufts University. Today, very few public school systems include preschool education (Christianson 2006). Currently, an increase of children attending

preschool has become important because kindergarten is not the first school experience for children. Early education programs promote preparation for school and learning (Rafoth 2004).

Selecting the options of full-day, half-day, or no preschool is a choice parents have to make for their child's education before the age of five. Currently, there is not a great deal of research regarding the benefits of full-day compared to half-day preschool programs. However, there is literature on comparing full-day to half-day kindergarten programs (Robin, Frede, and Barnett 2006). Academic advantages of full-day kindergarten programs include higher reading scores in early grades, higher test scores and more individual instruction. Social and behavior benefits of full-day kindergarten programs include an environment that is relaxed, more free play, greater progress in social skills for children from low income families, higher self-esteem and independence, and reinforcement of positive social skills (Rafoth 2004). An argued disadvantage of full-day programs is they are too academic for young children and are pushing skills before children are ready to learn. There is also the risk of some full-day programs concentrating only on academics in the morning and leaving the afternoon to simply be childcare disguised in a classroom setting. Other factors that make full-day programs difficult include the cost of continually upholding an appropriate teacher-student ratio, transportation, and classroom space (Rothenberg 1984).

The advantages of half-day programs recognized by educators include that the programs can still provide high quality academics and social skills while transitioning and orienting the students to a school atmosphere. Behaviorally, half-day programs have the benefit of being less stressful for students based upon a child's attention span and

level of interest (Rothenberg 1984). Children in half-day programs are able to spend time in school working with a teacher and socializing with peers, but are not completely abandoned of parental attention. An argued disadvantage of half-day programs is interrupting a child midway through the day to transition them from a school setting to the home environment (Rothenberg 1984).

When a family is trying to decide if a half-day program or full-day program is more suitable there are several factors to take into consideration. Children with little experience in learning and social skills would benefit from full-day programs as well as children who have a great deal of family stress or developmental problems. It is also important for parents to observe their children and work with the preschool teachers. Based on observations and judgment of the child, parents and teachers can determine the level of development, interacting and learning skills, and readiness the child has for a full-day program. The observations can also provide insight regarding how easily a child fatigues or how they respond to structure and rules (Rafoth 2004).

Definition of Terms

1. Preschool/ Early Education - A school like setting for children under the age of five. The Preschool can either be full-day or half-day and teaches children academic, social, and behavior skills while the children participate in classroom activities.

2. Full-day program - Children spend the whole day in preschool education. The time ranges among schools; 9:00am to 3:00pm is an example of a full-day program.

3. Half-day program - Children spend half of their day in preschool education. The time ranges among schools; 9:00am to 12:00pm is an example of a half-day program.

4. Head Start - “Head Start and Early Head Start are comprehensive child development programs which serve children from birth to age 5, pregnant women, and their families. They are child-focused programs and have the overall goal of increasing the school readiness of young children in low-income families” (<http://www.acf.hhs.gov>).

5. JCC - The Jewish Community Center association has 350 branches (<http://www.jcca.org>). The Bernard and Ruth Siegel JCC of Wilmington Delaware was the preschool observed for this study. The JCC offers both full-day and half-day preschool programs and is licensed by the state of Delaware and NAEYC Accredited (<http://www.siegeljcc.org/pages/earlychildhood.html>).

Assumptions

In this experiment, it was assumed the full-day and half-day classrooms were chosen for the children by their parents. It was also assumed that the teachers communicate to the parents about the children’s social and behavior progress or problems. It was also assumed the teachers remained unbiased towards both programs and evaluated the students accurately and honestly.

Limitations

There were limitations in this experiment that should be addressed. The sample of preschool students used in this experiment was limited to middle class, preschool students from one early education center. The narrow amount of diversity was also a limitation. Another limitation was the time period of the experiment, additionally only one preschool was observed due to the short duration of time. An additional limitation was due to the amount of days the participants were enrolled in preschool. Most of the students attended either full-time or part-time for five days per week, however some

children attended preschool for less than five days of the week. Lastly, due to a teacher's extended absence, the long-term substitute rated the children in one of the classrooms. This substitute did however have the assistance of the teacher's aide who had worked with the children for the entire year.

Summary

Chapter II consists of an overall review of the research completed on preschool education and full-day compared to half-day programs. The research regarding the length of the programs comes mainly from kindergarten due to the limited amount of experiments completed on the effects of full-day and half-day preschool programs. The review also includes research on quality early education and an international comparison of preschool funding. Chapter III includes the design of the study. Chapter IV consists of an analysis of the results of the experiment. Chapter V includes the summary and conclusions of the experiment as well as implications for future research.

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

The review of the following literature in relation to the current study is structured to move from general topics to specific topics. The general research includes information about early education, quality early education, benefits of preschool, and research related to funding universal preschools. The specific research includes comparing full-day to half-day preschool, full-day versus half-day kindergarten, and the social and behavioral development of preschoolers.

General Research on Early Education

Early Education is a broad term that encompasses preschool, nursery school, daycare, early childhood programs, private preschools, and Head Start. All of these environments provide early education that includes regularly organized instruction and social activities before kindergarten (Rothenberg, 1984). Early education has shown positive correlations to cognitive development, readiness to learn, less grade retention, and fewer placements in special education classes (Anderson et al., 2003). In studies regarding the educational system, early education is not always included. However, it is necessary to research early education because concentrating only on an educational system of kindergarten through twelfth grade ignores early development and the importance of early experiences (Glassy and Romano, 2005).

