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Child-Directed Play and Teacher Education Related to Preschool Suspension and Expulsion

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Abstract

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MA, Walden University, 2013

BS, Utica College, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The amount of time that children spend in child-directed activity can increase the frequency and quality of teacher–child interactions, which can decrease challenging behavior in children. The problem is that preschool children are being expelled and suspended at a high rate, and additional research is required to examine the prevention of behaviors that lead to expulsion and suspension. The purpose of this quantitative study was to examine whether the percentage of the day that children spend in child-directed learning stations, the quality of activities offered during child-initiated time, and the education level of the lead teacher predict classroom suspensions or expulsions. The theoretical framework for the research involved Piaget's child development theory and Vygotsky's zone of proximal development. A quantitative method was used to examine the predictive relationship between the percentage of the day spent in child-initiated learning activities, the quality of the child-initiated activities offered, and the teacher qualifications in a classroom and the number of expulsions and suspensions in a child care program. A sample of 39 preschool classrooms licensed by the Office of Children and Family Services were selected for inclusion. A significant correlation between suspensions and expulsions indicated that the more programs suspend students, the more likely they were to expel students. A stepwise regression indicated that neither of the 2 independent variables was found to be a statistically significant predictor in the models for either suspension or expulsion. Further research is recommended with a larger sample. This study may lead to positive social change by informing stakeholders on ways to prevent challenging behaviors and informing future research on this topic.

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Chapter 1: Introduction to the Study

Introduction

The topic of this study was suspension and expulsion in child care programs and their possible predictive relationship to the amount of time children spend in child-directed versus teacher-directed learning. The study was conducted in response to the high suspension and expulsion rate of preschool children, which is 13 times higher than the suspension and expulsion rate for children enrolled in public school, as first noted by Gilliam and Shahar (2006) and more recently researched by Gilliam, Maupin, Reyes, Accavitti, and Shic (2016). Determining a predictive relationship between the quality of child-directed learning activities and the time that children spend in them and suspension and expulsion rates may lead to positive social change by allowing program staff to make changes in an effort to prevent challenging behaviors leading to expulsion and suspension, rather than simply reacting to children once challenging behaviors have already occurred. If no predictive relationship exists, this information may indicate that program staff and researchers must look in other areas to assist in reducing the expulsion and suspension rates of preschool programs. This chapter contains background information on the problem of high expulsion and suspension rates for preschool programs and outlines the purpose of the study. Also included is the theoretical framework and the nature of the design of the study. Finally, the assumptions, scope, and limitations of the study are discussed before the chapter closes with the significance of the study and a summary.

Background

Current literature indicates that since zero-tolerance policies became popular in the 1980s, children have been removed from school for minor infractions at increasing rates (Gilliam & Shahar, 2006). Since a study by Gilliam and Shahar (2006), attention has been drawn to expulsion and suspension in private child care programs, with preschoolers being suspended and expelled at a rate 13 times higher than public school children in kindergarten through 12th grade. Demographic data currently available for the public school system in the United States include gender, race, ethnicity, and disability status. Specific data for each grade or age range is unavailable at this time. Policies have been developed to eliminate suspension and expulsion as a disciplinary option in preschool programs as well as public schools, yet little guidance is given concerning how to replace these approaches. Organizations such as Child Care Aware and the American Academy of Pediatrics have proposed policies to focus on preventing challenging behavior and working with teachers and caregivers to use other methods of managing children's behavior. The long-term effects of removing children from school have been shown to place children on a path of exclusion and distrust in authority figures. Children who are suspended or expelled from preschool may be placed on what is being called a *preschool-to-prison pipeline* (Adamu & Hogan, 2015).

The amount of time that children spend in child-directed activity has been shown to have benefits by increasing possible teacher-child interactions (Buckrop, Roberts, & LoCasale-Crouch, 2016; Williford, Wolcott, Whittaker, & LoCasale-Crouch, 2015). Those interactions help to build relationships between children and their caregivers,

which may reduce challenging behaviors and assist teachers in handling children when they display those behaviors. Such relationships also give teachers additional opportunities to work on social and emotional skills with children as needed in real situations rather than artificial ones, reducing the number and intensity of inappropriate responses by children to challenging social and emotional situations.

The quality of child-initiated activity is also discussed in the literature (Stagnitti, Bailey, Stevenson, Reynolds, & Kidd, 2016; Williford, Whittaker, Vitiello, & Downer, 2013). As the activities are planned well for children to choose from, each individual child will have things available to meet his or her interests. This structure allows children to be more engaged in play, thereby reducing the likelihood of challenging behavior. This engagement in activity also gives teachers the opportunity to interact and get to know the children in a class even more. When teachers build stronger relationships with children, instances of challenging behavior are reduced, and teachers are more likely to perceive challenging behavior that does occur in a positive way. The attributions that teachers make about a behavior change how they react to the behavior, in that a positive attribution elicits a more positive response and interaction from the teacher toward the child.

Existing literature has addressed the importance of child-initiated play, teacher-child relationships, and reducing suspension and expulsion. However, there is a gap in the literature pertaining to the connections among these things. In the literature, child-initiated play has been associated with academic success, but less attention has been devoted to its role in building teacher-child relationships and reducing inappropriate

behavior. Suspension and expulsion have been addressed as causes for concern in the literature, with a focus on eliminating these sanctions as options for behavior management. What is missing from existing literature is discussion of reducing the likelihood of challenging behavior that most often leads to expulsion or suspension by addressing the type of curriculum used in a program. Modifying the nature of activities in a preschool program could result in leaving more time and space for teachers to develop relationships with children, which have been shown in the literature to reduce challenging behaviors in preschool programs.

Through this research study, I sought to address the gap in the literature by showing whether there is a connection between whether children spend their time mostly in child-initiated or primarily teacher-initiated learning activities and number of suspensions and expulsions. This study opens an avenue of research for others to begin to explore as a way of reducing expulsions and suspensions by reducing potential challenging behaviors before these occur in a classroom, rather than studying other ways of handling the behaviors after they occur. If a connection between the amount of time spent in child-initiated activity and the number of suspensions and expulsions is found, this study may give early childhood program staff additional research to cite when talking with parents about the importance of child-initiated activity and when training staff to use child-initiated activity to prevent challenging behavior. If it is determined that no predictive relationship exists, social-change efforts can then be focused on other aspects of the classroom experience, or additional research may be suggested in this area. Researchers have called for further research regarding the specific types of experiences

that children engage in while in child care (Buckrop et al., 2016; Williford et al., 2013) as well as looking at possible mediators between child behavior and classroom quality (Friedman-Krauss, Raver, Morris, & Jones, 2014a). In other previous research, it has been recommended that future researchers look at preventive measures for challenging behavior (Sullivan, Klingbeil, & Van Normal, 2013).

Problem Statement

The problem is that preschool children are being expelled and suspended at a high rate, and additional research is required to begin to look at preventing the behaviors that lead to expulsion and suspension through offering developmentally appropriate learning activities, such as time spent in child-directed learning, which often come with education of the lead teacher.

Recent research has reported that suspension and expulsion have more negative than positive outcomes and that children who have been suspended or expelled are more likely to end up in jail later in life (Skiba, 2013). Once the option to expel children from child care or public school was made available, it came to be used for minor incidents rather than being used only as a last resort for seriously challenging behaviors, further increasing the percentage of children being expelled and suspended (Rodriguez, 2013). In New York State, 17.5% of early learning programs reported using expulsion, suspension, or both with at least one child in 2015 (Council on Children and Families, 2016). Of that percentage, 6.6% of programs used only suspension, 6.7% used only expulsion, and 4.3% used both suspension and expulsion (Council on Children and Families, 2016). Research has addressed expulsion and suspension data, with special

attention paid to racial, ethnic, and socioeconomic status disparities, as well as long-term effects of expelling a child. It has been noted that suspension and expulsion rates constitute a current, pressing problem that needs to be addressed by the field of early childhood education (Child Care Aware of America, 2016a). Researchers have called for research regarding the relationship between the specific types of experiences that children engage in while in care and suspension (Buckrop et al., 2016;Williford et al., 2013), as well as possible mediators between child behavior and classroom quality (Friedman-Krauss, Raver, Neuspiel, & Kinsel, 2014b).

Purpose of the Study

The purpose of this quantitative study was to examine whether the percentage of the day that preschool children spend in child-directed learning stations, the quality of activities offered during child-initated time, and the education level of the lead teacher predict classroom suspensions or expulsions.

The independent variables were the percentage of time that preschool children spend in child-initiated play (Appendix A), the quality of the planned time spent in child-initiated play as quantified by the Early Childhood Environmental Rating Scale (ECERS-R) score (Appendix B), and the education of the teacher. The dependent variables were the number of suspensions and the number of expulsions from the program.

Research Question and Hypotheses

The research question was the following: Is there a predictive relationship between the percentage of the day spent in child-initiated learning activities, the quality

of the child-initiated activities offered, and the teacher qualifications in a classroom and the number of expulsions and suspensions in a child care program?

$H_{0:}$ There is no significant predictive relationship between the percentage of the day spent in child-directed learning and the number of suspensions and expulsions of a child care program.

$H_{1:}$ There is a statistically significant predictive relationship between the percentage of the day spent in child-directed learning and the number of suspensions and expulsions of a child care program.

$H_{20:}$ There is no significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

$H_{2:}$ There is a significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

H_{30}: There is no significant predictive relationship between the education level of the lead classroom teacher and the number of suspensions and expulsions of a child care program.

H_{3}: There is a significant predictive relationship between the education level of the lead classroom teacher and number of suspensions and expulsions of a child care program.

Theoretical Framework for the Study

The theoretical framework for this study was a combination of Piaget's and Vygotsky's constructivist theories of how knowledge is built. Piaget noted in his constructivist theory that preoperational children (ages 2-7) actively use their environment to assimilate and accommodate knowledge in a way that is individualized to their own knowledge, rather than knowledge deemed necessary to teach by a teacher for the child's particular age. The quality of the learning activities offered in the environment for the current study was measured using the ECERS, which is used to ascertain whether the setup of activities is such that children are able to explore and experiment to develop their own knowledge. The amount of time spent in child-directed learning was measured as well to give a picture of the quality and quantity of how children spend their time in care. Vygotsky's social cultural theory highlights the role that a child's social environment plays as an essential factor in the child's construction of knowledge. Through active involvement within their environment during child-directed learning experiences, children develop cognitive, social, and emotional skills, which may affect whether they engage in challenging behaviors that result in expulsion, suspension, or both. Because the theories of Piaget and Vygotsky are used as a foundation for understanding child development in higher education settings, the education level of a teacher indicates how much exposure he or she has had to these theories. I also drew from Dewey's thoughts on the role of the experiential learning environment as a platform on which children build and apply their knowledge. More detailed information on the

theories and how they relate to the study can be found in the literature review in Chapter 2.

The reasons that children are suspended or expelled are most typically related to challenging behaviors that children may exhibit as they work through frustrations or irritations in a manner unacceptable to their teachers. These behaviors may involve having consistent difficulty sitting quietly, being disrespectful or defiant, yelling or screaming more than other children, having high demands for attention, and hurting themselves as well as others (Council on Children and Families, 2016). Recently, in response to data showing the negative long-term effects of suspension and expulsion, policies have been implemented to limit the use of these sanctions; however, these policies do not address the prevention of the behaviors that lead to suspension and expulsion (American Academy of Pediatrics, 2013; Child Care Aware of America, 2016a). As children are engaged in child-initiated learning, as Dewey discussed in his work on experiential learning, they can develop the social-emotional skills necessary to work through difficult situations. Vygotsky's constructivist theory and Piaget's work on the preoperational stage address how children may learn these skills in developmentally appropriate settings.

Nature of the Study

The nature of this study was quantitative. Data were collected, and a stepwise multiple regression was run to determine the predictability of the independent variables—amount of time that children spend in child-directed activity, the quality of the time spent in child-initiated activity, and lead classroom teacher education level—on the dependent

variables, number of suspensions and number of expulsions. The percentage of the day that the child spends in child-initiated activity versus teacher-directed activity is a continuous variable determined by taking the overall number of hours that the program is open and the number of hours within that time that children spend in child-directed learning and then teacher-directed learning, as shown on the daily schedule for the classroom. The education level of the lead teacher was determined as a categorical variable self-reported by the program director. The suspension or expulsion rate was determined by the number of suspensions and expulsions that the program had in each classroom in the current academic year of enrollment.

This design was chosen because I sought to conduct a field-type study that allowed collection of data in a way that was natural for the children without manipulating any variables or interrupting teachers' daily schedule. Doing this study with a quantitative design allowed for a clear statistical predictive relationship to be determined. The percentage of time spent in child-initiated learning is most easily converted to a quantitative design, and the measurement of quality using the ECERS (Harms, Clifford, & Cryer, 2014) also produces a quantitative variable that can be used as a stepwise multiple regression to show a predictive relationship. The percentage of time is a continuous variable, while the quality of learning activity and education level of the lead teacher are both ordinal variables. These clear variables lent themselves well to a quantitative study through which relationships could be examined, specifically in the context of a predictive relationship.

Using stepwise multiple regression, I sought to show whether a predictive relationship exists between time spent in child-directed activity, time spent in teacher-directed activity, quality of child-directed activities, and education level of the lead teacher, and suspensions and expulsions. Pearson's *r* was used to examine suspensions and expulsions and time spent in child-directed activities and quality of time in activities as an initial correlation, followed by Spearman's rank correlation to measure the predictive relationship between education level and number of suspensions and expulsions. A stepwise multiple regression was then conducted to ascertain a predictive relationship. I collected the data using the ECERS (Harms et al., 2014) score for the classroom setup for the day and the daily schedule with clarification by the lead teacher for anything not able to be directly scored, and self-reports by the lead teacher and program director.

Definitions

In this research, the focus was on the amount of time that children spent in child-initiated activities, the quality of those activities, the education level of the lead teacher, and suspensions and expulsions in the programs. The following section provides operational definitions for terms within the study that may have multiple meanings.

Child care center: A program, operating outside of an individual's home, where staff provide care on a regular basis for more than six children for more than 3 hours per day (Office of Children and Family Services, 2016). The term *child care program* is used interchangeably with *child care center*. Programs visited were full-day classrooms of preschool-aged children ages 3-5 years.

Child-directed activity: Time when children choose which activities to spend their time doing from choices that teachers have previously prepared in each learning center (National Association for the Education of Young Children, 2009).

Quality of activity: The level of quality for specific activities prepared by the teacher that the children may choose from during child-directed activity time. The level of quality for the activities was measured by the ECERS-R (Harms et al., 2014).

Expulsion: The removal of a child from a program for challenging behavior such that the child is not permitted to return.

Suspension: Removal of a child from a program for a short, specific period of time. A suspension was only counted when the removal of the child was due to the child's own challenging behavior.

Education of lead teacher: The *lead teacher* is the person listed by a child care program as the head teacher for a specific classroom. The education level is the highest level of education completed: high school, Child Development Associate credential, associate's degree, bachelor's degree, master's degree, or doctoral degree.

Assumptions

One assumption of the study involved interactions between teachers and children when they were engaged in high quality child-directed learning experiences. The child care environment was scored using the ECERS without any children being present, so observing the interactions was not part of the design. That being said, research has shown that the time that teachers spend with children is a factor in developing relationships and an indicator of the strength of these relationships (Buckrop et al., 2016;

Williford et al., 2015). For this reason, it is imperative to look at both the amount of time spent in that type of environment as well as the level of quality of that time, as measured by the ECERS-R. An assumption of this research was that the higher the ECERS-R score, the higher the level of quality of the time spent in child-directed learning. Although the environment was scored without children present, there was an assumption that the setup of the classroom did not change when children arrived.

Another assumption was that the census sample of the counties was representative of the early childhood population. It was assumed that by observing programs from around the county, it was possible to gather a representative sample in terms of overall program size, teacher experience and education, socioeconomic status of enrolled families, number of children with special needs, family structure, and financial stability of the program. These assumptions were necessary for the study because observing relationships and interactions between teachers and students would have been time consuming and would have made for a much lengthier data collection period. It would also have created challenges for the program in that an unfamiliar person would have been present in the classroom, impacting the behavior of the children and the teacher.

Scope and Delimitations

The scope of this study was determined by its focus on licensed child care centers. Lead teachers in child care centers in New York are required to have at least a Child Development Associate credential, which requires they have some knowledge base on child development and the role of child-centered curricula. Centers also have classrooms separated by age group, which give children opportunities to engage in play with

developmentally appropriate materials and with children at a similar developmental level. In-home child care that allows for children to interact with children in different age groups has its own set of challenges as well as opportunities. In order to obtain a greater level of consistency for data collection, the research included only child care center classrooms. Including only those programs licensed through the Office of Children and Family Services meant that the programs in this study were full-day programs with opportunities for both child-directed and teacher-directed activity that had been inspected to ensure compliance with health and safety regulations. In using the ECERS-R (Harms et al., 2014), only the subsection relating to activities planned for children was used. This reduced the amount of time spent in each classroom, in addition to providing a means for observing and assessing quality with no children present. The other indicators of the tool, while important for assessing overall quality, do not specifically address the activities planned. Observing while no children were present in the classroom allowed the tool to measure the child-directed activities as they were set up by the teacher for the children to engage in. For the study, the activities planned were the essential piece to focus on. With regard to generalizability of the results, the ECERS-R is available as a tool for other programs to use so that they can implement the individual activity indicators in their own classrooms. It addresses only the activities offered within the space, so can be implemented in all types of child care center classrooms with a variety of layouts. The results may be generalizable to other counties within New York that have characteristics similar to those of the county being studied. In addition, the results may be used to

inform additional research on the topic of child-initiated learning and teacher education in relationship to preschool expulsion and suspension.

Limitations

Given the type of study, one limitation was the inability to observe interactions that occur in the context of play. If I had conducted observations to gather such data, each visit would have taken between 2 and 3 hours. That amount of time in each classroom would have necessitated a very lengthy data collection period; moreover, having an outside person observing in the classroom would have presented a challenge for teachers. Children and teachers alike are likely to behave differently when there is an unfamiliar person in the room. I sought to avoid a demand effect or an evaluation apprehension effect whereby children or the teacher might behave in a certain way so as to please the observer or make themselves look good (Miller, 2018). In order to limit the likelihood of reactivity, the classroom teachers were not made aware of the specific tool being used until after the scoring tool had been completed.

Reliability and validity of the ECERS have not been tested on individual items or subscales at this time. This is considered a limitation of the tool; however, use of the tool was still deemed appropriate in this case, as the overall quality of the program was not being examined, only the quality of the activities being offered to children. Reliability and validity coefficients are discussed in Chapter 3. Examining the ECERS scale in its entirety and the type of things that are measured within each subscale, those listed in the activity subscale items are not dependent on other areas of the tool.

Significance

The significance of the study resides in its examination of possible connections between the ways in which children and teachers spend time during the day and challenging child behaviors that lead to expulsion and suspension. Currently, the focus of discussions of working with children with challenging behaviors is using discipline techniques after these behaviors have occurred, rather than studying different ways of preventing the behaviors. This study, in contrast, may provide information to assist programs in making changes prior to challenging behavior occurring rather than after. Teacher training could be developed to assist teachers in striking an effective balance between child-directed and teacher-directed activity as a way to prevent challenging behavior that leads to suspension or expulsion, rather than trying to treat the behavior after it has begun. When staff focus on preventing challenging child behavior by creating appropriate experiences for children, children have more time in the classroom engaged in play and developing social and emotional skills as well as academic skills. Teachers are able to scaffold children's interactions with planned activities as well as social interactions. As children are engaged in play more throughout the day, challenging behaviors can be reduced, and teachers can spend more time engaged with them, creating stronger relationships. These relationships may, in turn, help to reduce challenging behavior in children.

This study may also inform additional research on other ways that the environment or teacher-child relationships can be enhanced so that children are more engaged and challenging behavior is reduced to the point that expulsion and suspension

no longer represent the challenge they do now. Policies in place to prohibit expulsion or suspension do not give direction as to how to handle the behaviors that lead to these sanctions. This study was conducted in an effort to begin to look at ways to prevent such behaviors so that prohibiting expulsion and suspension might become unnecessary.

The results of this study have potential implications for positive social change by providing information on the relationship between how children spend their time in care and the occurrence of expulsions and suspensions. As children are engaged in more positive interactions with teachers and other children during the early years of preschool, they may learn more social and emotional skills at a time when neuroconnections are still being made in their brains. They may then bring those skills with them through grade school, into secondary school, and into their lives as they become working citizens. In this way, they may be taught skills to use when encountering a disagreement or working through strong emotions that, if they remained unaddressed, might place them on the path from preschool to prison. With well-developed social and emotional skills, they may be better equipped to thrive as contributing adult members of society who are able to function effectively with others.

Summary

Expulsions and suspensions have increased as a result of zero-tolerance policies that were put into place several decades ago. Rates of exclusion for preschoolers from private child care programs are 13 times higher than for public school students in kindergarten through 12th grade. The purpose of this quantitative study was to examine whether the percentage of the day that children spend in child-directed learning stations,

the quality of activities offered during child-initated time, and the education level of the lead teacher predict classroom suspensions or expulsions.

This quantitative study was limited to licensed child care centers. I made an assumption that the census sample strategy resulted in a representative sample, given that the area chosen was a mixture of rural, urban, and suburban areas and encompassed residents of varied socioeconomic status (the licensed child care centers accepted child care subsidies for low-income families). The ECERS-R was used to score only the activities set up for children, not the engagement of children with the activities. The significance of the study resides in its potential to indicate a connection between how children spend their time during the program day and the challenging behaviors that result in suspension and expulsion from a program.

In the next chapter, I review current literature on each of the variables in this study, including current data on expulsions and suspensions in both private preschools and public K-12 schools, research on the long-term effects of suspension and expulsion, interactions between teachers and children, and the way in which children spend their time while in a private program. In addition, the theoretical foundation of the study is supported using original works by Piaget, Vygotsky, and Dewey in addition to more current literature by researchers using these theorists' ideas to inform their work.

Chapter 2: Literature Review

Introduction

Children's behavior can have a serious impact on child care programs. Children who display challenging behaviors can influence the overall feeling of the classroom as well as the behavior of other children. There comes a point where some program directors have no other choice but to ask children to leave, either temporarily or permanently. According to 2016 research by the Council on Children and Families, expulsion and suspension happens in all modalities of care. A survey of 1,200 child care programs across New York State indicated that almost 20% of these had children suspended, expelled, or both (Council on Children and Families, 2016). In recent research, the results of suspensions and expulsions on the child have been shown to have a more negative impact on the child than a positive impact on the program (Skiba, 2013).

The reasons that children are suspended or expelled are most typically related to challenging behavior. Such behavior may occur as a child works through frustrations or irritations in a manner that is unacceptable to the teacher, such as having consistent difficulty sitting quietly, being disrespectful or defiant, yelling or screaming more than other children, having high demands for attention, or hurting him- or herself as well as others (Council on Children and Families, 2016). There have recently been policies to limit the use of suspension and expulsion in response to the long-term effects that have been shown; however, the policies do not address the prevention of the behaviors that lead to suspension and expulsion. When children are engaged in child-initiated learning,

they can benefit from opportunities to learn the social-emotional skills necessary for working through difficult situations in developmentally appropriate settings.

This literature review contains data on suspensions and expulsions in New York State and across the United States, as well as the long-term effects of these disciplinary measures on children and consequences of using suspension and expulsion as behavior management tools. In addition, research is reviewed regarding the impact that teacher-child interactions have on the behavior of children and their development of social and emotional skills.. Finally, this literature review includes the quality of child-initiated activities through child engagement and teacher qualifications. The chapter concludes with a discussion on the relationships among those topics and identification of the gap in the literature that I conducted this study to address.

Literature Search Strategy

For this literature review, current data on expulsion and suspension rates were found by searching the websites and publications of organizations concerned with issues related to early childhood, such as Child Care Aware of America, the U.S. Department of Education, and the Council on Children and Families. Recent peer-reviewed journal articles were found by searching the multidisciplinary databases Academic Search Complete and ProQuest Central. In addition, I accessed the specialized databases Education Source and ERIC to locate sources related to education, and I used PsycINFO to find sources related to psychology. Search terms included *preschool*, *suspension and expulsion*, *behavior guidance*, *teacher-child relationships*, *social and emotional development*, *preschool curriculum*, *child-initiated play*, and *play-based curriculum*.

As I found related articles, I used their reference lists to find other articles, in addition to searching Google Scholar to find articles that cited the chosen articles. In addition, the authors of chosen articles were searched in the above database to find additional works they authored. The search was considered exhausted when the same authors and articles were repeatedly being found in reference lists.

Theoretical Foundation

Many theorists who have spent time researching how children learn have agreed that learning is best done through hands-on experiences. Dewey (1938) discussed the importance of designing experiences within certain contexts to achieve optimal learning. Vygotsky (1978) discussed the zone of proximal development (ZPD), the point at which learning is optimal, which learning experiences should be designed to meet. Piaget (1929, 1973) studied how children take objects apart and then construct ideas about them. Teachers of young children have a role that involves scaffolding the processing of knowledge through experiences that cause disequilibrium, and administrative staff have the role of supporting teachers in that endeavor. Learning stations create disequilibrium when they involve topics of interest to children and are composed of accessible and safe materials with which children can interact.

Connections can be drawn between these theories and the social and emotional skills that children learn during time spent in learning activities. In the pages that follow, I look specifically at current research concerning how children develop social and emotional skills through curricula specifically designed to teach such skills or through daily interactions with caregivers.

Piaget's Constructivist Theory

Piaget's constructivist theory contains the notion that in order to construct an idea, children must make or build, create, and organize words and ideas (Piaget, 1973). Children construct their own ideas, building their own understanding of a concept. They take different pieces of information from a variety of sources in order to construct images. They combine smaller pieces to construct a comprehensive whole. Through all of the various experiences that create connections in the brain, an entire image is formed, which the child continues to mold and shape as additional experiences are presented.

It is important to note that this process is active rather than passive. Children must be active participants, using their own world, ideas, and experiences to construct information in their own way, rather than in the way a teacher or caregiver tells them they should. Children cannot learn about a concept by being taught directly through commands (Piaget, 1973). To put it another way, when children experience something for themselves and draw their own conclusions and images related to a concept, the concept becomes part of who they are. Although this process in children's learning is active, it is not purposeful. According to Piaget (1929), initially, children do not purposefully go out and seek to learn about a particular topic. Children do not understand the idea of thoughts themselves, so they do not realize that they need to seek information to form thoughts, or even that thoughts are formed in the brain. Rather, children gather knowledge through play and hands-on experiences as thoughts come naturally. Later, as their cognitive development progresses, children are able to draw from adult influences and begin to ask more questions to expand on the knowledge that they have already

acquired (Piaget, 1929). This stage occurs around the age of 8 years. The third and final stage occurs between 11 and 12 years, when the child begins to understand that thoughts are separate concepts from the idea itself.

Scholars in the field of early childhood education have applied Piaget's theory to the development of academic skills; the theory is also applicable to the development of social and emotional skills. Children learn the skills of turn-taking, "using their words," and handling their own upsets in the same way that they learn to write their names and play hopscotch. The acquisition of these skills gives children the ability to handle social and emotional situations correctly so that challenging situations do not result in challenging behavior.

Vygotsky's Theory

Taking children out of their immediate comfort zone puts them in a place to learn and grow. In planning learning experiences for children that push them beyond their current capabilities toward the ZPD, educators can place them in the appropriate position for optimal development (Vygotsky, 1978). Children learn how to handle themselves when a task is slightly challenging and is accompanied by some stress, while also giving them opportunities to see the fruits of their labor and to achieve success by pushing through and completing the task with the assistance of the teacher.

According to Vygotsky (1978), in order to be defined as *play*, an event must fulfill a child's needs, give him or her a desire to engage, and offer an opportunity to plan and achieve what the child set out to achieve. As a teacher reads a book and sings songs around a particular topic (e.g., zoo animals) and then

gives children a lot of time and a number of experiences around the topic, children can choose which experiences to engage in based on their desires. Children in such situations are able to look at the different learning stations available and create a plan based on what they already have experienced and where their desire to learn more lies.

Learning stations allow children to experience and play with things in a safe way. In the instance of a topic such as spiders, which are often scary to children, appropriately designed learning stations can allow the children to experience the topic without fear or any harm, engaging the topic in different ways and with their senses. At such stations, children are able to use their imaginations and manipulate objects as they choose (Vygotsky, 1978). They are able to play safely through their imaginations and learn what is true and real and what is not. They may not understand why they play in the way they do, or consciously seek to test their imaginations or determine reality in something, but that is the ultimate outcome, and that is how children use learning stations to aquire true knowledge. In addition to adjusting the images children create of objects and concepts, effective learning stations give opportunities for children to develop rules and abide by them, which is an important social skill to acquire (Vygotsky, 1978).

Dewey's Thoughts on Education

Dewey (1938) discussed a theory similar to Piaget's theory on the meaningful acquisition of true knowledge through rich experiences. Having the experience of taking

things apart and recreating them is the difference between acquiring knowledge and truly understanding something. When a child is able to understand all of the inner working parts of something and how they interact with one another and with the environment around them, they develop an intimate relationship with the object as it becomes a part of them and their internal working models of how life in general works. This understanding includes not only academic concepts, but also social and emotional concepts. Placing children in an engaging learning environment allows them opportunities to learn social order and rules, as well as how to handle themselves in different emotional states. Teachers are able to spend time with children, teaching social and emotional skills in the midst of the circumstance.

As children engage in experiences that build upon each other, they interact with new materials and objects in a way that allows them to compare and contrast experiences with previous ones to see where they overlap, as well as where they differ (Dewey, 1938). In this way, they shape intricate concepts of objects or events. They are able to take their initial views of the things that they are learning and mold and manipulate them based on the new experiences they have, making for a fluid learning experience and showing them that often in life, things are not cut and dried. Many times, information is obtained and taken exactly as it was presented, with little room for change with new information. As children are exposed to different experiences within the same topic area while their thinking is still changing, they develop the ability and expectation that as new experiences occur, knowledge changes.

In Dewey's (1938) discussion of experiences and education, he noted that situations and interactions are inseparable. All situations have some aspect of interaction as children process what they are experiencing and compare and contrast it against their current viewpoints. Without interaction, a situation is meaningless. The meaning within a situation comes from the interaction a child has with it. This could involve creating something using art materials, becoming a character in dress-up clothes, asking questions when an adult is telling a story, or deconstructing a peanut-butter-and-jelly sandwich to see the parts that make up the complete sandwich. In the latter example, the sandwich has no meaning to the child if the child is not interacting with it and giving it meaning as it applies to the child's individual life.

The responsibility of creating meaningful experiences for children in a program lies with teachers. In some cases, the administration or curriculum standards drive the subjects that must be taught while not dictating the way in which they are taught. "Teachers are the agents through which knowledge and skills are communicated and rules of conduct enforced" (Dewey, 1938, p. 18). One role of the teacher in these developmentally appropriate experiences involves scaffolding and the discussions that a teacher has with children while they are engaged. This process can be challenging for teachers because they may take for granted the information that they already know, forgetting that they once had to learn it (Dewey, 1938). There is a tendency for teachers to tell children how something works or why things are a particular way, forgetting that before they knew that themselves, they had to acquire the knowledge by recreating the

experience. To that end, it is essential that teachers scaffold learners while they discover answers for themselves, rather than telling them the answers (Dewey, 1938).

Children use learning experiences to interact with one another, work though social challenges of turn taking and using assertive words, and handle challenging emotions when things do not work out as planned (Dewey, 1938). Children do not learn skills such as self-control by simply being removed from a situation that is causing a challenge. If two children are pulling at opposite ends of the same truck, each wanting to play with it, and the teacher then removes the truck from the play area in an attempt to teach the children to share, the teacher is actually being counterproductive. Removing the need to work through a problem will not teach children how to work out the problem when it occurs again in the future, either with the same toy or in a different context. Just like skills for writing one's name or designing a bridge to go over a river, social and emotional skills must be carefully taught through scaffolding in the heat of the experience.