Kindergarten teachers have noted that students without preschool experience have difficulties with social, behavioral, and academic skills when they enter kindergarten (Pianta and Paro, 2003). The Delaware Department of Education (2003) addressed

developmental areas that early education is responsible for teaching to children. The general developmental topics include language and communication; mathematics such as numbers, spatial awareness and patterns; science; creative arts; emotional and social development; and physical health. Subtopics of emotional and social development include self-concept, self-control, cooperation, social relationship and knowledge of families and communities. It is important to later success that children are exposed to these developmental and educational areas.

Research on Quality Early Education

In the first three years of life children experience a great deal of physical, cognitive, social, and emotional development. Their development is partially shaped by relationships and experiences; therefore it is extremely important for children to receive quality early education (David and Lucile Packard Foundation as cited in Lombardi and Poppe, 2001). Glassy and Romano (2005) considers high quality childcare to be consistent, developmentally and emotionally supportive, and having positive impacts on the child and family. High-quality early education programs increase children's abilities in math skills, language skills, cognition, social skills, interpersonal relationships, and behavioral self-regulation; compared to children who do not receive high-quality early education. Early education programs which are not of high quality can result in children being academically unprepared for school as well as potentially facing social and emotional developmental problems.

Social and economic changes of current society have increased the number of women who have children and careers. In the year 2000: according to Lombardi and Poppe (2001), 61% of mothers with children under the age of three had careers outside

their home and five million out of the eleven million infants and toddlers in the United States spent part of their day in places other than their homes. Additionally, 60% to 70% of children under the age of six attended some type of early childhood program (Glassy and Romano, 2005).

Characteristics of quality early education centers include fostering children's academic, social, and behavioral development. Quality centers also have many types of adult and child interactions, this usually occurs when the staff-student ratio is low. Having a qualified staff is also crucial towards developing a quality early education center. The teachers should be knowledgeable about the curriculum they are instructing as well as learning styles and behavior of young children (Sylva et al., 2003).

Lombardi and Poppe (2001) found state spending for early education has increased more than twice since 1998. State actions to improve early education include; providing safe and healthy care while improving the quality of early education centers. For example, state legislators in Florida, Tennessee, New York, and Utah have decreased the child to staff ratios in order to increase better quality care (Lombardi and Poppe, 2001).

Research on Benefits of Preschool

The High/Scope Perry Preschool project was a longitudinal scientific experiment that focused on short term and long term effects of high quality preschool education. The research project used a sample of 123 low-income African American children ages three and four. Fifty-eight children were assigned to a high-quality preschool program and sixty-five children were not assigned to a preschool program. The research study collected data on the children when they were ages three to eleven as well as fourteen,

fifteen, nineteen, twenty-seven, and forty years old (Schweinhart, 2004). Schweinhart (2004), President of High/Scope Educational Research Foundation, described short-term and long-term outcomes in educational, economic, crime, and family domains. Children in the program group outscored children of the non-program group on intellectual and language tests during the time they were in preschool through the age of seven. At ages nine, ten, and fourteen the program group was scoring higher on school achievement tests. When the program group was ages fifteen and nineteen the students and their parents had “significantly better attitudes toward school.” At forty-years-old the program group reported a larger percentage completing high school and fewer had to repeat grades in school.

Schweinhart (2004) also reported; economically more students in the program group were employed and had higher annual earning at ages twenty-seven and forty compared to the non-program group. The amount of arrests and crimes committed were significantly lower for the program group versus the non-program group during the participants’ lifespan through the age of forty. Additionally, at the age of forty more of the program group males had raised their own children and reported higher family satisfaction. Parks (2000) found that the program students at the age of twenty-seven had fewer arrests for dealing drugs, received less public assistance, and more owned their own homes. The project also indicated from the cost-benefit analysis that the public saved more than seven times the initial investment per child.

The Carolina Abecedarian Project (CPA) was another longitudinal study of early education. In 1972, CPA placed fifty-seven infants into a full-day quality preschool and fifty-four infants in a non-treatment group. The preschool activities focused on social,

emotional, and cognitive development. At the age of twenty-one both groups were assessed in similar ways as the High/Scope Perry Program. CPA found that at age twenty-one, the children who participated in the program group had high cognitive test scores and more advanced linguistic skills compared to the non-program group. The program group was also more likely to attend a four-year college and, on average, had their first child later than the non-program group (Masse and Barnett, 2002).

Longitudinal studies such as the High/Scope Perry Project and The Carolina Abecedarian Project demonstrate the need and benefits of early education programs.

Besides the long-term benefits, there are also short-term benefits to early education programs. The National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (ECCRN) completed a study with over 1,300 mothers and their one month year old babies. The research assessed the children who experienced different types and amount of time in early child education at one, six, fifteen, twenty-four, thirty-six, and fifty-four months old. They compared social skills, emotional adjustment, and cognitive abilities of the children. At every age studied, children who attended a high-quality preschool center demonstrated more progress on cognitive, language, and pre-academic abilities. However, children who spent more time in preschool centers also showed more behavior problems and less pro-social behavior development at each age compared to the children who spent fewer hours in a preschool center (NICHD, 2006).

Research on Funding a Universal Preschool System

The purpose of a universal preschool system would be to provide a free education to all children ages three to five years old living in the United States (Greene, 2006). A

universal preschool education would benefit children of all socioeconomic statuses. Presently, only two socioeconomic groups of three to five year olds are receiving preschool education; the children whose families are fortunate enough to be able to afford private preschool education and the children beneath the poverty line who qualify for federally funded programs such as Head Start. However, the huge portion of middle class families with incomes just above the poverty line can not afford private preschool education nor qualify for federally supported programs (Greene, 2006).

Currently, there are a variety of agencies funding different programs serving preschool aged children and their families. This system is inefficient because both social services and state education departments are funding different programs and duplicating the same services while trying to help the same children (Jacobson, 2006). It is a barrier to have multiple institutional agencies for early education, because collaboration between the systems is difficult, there are differences in data, and miscommunication between networks occurs (Gallagher et al 2001). Washington State, along with other states, are trying to integrate multiple programs into one state agency. Last year, Massachusetts formed A Department of Early Education and Care which is responsible for such things as early care and education, early intervention, family support, and preschool services (Jacobson, 2006). The state of Oklahoma discovered their results of a universal pre-kindergarten program increased children's performance on academic assessments of reading, writing, spelling, math, and problem solving skills (Gormley et al., 2005).

A universal preschool program would insure each state had their own public preschool education with financial support from the federal government. Title I, Part A of the Elementary and Secondary Education Act (ESEA) permits funds to be provided for

preschool services to children who are at-risk within Title I funded schools and school districts (Ewen et al., 2005). Preschool programs can only be funded under Title I if the school receives money from Title I and wishes to operate a preschool program or if a local education agency (LEA) establishes a Title I preschool program for the whole district or a portion of the district (Department of Education, 2004). Head Start is a popular preschool program that is funded by the federal government. Head start provides academic, social, emotional, health, nutrition, and safety needs to preschool children and their families of low-income status (Center for Mental Health in Schools, 2006).

According to Greene (2006), in order to have a universal preschool system each state must commit and provide funding towards a preschool system and federal funding would be used to support the states programs. Currently, there is a great amount of variability in the states establishment of universal preschool. The majority of states have partially funded state preschools, other states have no form of state funded preschool, and only a small minority of states has a universally state funded preschool system (Greene, 2006). New Jersey, for example, has Abbott Preschool Program that was created in 1998. Preschool is provided for three and four year old children in Abbott districts which consist of the thirty highest poverty districts in the state (Barnett et al, 2001).

Preschool Funding on an International Level

Boocock (1995) compared the significant differences in the establishment of preschools on the international level. There is a large distinction among European countries; in France and Belgium almost 100% of three year old children are enrolled in preschool programs and the preschool teachers receive the same salary as primary school teachers. Germany has almost 70% of three to six year olds attending half-day

preschools fully provided for by the government. Sweden has been considered to have the most advanced childcare system in the world, since the mid 1960's local governments have provided supervised child care for children starting from birth. Some other European countries' percentages of preschool attendance include; 44% of British children, 28% of three year olds in Spain and Portugal, and less than 6% of Swiss three year olds attend preschool. Education is highly developed among countries such as Japan, Singapore, South Korea, Hong Kong, and Taiwan. In these countries most children attend preschool because it is considered the first step in academic education which prepares children for the future.

Research on Full-Day versus Half-Day Preschool

While there has been extensive research on the importance of preschool quality, the benefits of the duration of time spent in preschool is a topic that has not received a great deal of interest. The National Institute for Early Education Research (NIEER) conducted a study to see whether full-day or half-day preschool programs had more benefits on early school achievement. NIEER compared eighty-five children attending an eight hour full-day program to two hundred and fifty-four children participating in a two and half to three hour half-day program. The results of the research suggested children who have problems before preschool increased their vocabulary, math, and literacy to acceptable standards if they attended a full-day preschool program (Robin et al., 2006).

Children in the half-day programs also improved, but not to the same extent compared to the students in the full-day program (Robin et al., 2006). When the children were assessed an additional two times, towards the end of kindergarten and first grade,

the full-day group still tested for higher learning in literacy and mathematics (Barnett as cited in Lauds 2006). This research is useful to parents who are trying to decide the duration of preschool for their children, because they can examine the academic advantages and make an informed decision based on their child's needs.

This study by NIEER did not focus on behavioral or social consequences of full-day or half-day preschool, however the Effective Provision of Preschool Education (EPPE) Project did look into social and behavior differences. Their findings did not result in a difference of social or behavioral skills between full-day and half-day programs (Sammons et al., 2004 cited by Robin et al., 2006). Research completed on social and behavior abilities of preschoolers in full-day versus half-day is limited.

A real world application was implemented by Norwich Connecticut superintendent, Michael J. Frechette. Frechette formed full-day preschool and kindergarten programs from the half-day programs in order to help the children of the disadvantaged public school system. According to his research, the full-day preschool programs helped prevent and reversed the underachievement of preschool children. The school district initially received complaints of the full-day programs being too strenuous and demanding for young children. However, the results have indicated the children in the time in full-day programs had the time to experience art, music, physical education, library, and technology skills. The school system has also proved to overcome the initial negativity, because a waiting list of eighty children is signed up for the full-day services (Pascopella, 2001).

Research on Comparing Kindergarten Full-Day and Half-Day Programs

While the research on full-day and half-day preschool programs is very limited, there are generous amounts of studies regarding full-day and half-day kindergarten programs. The amount of children attending full-day kindergarten has drastically increased from 20% in the 1970's to over 50% by the year 2000 (Dianis, 2004). The main question that has been scrutinized by research is whether or not full-day programs more successfully prepare kindergarteners for academic achievement in the future compared to half-day programs (Plucker & Zapf, 2005). According to a survey supplied by The National Center for Early Development and Learning (NCELD), kindergarten teachers' cited problems in children's inability to follow directions, complete low level pre-academic skills, work independently or in a group, and communication difficulties. A concern of half-day kindergarten is that it does not prepare children in areas of language, literacy, general knowledge, emotional maturity, and social confidence that are needed for future school success (Brewster, 2002).