Dewey's (1938) ideas on experience and learning related to the study, in that by applying his concepts in creating an engaging environment for children, educators can support children in learning through interactions with other children and the teacher in the classroom. Learning through engagement is the concept supporting the hypothesis that the time that children spend in child-initiated learning reduces rates of expulsion and suspension. Engagement while in the classroom is one piece of the present problem; applying Dewey's (1938)

principles could be useful in addressing the number of expulsions and suspensions.

Literature Review Related to Key Variables and Concepts

Suspension and Expulsion

Suspending or expelling a child from care occurs when program staff decide that a child is no longer able to attend the program due to the behavior or conduct of the child. Suspension is a short-term consequence whereby a child is unable to return to a program for a predetermined length of time. Expulsion removes the child from the program permanently. When the two methods of discipline were first used, they were reserved for extreme cases of challenging behavior that caused disruption of the program or harm to the child or others (American Academy of Pediatrics, 2013). Around the 1980s and 1990s, programs began implementing a zero-tolerance policy whereby they began removing children for even minor or trivial behaviors (Skiba, 2013). Since that time, the focus of research on suspension and expulsion has been on public schools with K-12 students. In more recent years, as data have been collected on suspensions and expulsions in early childhood programs, additional policies have been modeled on K-12 policies to be implemented with younger age groups, and researchers have begun to look more closely at the long-term implications of suspension and expulsion for children.

Data. One of the first times that suspension and expulsion in early childhood were mentioned in research was when Gilliam and Shahar (2006) released data on rates and predictors in Massachusetts for expulsion and suspension from preschool and child care. The U.S. Department of Education (2014) released a Data Snapshot for Early Childhood

Education that revealed that suspension and expulsion data were not collected until 2011 (U.S. Department of Education, 2014). Data collected on about 1 million preschool students indicated that almost 5,000 of them had been suspended once and 2,500 had been suspended more than once (U.S. Department of Education, 2014). The data collected were specific to child care programs run by public schools under the auspices of the U.S. Department of Education, whereas Gilliam and Shahar (2006) collected data in Massachusetts that included both pre-kindergarten programs within school districts and licensed child care programs. Focusing specifically on New York State, the Council on Children and Families (2016) collected survey data indicating that 17.5% of child care programs had suspended children, expelled children, or both. The Council on Children and Families data included all child care programs and all ages, not only children of preschool age, as in the Gilliam and Shahar (2006) study.

As data were collected and analyzed more thoroughly to determine which children were being expelled, there were several patterns that emerged. The U.S. Department of Education found that in 2011-2012 and again in 2013-2014 data collected, boys represent just more than half of the program enrollment but almost 80% of the expulsions and suspensions (U.S. Department of Education, 2014; U.S. Department of Education, 2016). In New York State, boys were found to be suspended or expelled three times more often than girls (the Council on Children and Families, 2016). A second pattern that emerged was that race was also a factor in the suspension and expulsion rate. In New York State, American Indian, Multiracial, and African American children were more than twice as likely then White, Asian, and other races of being expelled or

suspended (Council on Children and Families, 2016). The U.S. Department of Education (2014) found that while Black children made up 18% of the total population of child care programs, they represented 42% of the suspensions or expulsions. In 2013-2014 data collection, the rate was the same with Black children making up 19% of the total enrollment but 47% of the suspensions and expulsions (U.S. Department of Education, 2016). The race of the teacher is also a factor. On average, Black teachers are more likely to recommend expulsion or suspension as a discipline for Black children (Gilliam et al., 2016).

Policies. As new data and research has been done to report the expulsion and suspension rates of early childhood, agencies and organizations have responded with various policies and suggestions of policies and procedures. In some cases, laws that were put into place many years ago have been examined to make it relevant to the current issues with expulsion and suspension (Bitner, 2015). Plyler V. Doe was put in place in the early 1980s to ensure that immigrants were given an equal opportunity at public education (Bitner, 2015). The argument now is that students who are expelled or suspended for an extended period of time are being excluded from their right to an education (Bitner, 2015). In states where no alternative education exists, those children are then deprived from the chance to have an education. For some states, there is no alternative education program so those children are simply denied any education. For the states that do have an alternative education program, it is often of low quality and is not considered to actually supplement the education they would receive in the public school (Bitner, 2015).

In other states, such as Wisconsin, acknowledgement is made that according to the U.S. Constitution, education is not a fundamental right for children (Lewis, 2014). At the same time, the education department does realize that the children in danger of being suspended or expelled do have a right to a hearing. The state of Wisconsin, however, has determined that education is a fundamental right for children (Lewis, 2014). In light of the recent attention drawn to suspensions and expulsions, it has been necessary to further define what is expected of the school districts to meet that right. Ultimately, Wisconsin determined that in order to meet that requirement, if a child was expelled or suspended from public school, alternative education must be offered so that students are not at a disadvantage for succeeding economically or personally (Lewis, 2014). The U.S. Department of Health and Human Services (2016) more recently showed agreement in that by stating in their policy on expulsion and suspension that if expulsion or suspension was used in a discriminatory way, the school could be in violation of civil rights laws.

In order to reduce the number of children denied education due to suspension and expulsion, several states have recently adjusted the zero tolerance policies to make it more challenging for schools to expel or suspend a child for behavior. Connecticut issued a public act effective in 2015 to state that schools must show that they had used positive behavioral support prior to the suspension or expulsion (Connecticut State Department of Education, 2015). Rodriguez (2013) issued a similar suggestion for amending state education laws to ensure that schools are using Positive Behavior Interventions and Supports (PBIS), peer counseling, or mental health services. Additionally, in a Policy Agenda, Child Care Aware of America (2016a) suggested

policies that give teachers access to mental health services for children so that suspension and expulsion are prevented. New York State is along the same thinking in a field memo suggesting policies for schools to ensure that children have access to social-emotional supports as well as a tiered program for handling challenging behaviors (U.S. Department of Education, 2014).

The American Academy of Pediatrics (2013) recommended that pediatricians work with policy makers to advocate and educate them on forming policies for schools around using PBIS individually and across the school district to reduce the number of expulsions and suspensions. It is not uncommon in many programs to find teachers in different classrooms using different approaches to discipline (Longstreth, Brady, & Kay, 2013). Policies that are put in place school-wide reduce the need for suspension and expulsion due to all teachers, staff, families, and students being aware of and using the same policies and procedures. It becomes a prevention of challenging behaviors requiring suspension or expulsion rather than a reaction. Allowing teachers and administration an opportunity to assess students for risk of being expelled or suspended prior to the challenging behavior occurring (Skiba, 2013).

In other cases, and especially in the case for early childhood, suspension and expulsion are being removed completely as an option, or experts are suggesting that it be removed. The U.S. Department of Health and Human Services (2016) issued a policy statement to recommend early childhood programs have policies in effect that limit expulsion and suspension to only those cases in which all other supports have been used and the program teacher, director, family and other involved service providers agree it is

in the best interest of the child to be removed from the setting. In such cases, it is also recommended that the team members work together to create a transition plan for the child that includes an alternative education program (U.S. Department of Health and Human Services, 2016). Connecticut State Department of Education (2015) also placed in their bill that preschoolers may not be suspended out of school for any reason.

When planning policies, in order for those policies to be effective, it is essential that they promote a climate within the classroom that is positive and promotes positive social interactions between the teachers and children as well as among the children (Longstreth et al., 2013). At the time of the study, Longstreth et al. (2013) did not find any specific checklists that could be used to determine if discipline policies meet these requirements of quality. A tool was created and tested for validity and interrater reliability. Statistical analysis on the test was significant, indicating that the checklist was both reliable and valid (Longstreth et al., 2013). As policies are designed as suggested, this checklist would likely be a helpful tool and beneficial to ensure the policies created are of high quality.

Long-term effects of suspension and expulsion. Suspending or expelling a child from the program certainly has short-term benefits as it removes the child with the challenging behavior from the classroom so that the teacher and other children can continue with the planned activities for the day without interruption. The concern that is being voiced by many in the education field is to know if the short-term benefits outweigh the long-term consequences to removing children from the learning environment (American Academy of Pediatrics, 2013; Child Care Aware of America,

2016a; Gilliam & Shahar, 2006). There are several concerns with using expulsion and suspension as behavior management. Removing children from a program is an extreme consequence and is believed to be placing children on a path of challenging behavior through adulthood, ending up in prison (Adamu & Hogan, 2015; Rodriguez, 2013; Skiba, Arrendondo, & Williams, 2014). Excluding children from the program is also linked with negative consequences for the child as well as the family. Parents are impacted in several different ways when children are unable to attend the program (Parker, Paget, Ford, & Gwernan-Jones, 2016; Rodriguez, 2013).

Young children, those enrolled in early childhood programs, are at an age where relationships are being developed with adults outside of immediate family. Bowlby (1969) discussed the importance of developing a sense of trust and safety with attachment figures. If children are excluded from the program early for misbehavior, they learn that the child care program is not a safe place and teachers are cannot be trusted (Adamu & Hogan, 2015). That image of how a relationship functions between teachers and students carries over throughout their education years and children are detached from child care program and teachers. Children are then labeled as being problem children and the potential for a relationship between the teacher and child continues to widen and challenging behaviors ending in expulsion and suspension increase (Adamu & Hogan). This specific long-term effect of expulsion and suspension is referred to as the School to Prison Pipeline (Adamu & Hogan, 2015; Garrett, 2013; Rodriguez, 2013; Skiba et al., 2014). While the expression is used in education from preschoolers through secondary

school, it is not specifically defined by any one organization or policy so the authenticity of it is questioned by some (Skiba et al., 2014).

As relationships between children and teachers deteriorate in situations where children are excluded from the program, the relationship or potential relationship between the child and other children in the class also deteriorates (Adamu & Hogan, 2015). This impacts the student's view of the school environment, which leads to a greater likelihood of negative behavior (Skiba et al., 2014). Children who are excluded continually from environments they expect to protect and care for them have a greater tendency of displaying aggressive behaviors (Garrett, 2013; Rodriguez, 2013). For these students, there is an increased likelihood they will also have incidences with the legal system when compared to their peers who were not suspended or expelled (Rodriguez, 2013).

While suspension and expulsion have long-term effects on a child's social life and impacts their behavior, it also has a negative long-term effect on their academic career. Children who are expelled or suspended are not able to participate in the learning opportunities presented, placing them behind their peers (Garrett, 2013). With students who are suspended at a greater likelihood of being suspended more than once, it places them at an even greater disadvantage as time goes on. Schools with a high suspension and expulsion rate have also been shown to have a lower achievement score on state tests (Noltemeyer, Ward, & Mcloughlin, 2015; Rodriguez, 2013). In the same way, multiple expulsions and suspensions also leaves children at a risk of having to repeat a grade since they are missing that amount of information (Rodriguez, 2013). This is in addition to the

short-term loss of teaching time for the teacher and other students in the classroom (Skiba et al., 2014).

Children who are suspended or expelled from school are also at a risk of dropping out of school completely in later years (Noltemeyer et al., 2015; Rodriguez, 2013; Skiba et al., 2014). Children with challenging behaviors are likely to already have underlying emotional or social issues, excluding them from school complicates and adds to those issues further (Noltemeyer et al., 2015). Children then feel even more distance from the place designed to protect and accept them, which leads to increased behaviors and uninvolved attitude towards the school. That lack of care of the relationship between themselves and the school has been shown to lead to the child disengaging from school and dropping out (Rodriguez, 2013). According to Skiba et al. (2014), the disengagement is only one of the factors leading from expulsion and suspension to school dropout. The other factors that play a part are with the lower grades associated with not being in classes and the social relationships with peers that are broken by being excluded from the program.

Excluding children from the child care program impacts not only the child but the family as a whole. For early childhood programs, children are likely in care because parents or guardians are working. After a child is expelled or suspended, parents must find alternative child care plans or miss work (Adamu & Hogan, 2015). The alternative care may or may not be of high quality and provide children with the care they need. For older children able to stay home alone, being out of school while parents are working leaves them time unsupervised to get into trouble and socialize with others who are also

expelled or suspended from school (Garrett, 2013; Rodriguez, 2013). In interviews with parents whose children have been suspended or expelled, Parker et al. (2016) found that parents also feel judged and unsupported by the school and other parents. Parents feel pressured to discipline children further at home, although they were not present in school when the incident happened. Parents are stuck between taking the school's word for what happened compared to their child (Parker et al., 2016). This causes stress on the family and on the relationship between the parent and the child.

Understanding the history behind the policies in Education that relate to expulsion and suspension is helpful in exploring how to prevent it. There are decisions made by child care programs in regards to expulsion and suspension that may not be made using the most relevant information. The data surrounding expulsion and suspension is also important in realizing the urgency for the research to be done. With the private child care preschool programs having such a significantly higher suspension and expulsion rate than public schools, it calls for research to be done to further understand the issue as well as moving towards a solution to the problem.

In examining the literature related to the suspension and expulsion issue in relationship to the theoretical foundation, examining the current literature in amount of time and quality of time is justified. Current literature relates the behavior of children to the relationship children have with their primary caregivers (Buckrop et al., 2016; Williford et al., 2015). During that time children spend in relationship with teachers, social and emotional skills can be taught in context so that those skills can later be used in situations between children. Looking at the education of teachers is justified in that the

time teachers invest in their education gives opportunities to learn how to spend quality time building relationships with children as well as the importance of child-initiated play (Carter, Williford, & LoCasale-Crouch, 2014). Looking at suspension and expulsion rather than challenging behavior is justified based on it being used as a means of responding to the behavior and the suggestions have been simply to abandon that method but have not looked at ways of preventing the behavior (Connecticut State Department of Education, 2015). In this way, the study will be looking at prevention rather than response.

Amount of Time Spent in Child-Initiated Learning

The number of hours that children spend in care can be spent doing a multitude of things. Time is spent playing in the dress-up area, building with blocks, singing songs about the weather, eating lunch, taking a nap, and running around on the playground. The day is typically shared between child-initiated activities and teacher-initiated activities. The time that children spend choosing their own activities is time that can be used for interacting with other children while exploring interest areas. That time of the day can be a time for teachers to interact with children at their level, scaffolding interactions among children, and spending time getting to know individual children. It is also a time when children have opportunities to interact with one another, learning social and emotional skills that can be carried over into later school settings. The study will look at the amount of time that is in the schedule where children can be in child-initiated activity and teachers will have the opportunity to interact with them as they are engaged.

Teacher-child interactions. According to the U.S. Census Bureau (2010),

children spend as many as 36 hours a week in child care. That means that teachers are responsible for a significant amount of time caring for children during their waking hours. Several variables surrounding the individual teachers can have an impact on the children during the time they are with those adults. Research has shown the strength of the relationship between a teacher and child can affect the behavior of the children as well as the overall atmosphere of the classroom (Buckrop et al., 2016; Williford et al., 2015). The relationship has an effect on the quality of the interactions between the teacher and the children and the overall atmosphere affects the interactions among the children. The type of relationship is sometimes impacted by the beliefs the teacher has about children, specifically about children's behaviors (Carter et al., 2014). As teachers work with children, the way they interpret and attribute the children's behaviors can cause different reactions and responses to the behavior.

In early childhood settings, not all programs are equal. According to Child Care Aware of America (2016a), the teacher is one of the indicators of quality child care that parents are encouraged to examine. In addition to things like qualifications, adult to child ratio, and staff training, the relationship between the teacher and the children of the classroom also indicate the quality of care. The strength of the relationship is manifested through the interactions as teachers get down on the child's level, meeting individual needs of each of the children, and incorporating each of the children's interests in the daily lessons.

Buckrop et al. (2016) used the Student-Teacher Relationship Scale (Pianta, 1992), to examine the strength of the relationship and how it is manifested in a classroom to

draw a connection between relationships in child care and referrals for special education services in early elementary school. Similar to Child Care Aware of America (2016a), Pianta (1992) measured the relationship through interactions between the child and the teacher such as warmth and affection. Teachers rate 15 different statements that range from sharing an affectionate, warm relationship with the child to the child openly sharing his or her feelings and experiences. Williford et al. (2015) used Banking Time to look at the relationship between the teacher and the children. Banking Time is an implementation procedure that makes a link between the amount of one-on-one time spent with each child and the strength of the relationship created. Similarly, Gehlbach, et al. (2016) used the interactions between students and teachers as an indicator of the strength of the relationship. The specific interactions were built on finding similarities between the teacher and each child as a base for the interaction.