These concerns have been studied by comparing full-day programs and half-day programs. Lee et al., (2006) completed a longitudinal study of over 8,000 kindergarteners across 500 public schools in the United States. In this study, 55.7% of the children were in full-day programs and 44.3% attended half-day programs. The children's literacy and mathematical learning skills were evaluated. The study took into account characteristics of the child such as their social background (gender, race, social economic status, native language, and age) and academic background. The study also assessed school characteristics such as the setting (urbanicity, region, kindergarten size, grade levels in school), social composition (minority enrollment, average social economic status) and academic composition.

Lee et al., (2006) also found patterns for accessibility to full-day kindergarten. The full-day programs tend to enroll children who are from lower social economic statuses, children of ethnic minority backgrounds, and children who are having problems with mathematics and literacy. Demographically, full-day programs tend to be located in large city schools and are more popular with schools of the South. The reason more schools serving disadvantaged families offer full-day programs is because they have the funds from Title I to assist them with expenses. For schools that do not receive Title I funds, full-day kindergarten may be a financial strain because of the need for more teachers and staff to meet ration requirements, more classroom space, and additional transportation (Rothenberg 1984).

The results of the study demonstrated children who attend full-day programs have higher cognitive achievement abilities in mathematics and literacy. While the children in full-day programs experience more academic instruction, it is only about one- third more than the half-day programs receive, according to teachers. However, the academic increase occurs from more time being spent on non-formal activities in full-day kindergarten that still promote academics (Lee et al 2006). Faculty at Southwest Missouri State University, Hough & Bryde (1996) found teachers of full-day programs feel they have more time to provide individual explanations to students. This is supported by Elicker and Mathur (1997) who claimed full-day programs allow teachers more time to incorporate experimental and self-learning strategies into the curriculum (as cited in Basket et al., 2005). Children who attend full-day kindergarten have more class time to learn about different subject matters and social skills (Lee et al., 2006).

Similar to the other studies, The Center for Evaluation and Education Policy of Indiana State compared full-day and half-day programs in the areas of academic achievement, social skills, and behavior. Multiple academic achievement tests including; The Boehm Test of Basic Concepts, Gates-MacGinitie Reading Tests, California Achievement Test, and Comprehensive Test of Basic Skills were administered to both groups from the time they were in kindergarten to third grade. Report cards and The Teacher Opinionnaire were also collected from both groups. Some of the test measures included, academic achievement, comprehension, vocabulary, work habits, independent work skills, and handwriting. On all measures, excluding a cursive handwriting test, the full-day group performed on a superior level than the half-day group (Plucker et al 2004).

Plucker et al., (2004) also cited additional research by; (Cryan et al., 1992; Humprety, 1980; Wang and Johnstone, 1999) regarding the social and behavioral effects of full-day and half-day programs. The consensus of this research was students of full-day programs had better social and behavior skills in domains such as, originality, individual learning, involvement in classroom activities, productivity with peers, intellectual dependency, and approach to teachers. In the Indiana Study, Plucker et al (2004) found no significant difference between the program types when measuring school attitudes towards math, reading, science, or social studies. According to The Teacher Opinionnaire, the majority of teachers rated the full-day group to exceed the half-day group in socialization and behavioral skills covering the domains of socialization with peers and attention span. Full-day students were also rewarded higher scores on a self-concept scale that focused on less stress and frustration, working well

with others, self-confidence, and obeying rules (Elicker and Mathur, 1997 as cited in Plucker, 2004).

Research studies are able to demonstrate which programs have better advantages. Half-day programs feature more parental involvement and are more suitable for children who do not have a long attention span (Rafoth et al., 2004). In a Canadian study of full-day versus half-day programs, teachers rated higher levels of parental support for the students of the half-day program (Da Costa and Bell, 2001). On the other side, research has shown the benefits for full-day programs include higher academic achievement skills, fewer grade retentions, better social and behavioral skills, and more exposure to independent learning (Rafoth et al., 2004).

However, Rafoth et al., (2004) also advised parents to think about their individual child when it comes time to make a decision between full-day and half-day kindergarten. If a child has attended a preschool, the parent should be advised to talk to the teachers regarding the child's ability and which type of program would be more suitable for their personal needs. The parents should also discuss the matter with the kindergarten educators or spend some time observing the different types of programs. Finally, the parent needs to critically think about their child's learning style and which program would meet the educational needs of their child.

Research Related to Social Skills and Behavior in Preschool Children

Preschool aged children's behavior is often a reflection of their cognitive development and how they construct the world. Children of this age think and behave in a very self-centered fashion and have an egocentric view of the world around them. Children's behavior often demonstrates their inability to view events from multiple

perspectives (Miller, 2006). Denahm et al., (2006) studied the correlation between children's positive behaviors and emotions to how much they are liked by their fellow peers. The results indicated that by three and one-half years old most children should be able to express friendliness, nurture, and respond to others emotions. Preschool children who have not yet developed the ability to distinguish others' positive and negative emotions are at a risk for being disliked by their peers. Peers rated other peers as being more likable when positive social and emotional skills were present.

Behavior problems in preschoolers can become a vicious cycle that affects other domains in the child's life. Behavior referred to as externalizing behavior problems, occurring in preschool aged children can result in noncompliance, high activity levels, and poor attention span. These characteristics lead to poor academic development thus introducing disengagement, frustration, and lower self-esteem. Externalizing behavior is a large classification including disruptive behavior, aggression, delinquency, oppositional defiant disorder, conduct disorder, or attention deficit/hyperactivity disorder (Arnold et al., 2006). It is necessary to identify children who have externalizing behavior problems because it can escalate with time into more dangerous and maladaptive behavior problems (Hill et al., 2006). Another cycle involves the parents' and teachers' frustration with the behavior problems and often results in stricter punishment, escape from the child, or less instruction from the teacher (Arnold et al., 2006).