The time spent with children is a factor in developing a relationship and an indicator of the strength of the relationship (Buckrop et al., 2016; Williford et al., 2015). In response to the research indicating the rise in suspension and expulsion rates, Williford et al. (2015) researched one factor to determine what type relationship existed between the factor and the emotional and behavioral outcomes for children. Banking Time is an investment that teachers make into students by spending quality time with each student throughout the day. The time spent is expected to be about 10 to 15 minutes per child at a time, around two to three times during each week. One challenge noted from previous research was that the definition of the quality of that time is the least clear of the measured indicators (Williford et al., 2015). Other indicators used in determining the

implementation were the type of program, the demographics of the teacher, and the teachers' beliefs about the relationship with each child. Based on previous research reviewed, Williford et al. (2015) expected that teachers who expressed a focus on child-centered learning would be more likely to implement the Banking Time in their classroom. After reviewing the data, it was found that the opposite was true. Teachers who were determined to have more of a focus on an authoritarian or teacher-centered classroom were actually more likely to implement the Banking Time than those who indicated a child-centered belief system (Williford et al., 2015). Additional research around the beliefs of teachers will give more insight as to what factors may play a role in the implementation of a program designed to improve behavior. Williford et al. (2015) made note of a possibility that the implementation of Banking Time itself may have provided an avenue for teachers with an authoritarian viewpoint to see children in a way they had not previously seen. Measuring the amount of time in the schedule dedicated to child-initiated play will allow for the opportunities for teachers to interact with children, creating meaningful relationships. Also collecting information on the education level of the teacher will indicate the amount of knowledge the teacher has on the importance of using that time wisely.

Social and emotional skill development. Children who have been suspended or expelled from child care programs are typically done so due to being easily frustrated, having difficulty sitting quietly, being disrespectful or defiant and yelling or screaming (Council on Children and Families, 2016). These behaviors are often a lack of social and emotional skill required to handle various situations that occur in a group setting. Parents

interviewed about the program's reaction to their child's behavior was that they thought the challenging behavior was something the child needed help with, not be excluded for (Parker et al., 2016). Managing responses to challenging situations requires a higher-order thinking process that some children have not yet developed by the time they are in early learning programs (Montroy, Bowles, Skibbe, & Foster, 2014). That higher order thinking requires a combination of working memory to know what to do and an inhibition or self-control to keep from doing what the child's initial reaction may be that is inappropriate. Children must be able to communicate with peers and with teachers in a positive manner, regardless of the situation that occurs (Shuttlesworth & Shannon, 2015).

In working with child care programs, specifically with teachers, the focus for newer programs is on training the teacher how to use real-life situations to teach children how to respond appropriately (Hemmeter, Hardy, Schnitz, Adams, & Kinder, 2015; Montroy et al., 2014). Programs such as the Pyramid Model are designed to teach children social and emotional skills to use in various situations as they occur because if children are suspended or expelled for lack of skills, they are then never taught different tools to use and will continue to try and find ways to handle situations on their own (Parker et al., 2016). One skill specifically, self-regulation, is one that is taught to children in order to prevent challenging behaviors. As children are exposed to difficult situations and things do not go the way they believe it should, self-regulation prevents them from lashing out at other children or at the teacher, the reason most given for children being suspended or expelled (Council on Children and Families, 2016).

In a program that relies heavily on a play-based curriculum where children have opportunity to interact frequently throughout the day, there is greater opportunity for conflict to occur within the natural context of the play and teachers can then model and teach the appropriate response within that same context immediately (Shuttlesworth & Shannon, 2015). For teachers who believe more heavily in the child-centered curriculum than colleagues focusing more on teacher-centered, children have a greater self-regulation (Hur, Buettner, & Jeon, 2015). One reason for that may be that for those who believe in child-centered approaches, the quality of the interactions is higher of the time spent between teachers and children during those activities (Williford et al., 2013). While a causal relationship cannot be made clear, there is a correlation between the quality of interaction between teachers and children and the self-regulation of the child. Children are more likely to be engaged in the program activities and with the teachers during child-centered learning (Williford et al., 2013).

Another piece of the challenging behavior that occurs is children getting along with their peers. As with self-regulation, having a child-centered curriculum gives children the most opportunities to interact with one another and challenges occurring that then give teachers a place to teach in the moment (Shuttlesworth & Shannon, 2015). Looking at challenging behaviors in regard to how engaged children are in a task, there is a correlation between the engagement and the reduction of challenging behaviors across all types of learning (Vitiello & Williford, 2016). The more children are engaged in various activities, the less challenging behavior occurs. One major attribution of this finding was the social skills of the children. The more interaction they have in a

program, the greater the opportunity for growth in social skills (Vitiello & Williford, 2016). As children are able to initiate conversations and interactions with other children, and have positive experiences throughout the play, their self-regulation increases (Montroy et al., 2014; Williford et al., 2013). The peer interactions and the self-regulation that occur during child-centered play experiences are correlated with a decrease in challenging behaviors.

Using the amount of time children spend in child-directed learning as a variable is more than simply doing the math to determine the percentage of their day. Understanding what happens during those hours and minutes helps to look at the schedule and determine which parts, such as free play, that would be counted as child-directed compared to morning meeting, which would be counted as a teacher-directed time. Knowing how to count each hour of the day, whether child-directed, teacher-directed, or neither child nor teacher-directed, such as naptime, allows the calculation for the variable to be the most accurate. The accuracy also assists in understand the results for other people reading the completed study who were not involved in data collection.

Quality of Child-Initiated Learning Activities

Based on the research of challenging behaviors and the correlation to those behaviors and the time children spend in child-initiated and child-centered learning activities, it is apparent that children gain a lot in the way of social and emotional development through the time spent in that way (Montroy et al., 2014; Shuttlesworth & Shannon, 2015; Williford et al., 2013). However, there is another element to the use of child-initiated activity that plays an important part: quality. Having child-initiated

activities, or free-play, available for children can be different than having planned high quality learning experiences for children to engage in throughout the majority of the day. In some programs, there is a combination of both. This requires planning on the part of the teacher ahead of time to ensure the experiences are things children are interested in and meet each of their developmental needs.

With the idea of expulsion and suspension increasing with the implementation of zero-tolerance policies in the 1980s, the timing was along the same as a call to action on a nation deemed at risk by U.S. Department of Education (2014). The concept of quality learning experiences was a piece of the findings. It was discussed that expectations for children needed to be raised and the expectations for the teachers to plan quality learning experiences to be increased as well. With the acknowledgement that children were graduating from high school unprepared for college or the workplace, there was a push for focus on the education system (U.S. Department of Education, 2014). It was also noted that even while children were in school, the teachers were only able to teach about one-fifth of the time due to increased challenging behaviors. The reaction to that issue was one of reaction through disciplinary measures rather than a proactive decision to work more on the classroom experience and how children were being engaged. Using the ECERS as a tool to measure the quality of the activities as set out for the children will allow for a way to measure how well that time is being used, how engaged the children will be during that time.

Child engagement. One aspect of the quality of the child-initiated activities presented to children in care is that the activities allow children to choose things that are

interesting and meaningful to them and their individuality. In order to do that, it is essential that the materials in the room and themes are interesting to children so that they are stimulated and engaged (Williford, et al., 2013). The level of which children are engaged is a range, with a certain level of engagement at each point within the day (Buckrop et al., 2016). The level changes throughout the day in various tasks from large group activities to individual projects to small group free-play choices. The level of engagement is shown to increase when children are able to choose their own activities from a range of choices (Hur et al., 2015). Children are able to choose which activities are interesting rather than being dictated by a teacher what they should find interesting.

Looking at the relationship between child-centered curriculum and the development of play skills in children, Stagnitti et al., (2016) looked at programs that are child-centered, and children are encouraged to start each day with a plan of what they would like to do that day. It is individualized for each student, and the teachers assist each child in creating their plan. In this way, children who are more active and desire more gross motor movements rather than fine motor can choose a day that is balanced for them specifically (Bristol, 2015). As children are unable to do what interests them, being forced to do things the teacher deems interesting and necessary for play, frustration is displayed as challenging behaviors (Bristol, 2015).

Having a variety of activities available for children to choose from is the key to ensure everyone's needs and interests are met. As teachers are planning activities for children to choose from, there are several factors to take into consideration. One is to include activities that are culturally relevant to each of the children so that they can feel

engaged and included, developing a sense of belonging and affirmation (Wright & Ford, 2016). In addition to culturally relevant, also including gender-relevant activities for children to choose based on their interests as it relates to their gender (Bristol, 2015). This includes books that are chosen to interest girls or boys, rather than only those books that would interest both, creating a gender bias.

In addition to having materials that meet the individual interests of children, the teacher must also take into consideration the developmentally appropriate practice for the children in his or her care and the Zone of Proximal Development for each child. When teachers are given the encouragement and training to get to know each child individually, they can then see what level they are each at, to determine how to plan activities that are just out of that level to challenge children while not frustrating them (Wass & Golding, 2014). When children have opportunities to do things they cannot do on their own, the teacher then becomes a facilitator who can assist them and scaffold them to learn the skill and eventually be able to do it by themselves (Khan, 2013). Allowing children to choose their activity from among carefully planned activities allows children also to interact with others of different levels than themselves, so that children can facilitate and scaffold each other's play and development (Bodrova & Leong, 2015).

In planning high-quality learning activities, also taking into consideration of the growth in learning processes, such as with Bloom's Taxonomy, is necessary. In planning activities carefully for children, they will be engaged in the activity as well as be able to process and think about what they are doing, drawing connections in earlier learning (Weigel & Bonica, 2014). Children should also have opportunity in their play to

experiment with materials to create new facts for themselves (Dimova & Kamarska, 2015). Planned learning activities where children discover something for themselves rather than a teacher demonstrating the phenomenon help the children to internalize the information and develop emotional attachment to the information, then assisting in the transfer of the information to long-term memory (Weigel & Bonica, 2014). This teaches children to be purposeful and also sets teachers up to be reflective in their planning (Hebert, 2016).

The quality of the child-directed learning activities is one variable to examine in this study because it is not only the amount of time children spend in child-directed learning that could be influential in challenging behavior. Many programs have "free play" where children play with the same toys every day but those toys are not part of a set curriculum or planned activity related to the weekly theme. Sometimes those toys are not rotated or changed at all throughout the year to accommodate the interests and changing developmental needs of the children. Collecting information on the education level of the teacher will also indicate how much knowledge they have in setting up the environment.

Quality of Teacher-Child Relationship

The benefits of having a strong relationship have been studied most recently in the capacity of special education referrals and academic achievement. Buckrop et al. (2016) noted that in the 2012 school year, there were 6.4 million children being served in the special education field, representing a wide range of needs that included socio-emotional and behavioral needs. After reviewing literature that directed towards quality of interactions between teachers and children as well as the closeness of the relationship

between teachers and children, research was conducted to examine those relationships in child care as one source of impact on referrals to special education services in kindergarten and first grade. Using data collected from the National Center for Early Development and Learning, Buckrop et al. (2016) found that relationships between teachers and children that were heavy in conflict were significantly positively correlated with special education referrals while high scores indicating a close relationship between teacher and child were significantly negatively correlated with special education referrals.

In addition to reducing referrals to special education services, additional research was found of evidence that increasing the focus of similarities between teachers and children in care can lead to a reduction in the achievement gap for underserved children in the program (Gehlbach et al., 2016). Ninth grade students and their teachers completed a get-to-know-you survey that asked about such things as friendship qualities, best class formats for learning, and other hobbies and interests. Teachers and students were also surveyed to determine how alike they felt they were to each other. In addition, grading information was collected for students. Five items from the get-to-know-you survey that were similar between a teacher and student were shared with both. As the data were analyzed, it was found that the students and teachers both perceived more similarities when the similarities were presented (Gehlbach et al., 2016). In regards to student-teacher relationship, however, the presentation of similarities only affected the perceived relationship for the teachers but not for the students. For the academic achievement, there was no increase at the mid-semester point but an increase in the end of the marking period. In one study, however, the opposite was found. It was found that

Black teachers were more likely to hold Black children to a higher standard in regards to their behavior, suggesting exclusion as a discipline more frequently than White teachers or to White students (Gilliam, et al., 2016).

Carter et al. (2014) examined the concept that teachers' beliefs could be a determining factor the viewpoint and assumptions teachers make on why children behave in a certain way. What teachers attribute a child's behavior to has an impact on how the teacher then responds to the child. If a teacher believes that the child is misbehaving simply because he or she is a bad child, is doing it for attention, or to upset the teacher, there is less likelihood the teacher will make an effort to spend time with the child. If the teacher attributes the child's behavior to something external or environmental, he or she is more likely to respond using time and attention towards the child. It was found in reviewing previous research that the measure for teachers' attributions for children's behavior was inconsistent and that additional research was needed to determine if a new measure, the Preschool Teaching Attributions (PTA) measure, is both reliable and valid as a measure (Carter et al., 2014).

Just as the authoritarian, or adult-centered, belief has an impact on the amount of time spent with children (Williford et al., 2015), the same belief has an impact on the assumptions and attributions for children's behavior. For those parents who hold an authoritarian belief system towards raising children, the attributions of negative behavior by a child are drawn to the internal focus. The same was found to be true of teachers (Carter et al., 2014). In addition to the authoritarian belief, the teachers' belief of themselves was also an explored factor in predicting the attributions of behaviors of

children (Carter et al., 2014). Teachers were given the Teacher Self-Efficacy Scale at the beginning of the study, with the higher the score indicating a higher self-confidence for teaching. After reviewing the scores on the PTA scale, it was found that the self-efficacy actually had no relationship with the perceived cause or responsibility of children's negative behavior.

With much focus being placed on the children of a classroom and how they are succeeding, it is important to discuss the well-being of the teachers of the program. As they are responsible for caring for children for a large portion of their wakeful day, there is continued evidence leaning towards the importance of caring for teachers so that they can care for children most effectively. The mental and emotional state of the teacher has been shown to be related to the executive function of the teacher and, consequently, the quality of care that the teacher is able to provide (Friedman-Krauss et al., 2014a; Friedman-Krauss et al., 2014b; Jeon, Buettner, & Snyder, 2014; Zinsser, Christensen, & Torres, 2016). Additional research has drawn a connection between the well-being of the teacher and the perceived challenging behaviors of children in the program (Friedman-Krauss et al., 2014a; Friedman-Krauss et al., 2014b; Jeon et al., 2014). As expulsions and suspensions resulting from challenging behavior continues to rise, it is essential to look not only at the children and the program itself, but also at the teachers and how well they are supported and cared for.

In a study by Friedman-Krauss et al. (2014a), quality of care was measured through the emotional climate of the classroom as a result of child externalizing behavior problems. Teacher stress level was used as a mediator. The expectation was that the

emotional climate of a classroom is negatively impacted by both the stress level of the teacher and by the challenging behaviors displayed by children (Friedman-Krauss et al. (2014a). Data were collected on over 200 children in Head Start preschool classrooms. The challenging behavior was reported by the teacher in a modified Behavior Problems Index, which still allows for some subjectivity by the teacher as to what constitutes a challenging behavior. The emotional climate of the classroom as measured using the Classroom Assessment Scoring System in both the fall and the spring. The stress level of the teacher was also self-reported using the Child Care Worker Job Stress Inventory.

After analyzing the data, it was determined that there was a predictable relationship between the fall and spring. For those classrooms with higher levels of challenging behavior in the fall, teacher stress was reported as being higher in the spring. It was determined, however, that there was no linear relationship to be found regarding the stress level of the teacher and the emotional climate of the classroom, but rather an inverted U shape that indicates the highest emotional climate is related to a moderate amount of stress of the teacher (Friedman-Krauss et al., 2014a). It is possible that a certain amount of stress acts as a motivator to increase the emotional climate of the program up to a certain point and then becomes too much stress and begins to decrease the climate. According to Zinsser et al. (2016), teachers view a school climate as more positive when they are less depressed. So, the well-being of the teacher impacts how they view the climate of the classroom. In regards to the challenging behavior itself being related to the emotional climate in the spring, it worked opposite than expected in that

more challenging behavior actually predicted a higher emotional climate in the spring (Friedman-Krauss et al., 2014a).

While Friedman-Krauss et al. (2014a) used the emotional climate as an indicator of quality, Jeon et al. (2014) used the Environmental Rating Scales (Harms et al., 2014) to measure the quality when exploring a possible connection on child care quality impacted by teacher depression and challenging behavior of children. The behavioral challenges of children were measured using the Child Behavior Checklist, similar to the Behavioral Problems Index used by Friedman-Krauss et al. (2014a) in that it was reported by the teacher. It was determined that for teachers who were coded as being more depressed, the children in the program displayed more challenging behavior (Jeon et al., 2014). Friedman-Krauss et al. (2014a) measured teacher stress level at both the fall and the spring and there was an increase in the spring for classrooms with more challenging behavior, which may indicate a directional relationship. Jeon et al. (2014) obtained the depression level and behavior index at the same time, so it is unclear how the two are related.

In looking at the relationship between challenging behavior and the well-being of the teacher, one key factor is the executive function of the teacher (Friedman-Krauss et al., 2014b). The executive function of the teacher assists him or her in using higher centers of the brain to process and respond to challenging behaviors rather than react out of stress using the lower centers of the brain. Teachers are able to respond to challenging behavior well when it falls within their level of comprehension using their higher order thinking. Once it reaches beyond that level of thinking and processing, the teacher then

begins to react rather than respond (Friedman-Krauss et al., 2014b). Not having the skills to work through the behavior then causes stress on the teacher, which is then shown to increase the challenging behavior of the children and the emotional climate of the classroom, creating a cyclical response from the teacher and the children (Friedman-Krauss et al., 2014a). The skills used to work with children with challenging behavior can come from the support of the administration and veteran teachers. Teachers who feel more supported and have the skills necessary to work with those children are less likely to be depressed (Zinsser et al., 2016). Measuring the quality of the activities offered and the amount of time set aside for child-initiated play where teachers have the ability to interact with children will help to show the teachers' knowledge and willingness to set up an engaging environment for the children that meets their needs.

Behavior guidance strategies. Little research has been done on the prevention of suspensions and expulsions specifically, although there is some significant research that addresses extreme challenging behaviors and reducing those behaviors. The American Academy of Pediatrics (2013) put forth a policy statement on suspension and expulsion, encouraging schools to focus on preventing the behaviors that result in the suspensions and expulsions. Winther, Carlsson, and Vance (2014) acknowledged that challenging behavior in children is a complex issue in that there is often more than one condition that influences each other so that one treatment or response is not effective for each child. To that end, one solution that is used across programs, classrooms, or even children, is not likely to be effective.

The American Academy of Pediatrics (2013) suggested three different strategies that could be used to prevent suspension and expulsion, directing attention towards early intervention services and early identification of children who may be at risk for developing the challenging behaviors that often lead to suspension or expulsion. The third strategy focused more on meeting needs of the children prior to them engaging in challenging behavior. The focus was on teachers providing alternative activities and structures for children who may need it as well as ensuring activities and materials are reviewed periodically to ensure they are developmentally appropriate for the children in the program.

The interest of the relationship between child-directed learning and expulsion and suspension and teacher relationships is not to look at teacher-child relationships as a separate variable but rather to explore current and past research that already supports how the teacher-child relationship is both developed during the interactions of child-directed play and also how it impacts challenging behavior. By looking at teacher-child relationships in both of these ways, a bridge is created to show support for the likelihood that the time children spend in child-directed learning is beneficial to more than just academic learning but also to their social and emotional development and displayed behaviors.

Relationships Between Suspension and Expulsion and Child-Initiated Activity

The data related to suspension and expulsion of children is a cause for concern. While many policies and suggestions for policies related to suspension and expulsion lean towards eliminating it as a possible response to challenging behavior, there is

research to draw a possible connection between child-initiated activity and challenging behavior that would reduce or eliminate behaviors so that exclusion of children is not required. Looking specifically at the social and emotional skills that are developed, the relationships that are established, and the engagement of children during child-initiated activities, there is evidence presented to show how each may prevent challenging behaviors in child care programs. The behaviors that are displayed by children and often result in expulsion and suspension are typically related to a lack of social and emotional skill (Hemmeter et al., 2015; Montroy et al., 2014). Learning social and emotional skills occurs during the time spent in child-initiated play and through relationship building between teachers and children as well as among children in the program (Hemmeter et al., 2015; Montroy et al., 2014). Using the quality and quantity of time in child-initiated play along with teacher education will enable the study to examine the time in which children spend learning the crucial skills of social-emotional development.

Social and emotional skills developed. There are policies and suggestions for policies put forth that encourage support for teachers to teach children social and emotional skills so that they can work through emotions and situations that occur (American Academy of Pediatrics, 2013; Longstreth et al., 2013). These social and emotional skills are the skills necessary to avoid the behaviors noted as most frequently resulting in suspension or expulsion (Council on Children and Families, 2016). Those surveyed reported becoming easily frustrated, and screaming and yelling as some of the most frequent behaviors that lead to excluding a child. Children are not born with these skills, they must be taught and research shows that the most successful way of teaching

those skills is in real-life situations while the situation is happening (Hemmeter et al., 2015; Montroy et al., 2014).

As children are engaged in child-initiated activities, there are interactions between the child and the materials that can lead to frustration. As the teacher is engaged with the child in those situation, he or she is able to scaffold the child through the emotion and assist in using appropriate skills to respond to that frustration. Children can learn in the moment of the frustration how to express the frustration in an appropriate way (Montroy et al., 2014). In the same way, as children are interacting with one another in the context of a child-initiated activity and disagreements occur, the teacher is available to interact with the children involved, using the moment itself as a teaching tool to assist the children in working through the emotions and then coming up with a solution.

Relationships established. During the early years of life when children are enrolled in early childhood programs, the formation of attachments and relationships occur (Bowlby, 1969). When children are excluded from programs, the trust with the program and the teacher is broken, and the formation of relationships with other children is also impacted (Adamu & Hogan, 2015). The strength of those relationships is influenced by the time spent in child-initiated activity (Buckrop et al., 2016; Williford et al., 2015). As teachers interact with children doing things that interest them, the relationship is built and strengthened (Buckrop et al., 2016; Gehlbach et al., 2016; Williford et al., 2015).

During that time, teachers and child learn about each other and their common interests, as well as have opportunity to work on communication skills with one another.

The more time that teachers spend with children, they also get to know each child on an individual level, and can begin to understand certain behaviors that each child displays, along with possible reasons for the behaviors. When teachers can understand or justify a child's behavior, they are more likely to respond using time and attention rather than discipline that includes suspending or expelling the child (Carter et al., 2014). As these relationships among children and between children and teachers are developed, the overall climate of the classroom is then improved, further reducing the likelihood of expulsion and suspension (Friedman-Krauss et al., 2014a). The context of the relationships being built is measured by both the amount of time dedicated to child-initiated play as well as the quality of the activities offered.

Engagement in activities. In the data regarding suspensions and expulsions across the United States, about 80% of those suspended or expelled are boys (U.S. Department of Education, 2016). In New York State specifically, boys are three times more likely than girls to be suspended or expelled (Council on Children and Families, 2016). Child-initiated activities allow for children to choose among activities that are carefully planned to meet individual needs so that each child can choose to spend their time in something that is engaging and challenges them appropriately (Hur et al., 2015). As the relationships between children and teachers are developed during child-initiated activities, teachers get to know children's needs and interests so that activities that are planned meet individual needs **(**Buckrop et al., 2016; Williford et al., 2013).

Activities can be planned to meet the gender differences of boys and girls so that boys are engaged with materials. As children are engaged in activities that are designed

for them, challenging behavior is shown to decrease (Vitiello & Williford, 2016). Boys especially can engage in activities that are challenging to them, but not too challenging to the point of frustration. They can focus more on gross motor skills if they desire, or have opportunity to work alone on a developmentally appropriate and engaging task (Bristol, 2015). As children grow and learn and develop, and relationships are strengthened during the child-initiated activities, challenging behavior decreases to the point where suspension and expulsion is no longer necessary. Using the ECERS as a tool to measure quality will allow the study to look at how engaged the children can be in the environment.

Gap in the Literature

After reviewing the current literature, there are data to support that suspensions and expulsions in child care is a concern, as well as general recommendations on policies to write that could potentially decrease or eliminate exclusion as a response to challenging behavior. The data that are collected on expulsion and suspension specifically in early childhood programs look at the children who are excluded and the reasons for the exclusion, but fail to look at the different program types to attempt to see a pattern in program type and the exclusion of children. The recommended policies are general regarding access to mental health services or social and emotional supports for children showing a risk for challenging behavior (American Academy of Pediatrics, 2013; Longstreth et al., 2013). In addition, many of the proposed policies are related specifically to Kindergarten through 12th grade, which is where the majority of the research has been done thus far. There are no policies or suggestion of policies found in

the review of the literature to prevent the challenging behavior in itself rather than react to it once it begins, and limited reference to child care programs.

With regard to child-initiated activities, the research shows connections between that type of programming and academic achievement, less is shown in regards to relationship-building and development of social and emotional skills. While there are connections drawn in the literature between child engagement in activities and challenging behavior, no research specifically addresses the connection between that engagement as a tool in reduction of the level and frequency of behaviors that lead to expulsion and suspension. The importance of child-teacher interactions and relationships is shown in the literature, but not in the context of eliminating the behaviors that lead to expulsion and suspension. Additional research is necessary to show a relationship between programs that use curriculums where children spend more time in child-initiated activities than in teacher-directed activities and the suspension and expulsion of those programs.

Summary and Conclusions

Current data shows a concern with suspension and expulsion rates in child care program. Policies and suggestions of policies have been developed to eliminate the use of suspension or expulsion and also to give some generalized suggestions for reducing need. After studying students who have been suspended or expelled, there are further concerns with this type of discipline and the long-term effect it has on children, their families, schools, and society in general. In order to address these concerns, it is necessary to look at methods that can prevent the need for exclusion as a discipline

strategy by reducing or eliminating the challenging behaviors that occur prior to suspending or expelling a child.

Time spent in a child-initiated activity, compared to teacher-directed activity, is one factor that shows a possibility of being related to reduction or elimination of challenging behaviors. Part of that is due to the teacher-child interaction and relationship that occurs during that time. Research shows the importance of that time and the growth that occurs, and a connection to the reduction in challenging behaviors. In addition, during child-initiated play, literature shows the development of social and emotional skills necessary for children to handle challenging situations and frustrations. The quality of the child-initiated activities is also shown as a possible factor to more deeply develop the teacher-child relationship and further develop the social and emotional skills necessary. In addition, there is literature to support that when children are engaged in quality child-initiated activities, challenging behavior is reduced.

The gap in the literature is mainly seen in the prevention means for exclusion as a response to challenging behavior. While research shows that children are being expelled and suspended and does show some aspects such as race and gender, there is little research looking at the type of program that children are being expelled and suspended from. The study looked at the type of program by comparing the amount of time children spend in child-directed learning compared to teacher-directed to find a possible connection between programs which are mainly teacher-directed and those mainly child-directed and expulsion and suspension rates. This helps to narrow that gap in the

literature so that additional research can be done or results can be used to inform programs as to the way children should be spending their time while in care.

In order to examine this gap in the literature, there were different variables used. The type of program was looked at by comparing those programs where children spend much of their time in child-directed learning with programs where children spend much of their time in teacher-directed. In addition, it was also necessary to look at the quality of the time children spend in child-directed learning by measuring the quality of the materials they have access to during that time. The collection of the lead teacher's education level is directly related to the teacher's knowledge of Piaget and Vygotsky's theories as those theories are part of child development curriculum for higher education as well as a part of the Child Development Associate Credential. The following chapter will outline how each of those variables will be collected and how the statistics were run to show the possible connection.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine whether the percentage of the day that children spent in child-directed learning stations, the quality of activities offered during child-initiated activity time, and the education level of the lead teacher predict classroom suspensions or expulsions. This section contains the research design for the study and the rationale for the design choice. The stepwise multiple regression analysis includes the description of the population, sampling, and data collection procedures. Also included is a section on possible threats to validity, including ethical considerations. The chapter concludes with a summary of the research method.

Research Design and Rationale

All data from the independent variables (IVs) and the dependent variable (DV) were entered into the SPSS multiple regression (MR) matrix as a block. The stepwise multiple regression analysis assessed each IV individually and as a group as they impact the DV. The analysis of the MR in SPSS included analysis of variance (ANOVA), Pearson *r* correlation, and descriptive data display. In MR analysis, SPSS will generate *R*, R^2, *R* adjusted, and standardized beta. There are two MR equations, one for each DV. The variables are as follows:

- Independent Variable 1 – Time spent in child-initiated activity
- Independent Variable 2 – Quality of activities offered during child-initiated activity time
- Independent Variable 3 – Teacher qualifications

- Dependent Variable 1 – Expulsion rate
- Dependent Variable 2 – Suspension rate

The research design for this research was a quantitative stepwise multiple regression analysis. The research question lent itself to a quantitative study because it was attempting to ascertain the predictive relationship between three IVs and two DVs. All the data were in interval/ratio levels of measurement, aside from teacher education, which was categorical. The categorical variable was transformed by the use of dummy variables. Each was scored as interval data, with high school as 12, Child Developmental Associate credential as 13, associate's degree as 14, bachelor's degree as 15, working on master's degree as 16, master's degree as 17, and doctoral degree as 18. The use of a qualitative research design was rejected as an option, as it would have given detailed information to explore different programs with varying rates of suspension and expulsion but would not have shown a predictive relationship or the extent of the predictive relationship, if it existed. Each variable was run in the stepwise multiple regression analysis to determine which variables might have a predictive relationship to the dependent variables. With this design choice, the quality of child-initiated activity was measured using the ECERS-R (Harms et al., 2014). I used only those subscale items that applied directly to the activities planned for children during the child-initiated activity portion of the day:

19. Fine motor
20. Art
21. Music/movement

22. Blocks
23. Sand/water
24. Dramatic play
25. Nature/science
26. Math/number
27. Use of TV, video, and/or computers (Appendix B)

These items make up the Activity section of the ECERS-R, and permission was obtained from the authors of the scale to use only this section (Appendix E). Each item generated a score of 1-7, and the nine item scores were then averaged to create one score for each classroom as an indicator of quality. These items were measured without children present; this approach eliminated potential influence arising from the presence of an unfamiliar person in the classroom while children were playing.

Methodology

Population

The target population for this study was licensed child care centers in two counties of the northeastern United States that served preschool-aged children. Licensed child care centers were used as the target population rather than prekindergarten classrooms contained within public schools due to the resources that public schools have access to, such as behavior specialists and social workers for support, that licensed programs do not have access to. In this way, the data collection was more equal among the census sample and representative of the target population.

Sampling and Sampling Procedure

A census sample of centers within two counties was obtained in an attempt to reach a total of 88 classrooms, therefore the sample size is the population. Of the 50 licensed child care centers in the counties, 17 Head Start programs were excluded due to policies prohibiting the use of suspension or expulsion. I sent a letter to the remaining 33 licensed child care centers containing a total of 88 preschool-aged classrooms explaining the purpose of the study, what would be required on the part of the program, and my responsibilities as the researcher. I then placed a follow-up program to each program to determine eligibility and willingness to participate. Eligibility was determined by speaking with administration to find out whether suspension and expulsion were part of the discipline policy used. In the event that it was specifically stated in a program's policy that suspension and expulsion were not used, that program was excluded from the study.

Procedures for Recruitment, Participation, and Data Collection

Contact information for the child care centers was first obtained through a public database of child care programs maintained by the government agency overseeing licensing of programs. The majority of programs were located in urban areas, serving families at varying levels of socioeconomic status. Next, a letter outlining the purpose of the study was mailed to each program director with a follow-up phone call 1 week later. For the programs whose leaders were willing to participate, an initial meeting was scheduled with the site director to discuss the steps of the study in depth. The meeting took no longer than an hour. At the time of the initial meeting, consent forms were given

to the teachers for each of the classrooms being visited. Teachers and program directors had time to ask questions and could take additional time up until the initial visit was scheduled to look over the form and decide whether they would be willing to participate. Next, visits were scheduled at a time when the classroom was set for the activities of the day but prior to children arriving; therefore, consent from parents was not required. Visits took no longer than 20 minutes per classroom.