Hill et al., (2006) studied predictors for externalizing behavior problems of three hundred eighty-three girls and boys. The research results indicated social-economic status and inattention for boys correlated with externalizing behavior problems. The predictors for girls included inattention and included emotion regulation. Anthony et al.,

(2005) examined the effect of parental behavior as a predictor of child behavior and social competence. The results of this study did not reveal significant correlations between parenting behavior and children's maladjustment, social competence, or levels of behavior problems.

Preschool education holds a very promising role in helping children and families with externalizing behavior problems. Classrooms set up as token or response-cost systems have reduced the amount of disruptive and aggressive behavior (McGoey & DuPaul 2000 as cited in Arnold 2006). Second Step is a program that focuses on empathy, impulse control, and anger management skills through class discussions, role-playing, modeling, and positive reinforcement. Results of this program have shown less physical aggression and increases in pro-social skills (Grossman et al., 1997 as cited in Arnold 2006). Another type of classroom-based program is called the Dinosaur Program. This program focuses on seven skills; learning school rules, being successful in school, emotional literacy, empathy, interpersonal problem solving, anger management, and friendship and communication skills. These lessons are based upon social, emotional, and cognitive challenges faced by children with behavior problems (Webster-Stratton and Reid, 2004). It is crucial young children with serious social and behavior problems are recognized and receive early intervention because these problems can escalate into future antisocial or delinquent behavior problems (Yoshikawa 1995).

Summary

Although, the amount of research on preschool is significantly less than kindergarten, current research places an emphasis on the growing development of early education. With the increasing amount of children attending preschools there is a strong

need for a universally funded preschool system. On an international level, multiple countries have already implemented a universal preschool system. In addition to a growing trend towards preschool, more research needs to be completed on comparing full-day versus half-day programs. Early education programs also have to be knowledgeable on the social and behavioral development of preschoolers in order to have a quality educational program

CHAPTER III: DESIGN

Participants

The participants in this study attended a private preschool located in a suburban community of Wilmington, Delaware. The participants consisted of thirty-one preschool children; three, four, and five years of age. The children were enrolled in four differentially grouped classrooms: half-day, three-year-old; full-day, three-year-old; half-day, four-year-old; and full-day, four-year-old. Due to the study taking place in the spring some of the children had turned a year older; therefore there were some four-year-old children in the three-year-old classrooms as well as five-year-old children in the four-year-old classrooms. The half-day, three-year-old classroom had seven participants: six three-year-olds and one four-year-old. The full-day, three-year-old classroom had nine participants: five three-year-olds and four children four-years-old. The half-day, four-year-old classroom had nine participants: two four-year-olds and seven five-year-olds. The full-day, four-year-old classroom had six participants: three four-year-olds and three five-year-olds. Each classroom had one teacher and one assistant teacher.

Materials

The materials used in the experiment were provided to the teachers by the experimenter. The measure used in the study was the Preschool and Kindergarten Behavior Scales- Second Edition (PKBS-2) (Merrell, K 2002). The content of the PKBS-2 was organized into two scales; social skills and problem behavior. Both scales required the teachers to rate on a four point system; 0= never, 1= rarely, 2= sometimes,

3= often. The social skills scale included thirty-four items that were formed to measure social skills as well as social adjustment that are likely to lead to positive personal and social outcomes (Merrell, K 2002).

The social skills scale was comprised of three subscales; social cooperation, social interaction, and social independence. The social cooperation subscale had twelve questions which reflected behavioral characteristics such as, “following instructions from adults, cooperating and compromising with peers, and showing appropriate self-restraint” (Merrell, K 2002). The social interaction subscale included eleven items which focused on social adjustment with peers, as well as gaining and maintaining friendships. The social independence subscale contained eleven items which were important in achieving social independence such as, “separating appropriately from adult caregivers, exhibiting appropriate confidence, and displaying positive assertiveness with others” (Merrell, K 2002).

The behavior scale was made up of forty-two items and included problem behaviors commonly seen in a preschool or early childhood setting. The problem behavior scale encompassed two subscales; externalizing problems and internalizing problems. The externalizing problems subscale included twenty-seven questions regarding disruptive behaviors such as acting out, under-controlled, and overactive behavior. Merrell (2002) described these behaviors as common in preschool aged children, however if severe and intense they can result into serious conduct problems. Those young children who exhibit these behaviors and do not receive any early intervention services are at risk for developing disruptive behavior disorders including, oppositional-defiant disorder, conduct disorder, and attention-deficit/hyperactivity

disorder (Merrell, K 2002). The internalizing problems subscale had fifteen items that depicted over-controlled emotional and behavioral problems. Internalizing behavioral and emotional problems include anxiousness, fearfulness, and emotional over-sensitivity. Merrell (2002) addresses the importance of early screening, identification, and intervention for internalizing problem behavior in order to prevent the risk of developing problems later in life such as mood disorders, depression, anxiety disorders, and social isolation.

Reliability/Validity

The PKBS-2 was standardized nationwide with 3,313 children ranging from ages three to six. The internal consistency reliability for the social skills scale was found to be .97 for age five and .96 for ages three, four, and six with a coefficient alpha of .96. The internal consistency for the behavior scale was found to be .94 for three and four-year-olds, .95 for five-year-olds, and .93 for six-year-olds with a coefficient alpha level of .97. The test-retest reliability coefficients for the social skills scale at three-week and three-month retest periods was .58 and .69. The test-retest reliability coefficients for the problem behavior scale at three-week and three-month retest periods was .86 and .78. Interrater reliability within preschool settings coefficient was found to be .48 for the social skills scale and .59 for the behavior scale (Merrel, K 2006).