Upon my arrival to the classroom at the scheduled time, the amount of time spent in child-initiated play was collected by examining the classroom's daily schedule. In places where it was not clear whether the time was child-initiated or teacher-directed activity, I sought clarification through discussion with the teacher as to what occurred during that time of the day. Next, the number of suspensions and expulsions for each classroom was obtained from the program director for the previous 12-month period, from December 2017 through December 2018. The program director reported if any substantial changes had been made in the classroom in that 12-month period, such as a change in teacher with a different level of education. In the event that a substantial change occurred, that classroom was not included in the study. Data were coded for each classroom to maintain confidentiality. Individual children's names were not given; I only received the number of children who had been expelled or suspended in each of the classrooms being scored. The education level of the lead classroom teacher was also collected at that time. Teacher's names were not collected, just the code of the classroom in which they worked. Finally, the quality of the activities offered was determined by

observing the classroom setup using the ECERS-R (Harms et al., 2014) sections pertaining specifically to activities.

Each individual planned activity item (19. Fine motor; 20. Art; 21. Music/movement; 22. Blocks; 23. Sand/water; 24. Dramatic play; 25. Nature/science; 26. Math/number; and 27. Use of TV, video, and/or computers) was scored with a number between 1 and 7 using the criteria within each activity item that discerns among each of the numbers 1-7 and averaged to determine an overall quality indicator for activities, as a whole, of the classroom. This process involving the ECERS tool was used to determine the quality of the child-initiated experiences offered (Harms et al., 2014). For the purpose of this research, observing the classroom with children present was not required, as the individual indicators for each activity item pertained specifically to the materials that were available for the children to use, not the way in which children interacted with the materials. For example, Item 26 (Math/number) had indicators such as "Materials are well organized and in good condition" (Harms et al., 2014, p. 52). Having materials that are organized allows children to find what they want and enables them to be engaged and explore in their own way. Item 19 (Fine motor) had indicators such as "Materials on different levels of difficulty accessible" (Harms et al., 2014, p. 39). Scoring the planned activities allowed for determining the likelihood that children were able to engage with materials that were at their developmental level. For example, children who were developmentally able to manage chunky knob puzzles would have those accessible to them, while children who were developmentally able to work through frame puzzles would have those available. In this way, no child would be forced to interact with

materials that were below or above their developmental level. Having access to materials within the appropriate developmental level assists in children's engagement so that they are not frustrated by materials too challenging for them or bored with materials below their developmental level (Vygotsky, 1978).

Within the tool are notes for clarification that specifically state what constitutes the different levels of quality to establish the score on the tool. Any information in the scale that could not be determined directly was collected through clarification by the teacher of the classroom, using the prompted questions included in the tool. The questions included in the tool are worded to be asked of the teacher and do not require children to be present. For example, Item 20 (Art) has a question for the indicator of three-dimensional art: "Are three-dimensional art materials such as clay or wood for gluing ever used? If so, how often?" (Harms et al., 2014, p. 41). Each question was used only to determine the score of the individual item as requested by the ECERS itself and was not used as an interview question for a qualitative study. Measuring these items on the ECERS allowed me to measure the quality of the time that children were expected to spend in child-directed activity. The amount of time they spent interacting with these materials was determined by the daily schedule (Appendix A).

In the event that staff representing a classroom or program wished to exit the study prior to completion, data collection for that program ceased, and the data were destroyed. Although I did not directly observe children in the classrooms, if I had discovered during discussion or ECERS scoring that there was a possibility of excessive punishment that would have warranted a call to the state central registrar to report child

abuse or neglect, I would have called the hotline the same day to file a report. Finally, after all programs had been visited and all data collected and analyzed, program directors were contacted to set up an appropriate day, time, and place to disseminate the findings from the study to the director as well as the teachers. All staff members were asked if they had any questions and were thanked for their participation. This meeting took about 25 minutes to an hour.

Should additional participants have been required, programs with the same criteria but in neighboring counties would have been reached in the same manner used for the original participant search.

Instrumentation

The ECERS-R (Harms et al., 2014) has been used in a variety of research projects domestically and internationally as a comprehensive quality indicator since it was released. Through all of the various uses of the scale, reliability and validity have been shown for the scale itself and the underlying subscales (Clifford & Reszka, 2010). The scale was developed using partnerships and experiences with field-based child care centers. The scores have remained consistent over time and with different assessors administering the scale (Harms et al., 2014). Test-retest reliability was used as well as interrater reliability, both producing statistically significant results of 86.1% agreement on interrater reliability and 73% on test-retest reliability. Reliability was assessed by taking each subscale in relationship to the entire scale to check for accuracy. High internal consistency was also found using a large sample size of 1,313 classrooms in urban centers serving low-income children (Cassidy, Hestenes, Hegde, Hestenes, &

Mims, 2005). Validity of the scale was assessed in content validity, predictive validity, and concurrent validity. According to seven nationally recognized experts in the field of early childhood programs, 78% of the total items on the scale were of high importance when measuring quality of environment, showing the content validity of the tool. Reliability and validity were not tested on individual items or subscales at this time. This is considered a limitation of the tool; however, use of the tool was still deemed appropriate in this case, as overall quality of the program was not being examined, only quality of the activities being offered to children. Examining the scale and the type of things that are measured within each subscale, those listed in the activity subscale items are not dependent on other areas of the tool. Permission was granted by the authors to use the activity subsection of the scale (Appendix E).

Operationalization of Constructs

The independent variable of time spent in child-directed activity was measured as a percentage of the total program day that was spent in child-directed activity. This was measured by looking at the program schedule for each classroom and labeling each section as being child directed, teacher directed, or a time such as transition or nap that was neither teacher directed nor child directed. If clarification was required, the teacher was asked to describe how the time was spent. At that time, a determination was made as to whether the children were in control of the learning or the teacher was in control. The time spent in child-directed activity was added together to determine the total number of hours spent in child-directed activity. For example, a program with 1 hour in the morning and 2 hours in the afternoon spent in child-directed activity would have had a

total of 3 hours. The total program day was determined by the open and close time of the center; for example, a center open from six o'clock in the morning until five o'clock in the afternoon would have had a total program time of 11 hours. Other programs might have an opening time of seven o'clock in the morning until six o'clock in the evening. The percentage was then computed for each classroom based on the total number of hours that the program was open and the planned schedule for the individual classroom. In the example above, the percentage would be 27%. While there was some variability in the length of time that individual children spent in the program, that variability would occur in all of the centers being studied. My intention in the research was to measure the opportunities that children had and how the program was designed, rather than observing actual interactions, given that those were likely to change on a daily basis. The overall atmosphere and intention of the program design represented a more consistent measure.

The independent variable of the quality of the child-directed activities was measured by the ECERS-R (Harms et al., 2014). Each of the indicators in the activity subscale was scored in the classroom with a number between 1 and 7. The eight scores within the activity subscale were then averaged together to create one score between 1 and 7 to indicate the level of quality of the child-directed activities being offered during the times indicated on the program schedule. The items within the activity subscale were as follows: fine motor, art, music/movement, blocks, sand/water, dramatic play, nature/science, and math/number. For example, a program with scores of 4, 6, 2, 3, 4, 4, 7, and 6 for the eight items, respectively, would have had a quality indicator score of 4.5. Individual item numbers were maintained separately to share with program

directors/administrators during the dissemination of results for the purpose of making recommendations for changes to their program as they saw necessary.

The independent variable of teacher qualification was collected through a direct question to the director of each program. Directors were asked their highest level of completed education for each teacher at the beginning of the current academic year; High School, Child Development Associate Credential, Associates Degree, Bachelors Degree, Masters Degree, or Doctoral Degree. Each will be scored as interval data with High School being 12, Child Developmental Associate Credential 13, Associates Degree 14, Bachelors Degree 15, Working on Masters Degree 16, Masters Degree 17, Doctoral Degree 18. For the sake of consistency, any classroom where a teacher had changed in the course of the academic year that had a different completed level of education would have been withdrawn from the research.

The dependent variable of the study was the suspension and expulsion rate for the program. The program director was asked to give the number of expulsions and suspensions for the current academic year. The number was broken down by classroom the child spent the majority of their time in at the time they were expelled or suspended. The two numbers were reported separately. For example, a program with 3 classrooms: Classroom A had 1 expulsion and 2 suspensions, Classroom B had 0 expulsions and 1 suspension, Classroom C had 1 expulsion and 3 suspensions. Data were also combined for classrooms within the same program for program level analysis to determine if any significance is found. Classrooms in child care centers are divided by age. Some larger

centers have more than one classroom with the same age children. For the study, the classrooms were those serving 3-year-olds or 4-year-olds.

Data Analysis Plan

The software used for data analysis is Statistical Package for the Social Sciences (SPSS) (IBM, 2016). In order to make the data as efficient as possible to be entered into SPSS, each classroom was coded with a letter indicating the center it is located within and a number. Each coded classroom then had 5 variables: percentage of day spent in child-directed learning, number of expulsions, number of suspensions, lead teacher education level, and quality indicator(s).

The research question is, "Is there a predictive relationship between the percentage of day spent in child-initiated learning activities, the quality of the child-initiated activities offered, and the teacher qualifications in a classroom and the number of expulsions and suspensions in a child care program?"

$H_{1:}$ There is a statistically significant predictive relationship between the percentage of day spent in child-directed learning centers and the number of suspensions and expulsions of a child care program.

$H_{0:}$ There is no significant predictive relationship between the percentage of day spent in child-directed learning centers and the number of suspensions and expulsions of a child care program.

$H_{2:}$ There is a significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

H_{20}: There is no significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

H_3: There is a significant predictive relationship between the education level of the lead classroom teacher and number of suspensions and expulsions of a child care program.

H_{30}: There is no significant predictive relationship between the education level of the lead classroom teacher and the number of suspensions and expulsions of a child care program.

The statistical analysis used was a stepwise multiple regression to determine which combination variables results in the strongest impact. The three IVs were loaded into the SPSS program as well as DV1. Then the three IVs were loaded into the SPSS program as well as DV2.

Threats to Validity

Given the nature of the research design, there are threats to validity to note. The external validity can be threatened by the use of the tool. As the teachers of the classroom were made aware of the use of the ECERS-R (Harms et al., 2014) and the wide availability of the tool, there is a possibility they would have constructed their classroom using the tool specifically for the day of the visit. The same could be said for adjusting the schedule to give the appearance of more or less time spent in child-directed activity. In order to determine if the classroom was constructed specifically for that day or if the classroom set up is accurate, the score included not only the materials themselves but also

evidence that the materials had been used in the past. For example, artwork displayed on the wall that is open-ended. Open-ended artwork on display shows that the children have spent time in the art center in a child-directed manner. This means they were able to create what they wanted, rather than a close-ended project that would be considered teacher-directed as it would conclude that teachers depicted what the children were to create in the art center. Questions that are included in the tool were used for clarification.

The possible threat to internal validity was in the selection of participants. Because the participants were selected based on their willingness to participate, there is the possibility of specific criteria or external variables that make a program more likely to participate. Given the time and travel constraints of collecting data in person, it was not possible to do a random sample. However, during the initial meeting with the program director, I spoke to the director about level of challenging behaviors perceived to ensure there is a balance of half of programs with extreme challenging behaviors and half of programs that do not experience many behaviors. If it had been found there was not a balance, additional programs for participation would have been sought using the same sampling procedure described above in a neighboring county.

A concern of teachers talking with one another and sharing details of the study with one another was addressed by not disseminating the results of the study until after all data has been collected. In addition to that, data were collected at each classroom in one center on the same day, directly following each other. For this reason, teachers did not have the opportunity to make changes to the classroom based on what one teacher may tell another teacher from the clarification questions asked during the scoring session.

Ethical Procedures

Program directors signed consent forms. For the directors, full disclosure will be placed in the letter, with description of the data to be collected, how data will be kept confidential, procedure for withdrawing from the research and potential risks (Appendix A). Prior to any data collection, approval was obtained by the Institutional Review Board (IRB) for Walden University. Due to the nature of the research, children were not being observed, eliminating the ethical concern of working with this vulnerable population. The teachers and program directors were not at risk, as the visits were only done by walking around the classroom. Questions were posed on items that are not directly observable in the manner directed in the ECERS-R (Harms et al., 2014) so as to obtain answers without leading the questioning in any way or causing the teacher to feel uncomfortable or pressured to answer a specific way. The classrooms were respected in that nothing was touched or moved without permission by the teacher or director and only if necessary to score something that cannot be scored any other way. Teachers had opportunity to ask questions or share examples if they desired.

Upon arrival at the center, all documentation was coded with one code for each program. The program was assigned a letter and each classroom a number to create a unique identifier. The list of assigned letters and numbers are maintained in a file password protected on my personal computer. All of the collected data will be kept in a secure cabinet and file folder specific to the research, in my home office. File cabinet is locked and access not granted to anyone in the home. At the conclusion of the research, the collected data were secured and archived in my home and only the statistical data

results are to be published and shared. Data will be destroyed by shredding seven years after publication of final dissertation. Any programs directors or teachers who are not willing to participate or withdraw from the study early were able to do so without penalty. Those programs, in addition to those that do participate, will be kept confidential.

Summary

The purpose of this quantitative study was to examine if the percentage of day children spent in child-directed learning stations, quality of activities offered during child-initiated activity time, and the education level of the lead teacher predicts classroom suspensions or expulsions. Amount of time spent in child-directed activity was determined as a percentage out of the full program day. The quality of those activities was defined by an average from eight items of the ECERS-R (Harms et al., 2014). The expulsion and suspension was the number of instances of each in the current academic year, as reported by the program director. The data analysis was done through SPSS (IBM, 2016) as a stepwise multiple regression. There were some threats to validity considered and precautions taken to reduce the impact of those threats. Ethical considerations were minimal given the nature of the study.

The quantitative design of this study involves collected data from child care program classrooms to measure quality of child-directed learning opportunities. In addition, during the visit, the daily schedule of the classroom was examined to determine the percentage of the total day children spend in child-directed activity and the same for teacher-directed activity. The program director self-reported the number of expulsions

and suspensions for each classroom as well as the highest education level of each lead teacher. The data were analyzed using a stepwise multiple regression to determine which combination of variables had the greatest impact on the expulsion and suspension rate. Once all of the data collection was complete and analysis was done, information was disseminated to the programs.

After laying the groundwork for this research, the following chapter will give a detailed description of all of the data collected and the analysis completed using the format referenced above. The main objective of the research was to determine which combination, if any, of the independent variables have a predictive impact on the dependent variables. The following chapter will give the data for each of the classrooms as well as the statistical data from SPSS (IBM, 2016). This will show which, if any, of the null hypothesis can be rejected.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine whether the percentage of the day that children spend in child-directed learning stations, the quality of activities offered during child-initated time, and the education level of the lead teacher predict classroom suspensions or expulsions.A stepwise regression was conducted to answer the following research question: Is there a predictive relationship between the percentage of the day that children spend in child-directed learning stations, the quality of activities offered during child-initiated activity time, and the education level of the lead teacher and the number of expulsions and suspensions in a child care program?

$H_{0:}$ There is no significant predictive relationship between the percentage of the day spent in child-directed learning centers and the number of suspensions and expulsions of a child care program.

$H_{1:}$ There is a statistically significant predictive relationship between the percentage of the day spent in child-directed learning centers and the number of suspensions and expulsions of a child care program.

$H_{20:}$ There is no significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

$H_{2:}$ There is a significant predictive relationship with the quality of the activities offered during child-directed learning and the number of suspensions and expulsions of a child care program.

H_{30}: There is no significant predictive relationship between the education level of the lead classroom teacher and the number of suspensions and expulsions of a child care program.

H_3: There is a significant predictive relationship between the education level of the lead classroom teacher and number of suspensions and expulsions of a child care program.