The content validity for the items of the PKBS-2 was examined by sixteen expert judges. The items were developed according to their theoretical and practical relationship to the overall categories and subscales for social skills and problem behavior. The validity of the item-total correlations for the PKBS-2 thirty-four itemed social skills scale were found to be in the .60 to .70 range with no score less than .32. The validity of

the item-total correlations for the PKBS-2 forty-two itemed problem behavior scale were found to be in the .60 to .70 range with no score less than .40. Convergent validity for social skills and problem behavior was established by comparing the PKBS-2 to seven other child behavior rating scales. Overall, the results of the research signify that the PKBS-2 is a valid measure.

Method

Prior to the beginning of the experiment, the preschool students were enrolled in either full-day or half-day preschool programs. The half-day preschool program started at 9:00am and ended at 12:00pm for five days per week. The full-day preschool program started at 9:00am and ended at 3:00pm for five days per week. The permission of the director of the preschool was granted prior to the start of the research.

The experiment was designed to measure social skills and behavior development of full-day and half-day preschoolers. Due to these objectives, the experimenter avoided scales that measured severe behavior problems or pathology. Another consideration of the scale was its suitability for the teachers to complete. Therefore, the scale could not be too time consuming or burdensome. The PKBS-2 matched the expectations of the study.

The experimenter met with the preschool director and the participating teachers prior to the beginning of the experiment. At this meeting, the experimenter explained the need, purpose, and procedure of the study. The experimenter also explained how to complete the social skills and behavior scales of the PKBS-2. The experimenter answered questions and clarified concerns. The teachers understood their role in the research and displayed strong willingness to participate in the study. Parental consent

forms were distributed and consent was granted before the experiment started. The teachers received the scales once the parental consent forms had been obtained.

The teachers completed sections I, II, and III of the PKBS-2 summary/response form. In section I the teachers omitted the child's name due to the confidentiality of the research. The teachers did however answer questions in section I regarding the age, gender, and classroom type of the children. In section II the teachers filled in rater information regarding their name and relationship to the child. Section III consisted of the social skills and problem behavior scales. The teachers answered thirty-four questions on the social skills scale for each child and forty-two questions on the behavior scale. The teachers had the option to include any additional information regarding the child's behavior in section IV. Once the teachers were finished completing each child's questionnaire the experimenter collected the forms.

Independent and Dependent Variables

In this experiment, the independent variables were the classroom type and the age of the children. The four classroom types consisted of: half-day for three-year-olds, full-day for three-year-olds, half-day for four-year-olds, and full-day for four-year-olds. The independent variable of age included three and four years of age, as well as five years of age for those children who have had already turned a year older. The dependent variables were the scales and subscales of the PKBS-2 and included the composite standard scores for the social skills scale and behavior scale. The dependent variables also included the standard scores for each of the subscales; social cooperation, social interaction, social independence, externalizing behavior, and internalizing behavior.

It was expected that there would be a significant difference between the full-day and half-day students on social skills and behavior scores. It was predicted the full-day three and four-year-olds would exhibit significantly higher ratings on the social skills scales. It was also expected that the half-day three and four-year-olds would receive lower problem behavior scores on the behavior scales. It was also predicted that there would be a difference in social skills of the three-year-olds and four-year-olds regardless of program type.

Analysis of Data

After the teachers completed their questionnaires the scores were collected from each class. The data from the following four classroom groups was analyzed: half-day, three-year-old; full-day, three-year-old; half-day, four-year-old; and full-day, four-year-old. Between subjects analysis of variance tests were performed on this data at the .05 level to determine if there was a statistically significant difference between the groups. The composite standard scores of social skills and behavior, as well as the standard scores for each subscale for the type of classroom and age of the participants were analyzed by the use of between subjects analysis of variance.

Summary

This study analyzed the difference of social skills and behavior between half-day and full-day preschool programs. Three-year-old and four-year-old age groups were used. Prior to this study, the participants had been enrolled into one of the four classroom types. The teachers' rating scales of the children's social skills and behavior were implemented through the use of the PKBS-2. Standard scores and composite standard scores were analyzed with between subjects analysis of variance tests. This method was

used to determine whether or not there was a significant difference between half-day and full-day programs pertaining to social skills and behavior. Between subjects analysis of variance tests were also used to determine whether or not there was a significant difference between the three-year-old classrooms and the four-year-old classrooms. It was expected that the students in the full-day program would exhibit better social skills and more behavior problems than the half-day program. It was also expected that the four-year-olds would exhibit better social skills than the three-year-old students.

CHAPTER IV: RESULTS

Introduction

The purpose of this study was to examine the differences between half-day and full-day preschool programs regarding social skills and behavior in children three and four years of age. It was hypothesized that the children in the full-day classrooms would score significantly higher on the three social skills subscales compared to the children in the half-day program. It was also hypothesized that the children in the full-day program would score significantly higher on the two problem behavior subscales compared to the half-day preschool children. The last hypothesis was that the four-year-old children would score significantly higher on the social skills scale compared to the three-year-old children.

Results

After the teachers completed the rating scales of the PKBS-2 the experimenter completed the score summary table of the summary/response form. The experimenter examined the composite standard score for the social skills scale and the problem behavior scale. The experimenter also analyzed standard scores for the subscales; social cooperation, social interaction, social independence, externalizing problems, and internalizing problems. There were a total of thirty-one students from all four classrooms combined. More specifically, there were seven students in the half-day, three-year-old classroom; nine students in the full-day, three-year-old classroom; nine students in the half-day, four-year-old classroom; and six students in the full-day, four-year-old classroom.

A four (classroom) by three (age) between subjects analysis of variance on social skills revealed no statistically significant interaction, however there was a statistically significant difference main effect for classroom type. ($F(3, 23) = 6.05, p = .003$). A test of main effects, post hoc tukey, of classroom showed a statistically significant difference between the half-day, three-year-old classroom; full-day, three-year-old classroom; and half-day, four-year-old classroom. The half-day, three-year-old classroom ($M = 115.57$) revealed higher scores; compared to the half-day, four-year-old classroom ($M = 111.5$); and the full-day, three-year-old classroom ($M = 84.56$) for social skills (see table 4.1).

For social cooperation, a four (classroom) by three (age) between subjects analysis of variance revealed no statistically significant interaction, however there was a statistically significant difference main effect for classroom type. ($F(3, 23) = 4.10, p = .018$). A test of main effects, post hoc tukey, of classroom showed a statistically significant difference between the half-day, three-year-old classroom; and the full-day, three-year-old classroom. The half-day, three-year-old classroom ($M = 111.14$) revealed higher scores; compared to the full-day, three-year-old classroom ($M = 88.22$) for social cooperation (see table 4.1).

An analysis on the social interaction subscale using a four (classroom) by three (age) between subjects analysis of variance resulted in no statistically significant interaction; however there was a statistically significant difference main effect for classroom type. ($F(3, 23) = 4.82, p = .010$). A test of main effects, post hoc tukey, of classroom showed a statistically significant difference between the half-day, three-year-old classroom; and the full-day, three-year-old classroom. There was also a statistically significant difference between the full-day, three-year-old classroom; and the half-day,

four-year-old classroom. The half-day, three-year-old classroom (M= 114.86) revealed higher scores; compared to the half-day, four-year-old classroom (M= 112.33); and the full-day, three-year-old classroom (M= 84.67) for social interaction (see table 4.1).

Post analysis, nothing statistically significant was found for the social independence subscale. This included interaction, classroom type, and age.

Table 4.1 Mean scores for social skills scale and subscales.

Classroom	Social Skills	Social Cooperation	Social Interaction
3 yrs ½ day	115.57	111.14	114.86
3 yrs full day	84.56	88.22	84.67
4 yrs ½ day	111.50	109.33	112.33
4 yrs full day	102.78	101.67	103.67

For the problem behavior scale, a four (classroom) by three (age) between subjects analysis of variance did not result in a statistically significant interaction, however there was a statistically significant difference main effect for classroom type. ($F(3, 23) = 7.97, p = .001$). A test of main effects, post hoc tukey, of classroom revealed a statistically significant difference between the half-day, three-year-old classroom; and the full-day, three-year-old classroom. There was also a statistically significant difference between the full-day, three-year-old classroom; the half-day, four-year-old classroom; and the full-day, four-year-old classroom. The full-day, three-year-old classroom (M= 112.44) revealed higher scores; compared to the half-day, four-year-old classroom (M= 91.50); the full-day, four-year-old classroom (M= 84.77); and the half-day, three-year-old classroom (M= 78.0) for problem behavior (see table 4.2).

To analyze externalizing problem behavior, a four (classroom) by three (age) between subjects analysis of variance revealed no statistically significant interaction, however there was a statistically significant difference main effect for classroom type.

($F(3, 23) = 5.90, p = .004$). A test of main effects, post hoc tukey, of classroom showed a statistically significant difference between the half-day, three-year-old classroom; and the full-day, three-year-old classroom. There was also a statistically significant difference between the full-day, three-year-old classroom; the half-day, four-year-old classroom; and the full-day, four-year-old classroom. The full-day, three-year-old classroom ($M = 114.11$) revealed higher scores; compared to the half-day, four-year-old classroom ($M = 92.33$); the full-day, four-year-old classroom ($M = 88.89$); and the half-day, three-year-old classroom ($M = 82.29$) for externalizing problem behavior (see table 4.2).

By the use of a four (classroom) by three (age) between subjects analysis of variance on internalizing problem behavior there was no statistically significant interaction, however there was a statistically significant difference main effect for classroom type. ($F(3, 23) = 6.79, p = .002$). A test of main effects, post hoc tukey, of classroom resulted in a statistically significant difference between the half-day, three-year-old classroom; and the full-day, three-year-old classroom. There was also a statistically significant difference between the full-day, three-year-old classroom; and full-day, four-year-old classroom. The full-day, three-year-old classroom ($M = 109.67$) revealed higher scores; compared to the full-day, four-year-old classroom ($M = 85.78$); and the half-day, three-year-old classroom ($M = 77.71$) for internalizing problem behavior (see table 4.2).

Table 4.2 Mean scores for problem behavior and subscales.

Classroom	Problem Behavior	Externalizing Behavior	Internalizing Behavior
3 yrs ½ day	78.00	82.29	77.71
3 yrs full day	112.44	114.11	109.67
4 yrs ½ day	91.50	92.33	92.33
4 yrs full day	84.78	88.89	85.78

Summary

In summary, there were seven between-subjects analysis of variance tests conducted in this study. There was a statistically significant difference found on the type of classroom and the scores on the social skills and behavior scales. More specifically, there was significance found between the four different classrooms and the social skills subscales and behavior subscales. The only subscale that did not reveal a significant difference was social independence. There was no statistically significant interaction effect on classroom type and age. There was also no significant difference on the age of the children and the social skills and behavior scores.