Data Collection

A total of 33 child care programs totaling 110 classrooms were approached over the course of 4 weeks. Staff from 14 programs with a total of 38 classrooms signed participation agreements. Staff representing four programs specifically stated that they were not interested in participating, without providing a reason. Staff from nine programs stated that they would look into participating, would talk to other people in the program, and would then get back to me, but they did not connect with me again. The remaining six programs did not return messages that I left. I used the ECERS-R in all 38 classrooms, in addition to collecting data on lead teacher education level and numbers of suspensions and expulsions in the current school year. In addition, I collected daily schedules and the percentage of time spent in child-initiated play for each classroom. Data were collected over the course of 4 weeks. Time spent in each classroom averaged 15-20 minutes, including ECERS-R scoring and time spent collecting the number of suspensions and expulsions, lead teacher's education level, and copies of daily schedules for each classroom.

The total population of 33 programs included programs in both rural and urban locations. It encompassed smaller centers with only one to two preschool classrooms as well as larger centers with six to seven preschool classrooms. Moreover, the total population included programs that accepted child care subsidies for low-income families as well as those that only accepted self-pay families. Likewise, the sample of 14 programs contained a mix of smaller and larger centers, centers from both rural and urban locations, and centers that accepted subsidies as well as self-pay-only centers. Because staff at each center that I contacted were able to decide whether to participate or not after the research was explained, it is unclear whether the sample is representative of the population in terms of the percentage of child-initiated play, ECERS-R score, teacher education, and number of expulsion and suspensions. There is no way of knowing whether the programs that did not respond or whose staff chose not to participate experienced higher or lower numbers of expulsions or suspensions. Of the 14 participating programs, there were five whose staff reported expulsions, suspensions, or both in the current academic year. Whereas previous data showed that 17.5% of programs in the state had expelled students, suspended students, or both, the sample showed that 35.7% of participating programs had expelled students, suspended students, or both.

Results

The descriptive statistics for the variables are shown in Table 1. The mean number of suspensions for the 38 programs was .58, and the mean number of expulsions was .18. The teacher education variable was dummy coded so that 1 was high school

education, 2 was Child Development Associate credential, 3 was associate's degree, 4 was bachelor's degree, 5 was master's degree, and 6 was doctorate or higher. The mean of 3.42 makes for an average of associate's and bachelor's degrees. The mean ECERS score was 3.91, and the mean percentage of child-initiated play was 39% of the total hours that the program was open.

Table 1

Mean and Standard Deviation for Variables

	Mean (n = 38)	Standard deviation
Suspensions	.58	1.57
Expulsions	.18	.51
Education	3.42	1.11
ECERS-R	3.91	1.11
Child-initiated	39.00	16.98

Correlation and multiple regression analyses were conducted to examine the relationships between suspensions, expulsions, education level of the lead teacher, ECERS-R score, and the total percentage of child-initiated play scheduled. Table 2 summarizes the correlations for all of the variables. The only correlation that shows significance below .05 was that of suspensions and expulsions with a Pearson r of .569. That simply means that those programs that suspended students during the academic year were likely to have also expelled students. Given the way in which data were collected, there was no way of knowing whether the same students had been suspended and then expelled. Further research is necessary. Although none of the correlations for the hypothesized combinations of variables were statistically significant, there was a notable negative correlation of -.208 between the number of expulsions of the program and the

percentage of child-initiated play with a significance of .089, only slightly above the .05 threshold. In addition, there was a notable negative correlation between the percentage of child-initiated play and suspension, with a Pearson *r* of -.266 and a significance of .107. While significance was not below .05, it was at the next closest level of significance.

Table 2

Correlations

		SUSP	EXP	ECERS	CHILD PLAY	TEACH EDUC
SUSP	Pearson correlation	1	.569**	-.280	-.266	-.206
	Sig. (2-tailed)		< .004	.089	.107	.214
	N	38	38	38	38	38
EXP	Pearson correlation	.569**	1	-.006	-.208	.050
	Sig. (2-tailed)	.000		.970	.210	.765
	N	38	38	38	38	38
ECERS	Pearson correlation	-.280	-.006	1	.173	-.035
	Sig. (2-tailed)	.089	.970		.300	.835
	N	38	38	38	38	38
CHILDPLAY	Pearson correlation	-.266	-.208	.173	1	.089
	Sig. (2-tailed)	.107	.210	.300		.594
	N	38	38	38	38	38
TEACHEREDU	Pearson correlation	-.206	.050	-.035	.089	1
	Sig. (2-tailed)	.214	.765	.835	.594	
	N	38	38	38	38	38

**Correlation is significant at the 0.01 level (2-tailed).

Table 3 summarizes the stepwise regression for the dependent variable expulsions. The stepwise regression was done manually, inserting independent variables in the order of significance of Pearson correlations. The ECERS-R score was first, the percentage of time spent in child-initiated play was second, and teacher qualification was

third. The R^2 shows how much of the variability in the outcome is accounted for by the three independent variables. The value for the first model of only ECERS-R score accounts for too little to register. The value for the second model, which adds the percentage of time spent in child-initiated play, accounts for 4.4% of the variability, and the third model adds teacher qualifications, and then the percentage increases slightly to 4.9%. These results are not based upon significant results. Additionally, the low adjusted R^2 values support the conclusion that there are no significant predictive values between the IVs and the DV.

Table 3

Model Summary

				Std. error	Change statistics				
Model	*R*	*R* square	Adjusted *R* square	of the estimate	*R* square change	*F* change	df1	df2	Sig. *F* change
1	.006[a]	.000	-.028	.519	.000	.001	1	36	.970
2	.210[b]	.044	-.010	.515	.044	1.620	1	35	.212
3	.222[c]	.049	-.035	.521	.005	.179	1	34	.675

[a]Predictors: (Constant), IV2. [b]Predictors: (Constant), IV2, IV1. [c]Predictors: (Constant), IV2, IV1, IV3.

Table 4 summarizes the stepwise regression for the second dependent variable: suspensions. The stepwise regression was done manually, with Model 1 containing the percentage of time spent in child-initiated play, Model 2 adding teacher qualifications, and Model 3 adding ECERS-R score. The R^2 shows the first model accounting for 7.1% of variability, the second model accounting for 10.4%, and the third model accounting for 16.5%. These results are not based upon significant results. Additionally, the low

adjusted R^2 values support the conclusion that there were not any significant predictive values between the IVs and the DV.

Table 4

Model Summary

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Change statistics				
					R square change	*F* change	df1	df2	Sig. *F* change
1	.266[a]	.071	.045	1.535	.071	2.732	1	36	.107
2	.323[b]	.104	.053	1.528	.034	1.314	1	35	.259
3	.406[c]	.165	.092	1.497	.061	2.486	1	34	.124

[a]Predictors: (Constant), IV1. [b]Predictors: (Constant), IV1, IV3. [c]Predictors: (Constant), IV1, IV3, IV2.

Summary

Judging solely by the statistical significance at the .05 level, the only reportable statistically significant finding is that of the positive correlation between expulsion and suspension, which was not the focus of one of the research subquestions. The research question "Is there a predictive relationship between the percentage of the day spent in child-initiated learning activities, the quality of the child-initiated activities offered, and the teacher qualifications in a classroom and the number of expulsions and suspensions in a child care program?" is most simply answered with "No, there is not." With the hypothesis presented, none of the null hypotheses are rejected. That being said, given the small sample size, there is reason to still make mention of the outcomes, with the expectation that a larger sample size would lead to statistically significant results.

When one looks at the descriptive data, it is evident that the suspensions and expulsions for the sample were higher than what was found in previous research

conducted by the Council on Children and Families (2016). The Council on Children and Families found that 17.5% of programs expelled students, suspended students, or both. The current sample showed that 35.7% of the programs sampled and 21% of the classrooms had experienced suspensions, expulsions, or both. The ECERS-R (Harms et al., 2014) has a scale of 1-7, with 7 indicating the highest quality. The average quality score of the classrooms in the sample was less than 4. The stepwise regression shows that the highest percentage of impact comes when all three independent variables are entered into the model. The change is higher for suspensions than for expulsions.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to examine whether the percentage of the day that children spend in child-directed learning stations, the quality of activities offered during child-initated time, and the education level of the lead teacher predict classroom suspensions or expulsions.

As suspension and expulsion rates have increased over the previous years (Council on Children and Families, 2016; Gilliam et al., 2016; Gilliam & Shahar, 2006), cause for concern and the need for further research have become evident. Much research has been done on expulsion and suspension and the consequences of such, but limited research has been conducted on preventing the challenging behavior that leads to exclusion of children from a program.

The nature of this study was quantitative. Data were collected, and a stepwise multiple regression was run to determine the predictability of the independent variables involved—the amount of time that children spend in child-directed activity, the quality of the time spent in child-initiated activity, and lead classroom teacher education level, on the dependent variables, number of suspensions and number of expulsions.

After contacting 33 child care centers that served preschool-aged children, I established a sample of 14 programs with a total of 38 preschool classrooms. Suspension and expulsion data were collected for each classroom, in addition to data on the percentage of time spent in child-initiated activity and the lead teacher's education level. In addition, the activity subset of the ECERS-R (Harms et al., 2014) was conducted on

each classroom. A stepwise multiple regression was conducted with the data to determine which variables—suspension, expulsion, ECERS-R score, percentage of time spent in child-initiated activity, and lead teacher education level—presented a statistically significant relationship.

The only correlation found with a significance less than .05 was that of suspension and expulsion. Programs that had suspended children had also expelled children. There was a notable negative correlation of -.208 between the number of expulsions of the program and the percentage of child-initiated play with a significance of .089, only slightly above the .05 threshold. In addition, there was a notable negative correlation between the percentage of child-initiated play and suspension, with a Pearson *r* of -.266 and a significance of .107.

Interpretation of Results

Theoretical Foundation

Compared to the theories of Vygotsky (1978) and his ZPD as well as Piaget (1929, 1973) on children's construction of ideas, the descriptive statistics show that programs in general, when the ECERS-R (Harms et al., 2014) was used as an indicator of quality, fell around the middle, with the average score being below 4 (Table 1). Built into the scale as indicators were things such as having varying levels of difficulty in items such as puzzles and books. Having more variety places a program in a position of meeting several children where they are developmentally, allowing them to experience the scaffolding necessary to move to the next level in the ZPD (Vygotsky, 1978).

Similarly, Piaget (1929, 1973) discussed the importance of allowing children disequilibrium in their thoughts, along with opportunity to work through that disequilibrium using materials available. The data show that, on average, 39% of children's day was spent in child-initiated activity, and the activities they had access to during that time met about half of the requirements set by Harms et al. (2014). An assumption was made that teachers spent the time available in child-initiated play scaffolding children's learning and assisting them in working through disequilibrium. In the design of the study, interactions between teachers and children were not observed.

Suspension and Expulsion

Gilliam and Shahar (2006) researched preschool expulsion and suspension in Massachusetts and found that preschoolers were suspended or expelled 13 times more often than public school children were. The U.S. Department of Education (2014) researched preschool programs run under its auspices and found that almost half a percentage of all students were suspended at least once, with half of those students suspended more than once. Specifically in New York, the Council on Children and Families (2016) found that 17.5% of the child care programs studied had expelled students, suspended students, or both. The current research revealed that 35.7% of those studied had suspended or expelled students in the current academic year.

Amount of Time Spent in Child-Initiated Learning

Previous research has shown that the time that children spend with teachers has positive effects in developing strong teacher–student relationships while reducing the amount of challenging behavior that occurs with individual students and improving the

overall atmosphere of the classroom (Buckrop et al., 2016; Williford et al., 2015). The relationship between a child and a classroom teacher is developed through time spent together, engaging in one-on-one interactions with things meaningful to the child (Buckrop et al., 2016; Child Care Aware of America, 2016b; Pianta, 1992). The current research showed that the average classroom in the sample was designed with 39% of the day being spent in child-initiated learning. In relationship to suspension and expulsion, there was a slight negative correlation for each, meaning that the higher the percentage of time spent in child-initiated activity, the lower the number of suspensions and expulsions. While the correlation was not significant at the .05 level, the finding does show there is a relationship that is worth noting. With a larger sample size, there is a possibility that a significant correlation could be found.

Quality of Child-Initiated Learning Activities

The amount of time spent in child-initiated activity is only part of the total picture. The way that children spend that time is also important. In order for the time spent in child-initiated learning to be beneficial for children, one element of importance is how engaged the children are in the activities being offered. Engagement has been shown to come when children are able to choose their own activities from a variety of choices (Hur et al., 2015). When they are able to choose activities that interest them, that are relevant to their personal lives, and that meet them where they are developmentally, these choices reduce their need to act out (Bristol, 2015). In the current research, this effect is evident in the small negative correlation of -.280 with significance of .089 (Table 2) for the ECERS-R (Harms et al., 2014) and the number of suspensions. While this

finding is not statistically significant, it is notable in that the higher the ECERS-R score as an indicator of quality, the lower the number of suspensions in the classroom.

Limitations of the Study

A major limitation to the study was that the ECERS-R (Harms et al., 2014) was only conducted in part and not fully. The activity subsection was used so as to simplify the study and avoid the need to obtain permissions from parents and children, as well as to avoid disruptions to the classroom being created by having an unfamiliar person present. Scoring the ECERS-R (Harms et al., 2014) when children were not present made data collection quicker and less intrusive than if children had been present and teachers had been working with students during that time. There is a possibility that scoring the entire tool in all of the subsections would have offered a clearer indicator of quality for the program, rather than focusing on just the activities available and making the assumption that children and teachers were using the time efficiently. Given that a large part of the research that I reviewed addressed relationships between teachers and children, a tool that could be used to score actual interactions throughout the day would have given a better indicator or shown a different correlation related to suspension and expulsion.

Recommendations

The current study shows correlations; however, they are not statistically significant. The sample size was small, so a larger sample size is recommended to possibly show stronger correlations.. Using ECERS-R Activity subscale Items 19 (fine motor), 20 (art), 21 (music/movement), 22 (blocks), 23 (sand/water), 24 (dramatic play),

25 (nature/science), 26 (math/number), and 27 (use of TV, video, and/or computers; Harms et al., 2014) did provide an indicator of the quality of the time that children spent in child-initiated activity, which I was able to gather in an unobtrusive way without disrupting interactions between the teacher and students. However, it did not allow for direct observations of teachers with students within the context of that child-initiated time. A different scoring tool is recommended that might allow for scoring the quality of time; alternatively, researchers might conduct a qualitative study that would give a broader picture of how children and teachers spend that 39% of their day in child-initiated activity. Recommendations are also made to look at the variables of percentage of time spent in child-initiated play, lead teacher education level, and quality of care individually. For example, researchers might look at programs with a low percentage of time spent in child-initiated play and then increase that amount of time, noting changes in the children and/or teachers following that increase.

It might also be beneficial to conduct a qualitative study to collect information on specific child/teacher interactions directly. Such an approach could allow researchers to note detailed interactions and more specific information on how child-initiated time is spent. It is also recommended that future researchers conducting qualitative research explore the perceptions of teachers, administrators, and other stakeholders concerning programs' reasons for expulsions and suspensions.

Implications

The results do indicate that there is a relationship between the amount of time spent in child-initiated play and expulsions and suspensions. There is also a slight

correlation between the ECERS-R score that indicates the quality of the activities available to children during child-initiated play time and the number of suspensions. Although the correlations are not statistically significant, they do show the possibility of a relationship, meaning that even slight changes have the possibility of making a difference in the life of a child with extreme challenging behavior. As numbers of expulsions and suspensions are increasing (Council on Children and Families, 2016; Gilliam et al., 2016; Gilliam & Shahar, 2006), it is notable that any change that teachers can make in regard to the amount of time that children spend in child-initiated play and the quality of the activities available during that time would help the situation. At this time, focus has been placed on eliminating suspension and expulsion as a response to extremely challenging behavior (American Academy of Pediatrics, 2013; Bitner, 2015). Simply eliminating the consequence does not prevent the behavior from occurring, nor does it solve the consequences of the disruption within the classroom.