CHAPTER V: DISCUSSION

Review of Results

After reviewing the data, it was found that the children who attended the half-day preschool program scored higher on the social skills scale compared to students who attended the full-day preschool program. The participants in the half day, three and four-year-old classrooms displayed higher social skills; compared to the participants in the full-day, three and four-year-old classrooms. When the social skills subscales were analyzed, it was found that the children of the half-day programs scored higher on the social cooperation and social interaction subscales.

This finding does not support the hypothesis that the full-day preschool students would score higher on the social skills scale. The results indicated that the half-day students displayed higher social competence in the areas of social cooperation and social interaction. These results also failed to support past research that utilized a teacher opinionnaire to rate social skills. In a study completed by Plucker et al (2004) the majority of teachers rated the full-day group to exceed the half-day group in socialization abilities.

Another significant result comparing the half-day and full-day classrooms was the behavior ratings. A higher score on the behavior scale indicated more behavior problems. It was hypothesized that the children in the full-day classrooms would display more problem behavior; compared to the children in the half-day classrooms. The explanation supporting this hypothesis was based on teachers observing more behavior problems in full-day classrooms, where more time was spent with the children. The

results of this study partially supported this hypothesis. It was found that the full-day, three-year-old classroom showed significantly higher behavior problem scores; compared to the half-day, three-year-old classroom; and the half-day, four-year-old classroom. However the full-day, four-year-old classroom did not display significant amounts of behavior problems. In other words the results are not consistent when comparing full-day to half-day classrooms. This finding contradicts research that has found full-day programs to be more beneficial than half-day programs in order to increase positive behavior skills (Rafoth et al., 2004).

The subscales classified behavior problems into two categories, internalizing and externalizing. After a more specific examination of problem behavior it was found that the scores for externalizing and internalizing behavior were very similar when comparing the classroom types. In both cases the full-day, three-year-olds scored significantly higher; compared to the half-day, three-year-olds. This would indicate that the children in the full-day classroom have more behavior problems.

However, this was not the case for the results of the full-day, four-year-old classroom. The children in the full-day, four-year-old classroom did not have significantly higher problem behavior scores than the half-day classrooms. The discrepancy in this study between full-day and half-day programs in relation to behavior problems has also occurred in previous research. The Effective Provision of Preschool Education (EPPE) Project examined social and behavioral skills of half-day and full-day preschools. The findings of this study did not result in a difference of behavioral skills between full-day and half-day programs (Sammons et al., 2004 cited by Robin et al., 2006).

Despite the significant results when comparing full-day and half-day classroom types, there were no significant results with age. Contrary to the hypothesis that the four-year-olds would display more advanced social skills; the results of the current study does not support age differences in regards to social skills or behavior. An explanation for the non-significance could be a result of the amount of skills that are developed between the ages of three and four when children are enrolled in preschool. While there may not be a significant amount of difference between this sample of three and four-year-olds, other studies such as the High/Scope Perry Preschool project have demonstrated the significant results of three and four-year-olds who have attended preschool compared to those who have no preschool education.

Limitations

A limitation of this study was the adaptable characteristic of this preschool's full-day and half-day programs. The classrooms were designed as five days per week: half-day, 9:00am - 12:00pm; and full-day, 9:00am - 3:00pm. However the preschool permits exceptions based on parental preference; therefore not all of the participants fit into these designated categories. Some of the children in the study attended the full-day program for only three days of the week. These children were still considered to be in the full-day classrooms and were rated as such. Similarly, some of the participants in the half-day program only attended for three days of the week. These children were also considered to be in the half-day classrooms and were analyzed in the same manner.

This leads to another limitation of the study, which is that not all of the students could be compartmentalized into specific age groups. Two of the classrooms were designated as three-year-old and the other two were designated as four-year-old. This

study took place in the middle of the school year; therefore some of the participants had already turned a year older, but had not moved to the higher aged classroom. Another explanation for age discrepancy is that some children attend an extra year in preschool.

During the time of the current study one of teachers could not complete all of the rating forms due to an extended absence. This could be considered a limitation since the substitute teacher was not thoroughly familiar with the children's social skills and behavioral development. However the assistant teacher and the substitute teacher jointly rated the children. The assistant teacher had worked with the children since the beginning of the school year and was familiar with their social and behavioral development.

Another limitation of the study involves both the sample size and characteristics of the participants. The study contained only thirty-one preschool children. All of the subjects were middle-class and were enrolled in one private preschool in Wilmington, Delaware. Therefore the absence of diversity was also a limitation in this study.

Conclusion

In conclusion the results of this study showed a significant difference between full-day and half-day preschool classrooms on social skills and behavioral development. The children in the half-day programs scored higher overall on social skills, specifically social cooperation and social interaction. The only social skills subscale that did not reveal a significant difference between the half-day and full-day programs was social independence. The results of the problem behavior scales were significant, but inconsistent. Only one of the full-day classrooms had higher rates of externalizing and internalizing problem behavior compared to the half-day classrooms. Further research is

needed to assess the rates of problem behavior with full-day and half-day preschool programs.

Implications for Further Research

There is a need for more research on comparing full-day to half-day preschool programs. The importance of preschool and early educational programs has already been established by previous research. There have also been numerous studies on comparing full-day to half-day kindergarten programs. However, additional research is needed to assess the advantages of both full-day and half-day preschool programs. It would be interesting to compare the development of social skills and behavior from the beginning of the school year to the end of the school year in both full-day and half-day programs. Another suggestion for future research would be a longitudinal study on social and behavioral development of full-day and half-day preschool children once they have reached kindergarten. It would also be useful to gain more information by assessing a greater diversity of preschool programs. Overall, additional research would be useful to raise awareness on the importance of early education.

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