Aiming to increase the amount of time that children spend in child-initiated play beyond the current average of 39% and taking steps to improve the level of quality as measured by the ECERS-R (Harms et al., 2014) or another indicator of quality would represent a move in the right direction until further research can be done. The current research gives some direction for teachers and programs struggling with high expulsion and suspension rates and an indication as to how to prevent challenging behaviors through offering child-initiated activity times throughout the day, examining the way that time is spent and what types of activities and toys children have access to. For families with children who have been suspended or expelled from programs, the current research

may provide some guidance to assist them in searching for more suitable care. Families can use the information to ask potential programs about their policies on time spent in child-initiated play. Although the results are not significant and correlation does not determine causation, the results do show there is something more to examine, making additional research necessary.

Conclusion

Suspension and expulsion rates in preschools represent a complex challenge. Suspension and expulsion impact teachers and children in the classroom, programs as a whole, families of those suspended or expelled, and, most of all, the children affected, placing them on a path that may not lead to becoming contributing members of society (Skiba, 2013). By focusing not on the consequences used to sanction challenging behavior but at ways to prevent that behavior, it is possible to make changes to programs to not only engage students who may be at risk for suspension or expulsion, but also increase the quality of experiences for children who are not at risk. Changes in things such as the percentage of time spent in child-initiated play and the quality of that time not only have been shown to have a slight relationship with lower expulsion and suspension rates, but also are in line with research indicating that how children spend their time relates to how they acquire information that is meaningful. Some change is better than no change. There is a need for further research in this complicated area of expulsion and suspension that involves a larger sample size, a different scoring tool, or a different nature of study.

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Appendix A: Sample Preschool Classroom Schedule

With Child-Initiated Activity Highlighted

7:00 AM – 8:00 AM Arrival, Table Activities

8:00 AM – 8:15 AM Morning Meeting

8:15 AM – 8:45 AM Breakfast

8:45 AM – 9:15 AM Whole Group Activity

9:15 AM – 10:15 AM Learning Stations

10:15 AM – 11:00 AM Outdoor Activities

11:00 AM – 11:30 AM Whole Group Book Reading

11:30 AM – 12:00 PM Lunch

12:00 PM – 2:30 PM Nap/Rest

2:30 PM – 3:00 PM Snack

3:00 PM – 3:15 PM Afternoon Meeting

3:15 PM – 4:00 PM Outdoor Activities

4:00 PM – 5:00 PM Departure, Table Activities

Total Day – 10 Hours

Child-Initiated Time – 2.5 Hours

Percentage of Day in Child-Initiated – 2.5/10 x 100 = 25%

Appendix B: Early Childhood Environmental Rating Scale Activity Indicator

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
ACTIVITIES						
19. Fine motor						
1.1 Very few developmentally appropriate fine motor materials accessible for daily use.		3.1 Some developmentally appropriate fine motor materials of each type accessible. *		5.1 Many developmentally appropriate fine motor materials of each type accessible for a substantial portion of the day. *		7.1 Materials rotated to maintain interest (Ex. materials that are no longer of interest put away, different materials brought out).
1.2 Fine motor materials generally in poor repair or incomplete (Ex. puzzles have missing pieces, few pegs for pegboard). *		3.2 Most of the materials are in good repair and complete. *		5.2 Materials are well organized (Ex. pegs and pegboards stored together, building toy sets stored separately).		7.2 Containers and accessible storage shelves have labels to encourage self-help (Ex. pictures or shapes used as labels on containers and shelves; word labels added for older children). *
				5.3 Materials on different levels of difficulty accessible (Ex. both regular and knobbed puzzles for children with varying fine motor skills).		

Notes for Clarification

1.2. "Generally in poor repair or incomplete" means 80% of materials cannot be used properly because pieces are missing, parts are broken, or there are other problems.

3.1. There are several different types of fine motor materials, including *small building toys* such as interlocking blocks and Lincoln logs; *art materials* such as crayons and scissors; *manipulatives* such as beads of different sizes for stringing, pegs and pegboards, sewing cards; and *puzzles*. "Some" of each type means more than one example of each of the four types is accessible for 1 hour in an 8-hour program, prorated appropriately in shorter programs (see "Explanation of Terms Used Throughout the Scale" on p. 7 for amount of time required). In order to be given credit for one example of a type, the material must be complete and in good enough condition to permit the activity for which it was designed. Therefore, crayons and paper to draw on is one example of an art material; a puzzle with all its pieces is one example of puzzles; a set of beads with strings is one example of manipulatives. (For further details about the four types of fine motor materials see *All About the ECERS-R*, pp. 189, 190.)

3.2. "Most" means 80% of fine motor materials.

5.1. "Many" requires at least three examples of each type to be accessible for a substantial portion of the day. Many items representing each type do not all have to be accessible at the same time, however a combination of these materials needs to be accessible for a substantial portion of the day to assure that children have a wide choice.

7.2. To gain credit, almost all shelves and/or containers must have labels that are meaningful to the children.

Questions

5.1. When are the manipulatives and other fine motor materials accessible for children to use?

7.1. Do you use any other fine motor materials with children? How is this handled?

*Notes for Clarification

Item 20. Categories of art materials: ***drawing materials*** such as paper, crayons, nontoxic felt pens, thick pencils; ***paints; three-dimensional materials*** such as play dough, clay, wood gluing, or carpentry; ***collage materials***; ***tools*** such as safe scissors, staplers, hole punches, tape dispensers.

1.1. "Rarely available" means activities with art materials are offered less than once a day, or if offered daily, all children do not have the opportunity to participate if they wish, or the time offered is too short to be satisfying to the children.

1.2, 3.2. "Individual expression" means that each child may select the subject matter and/or art medium, and carry out the work in his or her own way. A number of paintings, each of which is different because the children have not been asked to imitate a model or assigned a subject to paint, is considered "individual expression."

3.1. In groups with children under 3 years of age or with certain developmental delays, staff may bring out materials to make them accessible daily with close supervision for as long as there is interest. Adaptations may be needed to make art materials accessible and usable for children with disabilities. "Some" means at least one usable art material that will allow children to complete artwork (e.g., crayons with paper). To give credit, the materials must be accessible daily for at least 1 hour in an 8 hour program, prorated appropriately for shorter programs (see chart in "Explanation of Terms Used Throughout the Scale" on p. 7).

5.1. "Many and varied" requires that 3-5 different art materials be accessible from at least four of the categories for a substantial portion of the day, and drawing materials is required as one of the four. All categories need not be accessible at the same time, as long as each is included for some time during the substantial portion of the day. (For more information about the categories, see *All About the ECERS-R*, p. 200.) Food cannot be counted as an art material.

5.2. "Much individual expression" means that 85% of the time when art materials are used, children can do "free art" and are not required to follow an example. Observe to see whether children have access to the art materials and if they actually use them in their own creative way. You may also look at the artwork displayed in the room. If you see many teacher-directed projects displayed, and little individual work being done by the children during the observation, do not give credit for this indicator. If you are not sure, ask the teacher how often projects like those in the display are done. If projects that meet the requirements of 3.2 are used no more than once or twice a week, and you observe many instances of children using art materials in their own, creative way, you may give credit for 5.2, even if much of the work displayed is of the "project" variety. (For further discussion of individual expression requirements at the 3 and 5 levels, see *All About the ECERS-R*, pp. 201–204.)

Questions

5.2. How do you choose what to put on the bulletin board?

7.1. Are three-dimensional art materials such as clay or wood for gluing, ever used? If so, how often?

7.2. How do you choose what art activities to offer the children?

7.3. Do you offer art activities that children can work on over several days? Please describe some examples.

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
21. Music/movement						
1.1 No music/movement experiences for children. 1.2 Loud background music is on much of the day and interferes with ongoing activities (Ex. constant background music makes conversation in normal tones difficult; music raises noise level).		3.1 Some music materials accessible for children's use (Ex. simple instruments; music toys; tape player with tapes). * 3.2 Staff initiate at least one music activity daily (Ex. sing songs with children; soft music put on at naptime, play music for dancing). 3.3 Some movement/dance activity done at least weekly (Ex. marching or moving to music; acting out movements to songs or rhymes; children given scarves and encouraged to dance to music).		5.1 Many music materials accessible for children's use (Ex. music center with instruments, tape player, dance props; adaptations made for children with disabilities). * 5.2 Various types of music are used with the children (Ex. classical and popular music; music characteristic of different cultures; some songs sung in different languages). *		7.1 Music available as both a free choice and group activity daily. 7.2 Music activities that extend children's understanding of music are offered occasionally (Ex. guest invited to play instrument; children make musical instruments; staff set up activity to help children hear different tones). * 7.3 Creativity is encouraged with music activities (Ex. children asked to make up new words to songs; individual dance encouraged).

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

3.1. "Some" means more than one example of music materials are accessible for at least 1 hour per day in an 8-hour program, prorated appropriately for shorter programs (see "Explanation of Terms Used Throughout the Scale" on p. 7 for time required in shorter program). The materials need not be accessible at the same time.

5.1. To give credit for "many," there must be enough musical instruments for at least half of the children to use at once *plus* some music to listen to, such as a tape player with tapes or a computer program that has extensive musical content (e.g., complete songs, and/or passages of music). Do not give credit for very short musical sound patterns on the computer, as found in many computer games. Dance props must be accompanied by something that makes music such as recorded music, child-created music, or adult created music. For a tape player to be considered accessible in a group of older children (majority of children are 4 years and older), children should be able to use the tapes independently, but in younger groups help may be needed from the teacher.

5.1. (cont.) To give credit, the "many" music materials must be *accessible* for at least 1 hour daily in programs operating 8 hours or more a day. Less time is required for programs operating less than 8 hours a day, with the amount of time calculated proportionally, based on the ratio of 1 hour for programs of 8 hours or more (see "Explanation of Terms Used Throughout the Scale" on p. 7 for time required for shorter programs).

5.2. "Various types of music" means at least three different types. (See *All About the ECERS-R*, p. 216 for a list of types of music.)

7.2. For this indicator, "occasionally" means at least 3–4 times per year.

Questions

How do you handle music with the children?

3.2. How often do you do music activities with the children?

3.3. Do children ever do movement or dance activities? About how often is this done?

5.2. What kinds of music do you use with the children?

7.2. Do you ever do special music activities?

7.3. Are there any opportunities for children to do music activities in their own way?

Inadequate		Minimal		Good		Excellent
1	2	3	4	5	6	7

22. Blocks*

1.1 Few blocks are accessible for children's play. *

3.1 Enough blocks and accessories are accessible for at least two children to build independent structures at the same time. *

3.2 Some clear floor space used for block play.

3.3 Blocks and accessories accessible for daily use. *

5.1 Enough space, blocks, and accessories are accessible for three or more children to build at the same time. *

5.2 Blocks and accessories are organized according to type.

5.3 Special block area set aside out of traffic, with storage and suitable building surface (Ex. flat rug or other steady surface). *

5.4 Block area accessible for play for a substantial portion of the day. *

7.1 At least two types of blocks and a variety of accessories accessible daily (Ex. large and small; homemade and commercial).

7.2 Blocks and accessories are stored on open, labeled shelves (Ex. labeled with picture or outline of blocks). *

7.3 Some block play available outdoors.

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 22. Blocks are materials suitable for building sizable structures. Types of blocks are ***unit blocks*** (wooden or plastic, including shapes such as rectangles, squares, triangles, and cylinders); ***large hollow blocks*** (wooden, plastic, or cardboard); ***homemade blocks*** (materials such as food boxes and plastic containers). Note that interlocking blocks (whether large or small, indoors or outdoors) are not considered blocks for this item, but are given credit under Item 19. Fine motor. Usually the block area will be found in the classroom being observed. However, in a center where there is a block area that is outside the observed classroom (such as in a multi-purpose room or outdoors), that is accessible to the children on a regular basis, this should be considered when scoring this item.

1.1. "Few blocks" means there are no blocks for children to use or fewer blocks than are needed for two children to each build a sizable structure.

3.1. "Enough blocks" means there are sufficient blocks of a specific type that can be used together to make a sizable structure. Random collections of blocks with fewer than 10–20 of each type cannot be given credit because they are difficult to build with. To give credit, block "accessories" need to be within or near the block area so that it is obvious to the children that those materials are to be used with the blocks. Accessories enrich block play. Examples are toy people, animals, vehicles, and road signs. If accessories are not stored near or with the blocks, it must be observed that children actually use the materials as block accessories. If not observed, then credit cannot be given.

3.3. To give credit, blocks and accessories must be accessible for one hour in programs of 8 hours or more, prorated for programs operating fewer hours (see "Explanation of Terms Used Throughout the Scale" p. 7).

5.1. This indicator requires enough blocks for three children to build sizable structures independently. Observe how space for block play is used. No specific square footage is required. If you don't observe children using this area, then imagine how it would be used based on the size of the block area and type of blocks. Also consider age and ability of children.

5.3. The block area may include other types of small and interlocking blocks considered under Item 19. Fine motor, in addition to blocks, and still be given credit for being a special block area. Usually, credit cannot be given if other materials, such as other fine motor toys, art, pretend play materials, or carpentry tools are included with the blocks and interfere with block play in any way. However, if there are a few hardhats or small toy houses/buildings in the block area that do not take up space, or interfere with block play, credit can be given.

5.4. All block areas considered in calculating accessibility for a substantial part of the day must meet requirements of 5.1–5.3. Additional block areas may be outdoors or in another indoor space.

7.2. When labeling block shelves, use of printed words only without the graphic representation of blocks is not given credit.

Questions

3.3. How often is block play available? About how long are the blocks available for play?

7.3. Do the children play with blocks outdoors?

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
23. Sand/water*						
1.1 No provision for sand *or* water play, outdoors *or* indoors. *		3.1 Some provision for sand *or* water play accessible either outdoors *or* indoors. *		5.1 Provision for sand *and* water play (either outdoors *or* indoors).		7.1 Provision for sand *and* water play, *both* indoors *and* outdoors (weather permitting). *
1.2 No toys to use for sand *or* water play.		3.2 Some sand/water toys accessible.		5.2 Variety of toys accessible for play (Ex. containers, spoons, funnels, scoops, shovels, pots and pans, molds, toy people, animals, and trucks). *		7.2 Different activities done with sand and water (Ex. bubbles added to water, material in sand table changed, i.e. rice substituted for sand).
				5.3 Sand *or* water play available to children for at least 1 hour daily. *		

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 23. Materials that can easily be poured, such as rice, lentils, birdseed, and cornmeal may be substituted for sand. Sand or sand substitute must be available in sufficient quantity so children can dig in it, fill containers, and pour. Woodchips can be considered a substitute for sand if the material can be used in the same way as sand—that is, easily poured or dug in—and if children would not get splinters when using the material. Health or safety issues related to use of sand, water, or sand substitutes should be considered in Items 13 and 14.

1.1. "Provision" for sand and water requires action on the part of staff to provide appropriate materials for such play. Allowing children to play in puddles or dig in the dirt on the playground does not meet the requirements of this item.

3.1. Each room does not have to have its own sand and water table, but must be able to use a sand and water table regularly if it is shared with another room. To give credit, access does not need to be provided on a daily basis, but should be a regular part of the program, for example, at least for ½ hour twice a week.

5.2. For "variety," consider the *differences among the toys* that children can use. Variety is represented in toy characteristics, such as use, size, transparency level, shape, color, and these types of properties should be considered, but *use* of the toys is of prime importance in making a scoring decision. If only duplicates of one toy are accessible (e.g., many spoons), then the requirements for variety are not met. Variety in toys does not have to be provided all at one time—variety can be provided through regular rotation of toys.

5.2. (cont.) If the teacher reports that toys are rotated, ask to see the other toys, and find out how often they are rotated. If both sand and water are accessible, variety in toys must be provided for both, but the same toys can be used to meet the requirement.

Number of toys accessible for play is also considered when determining "variety." For example, when fewer children use the toys at one time, fewer toys are required for variety, as long as the toys can be used for different purposes. When more children must share, more toys of different types are needed.

5.3. For programs of 4 hours or less, the requirement of 1 hour is changed to ½ hour.

7.1. Separate provisions for indoor use and outdoor use for sand and water play must be provided to give credit for this indicator. Giving credit cannot depend on a teacher's moving one provision (e.g., a sand/water table) from indoors to outdoors every day. Because of the inconvenience for the teacher and the difficulty of changing the material in the one container to allow for the provision of *both* sand and water, dual use of one piece of equipment is unlikely to occur often.

Questions

3.1. Do you use sand or water with the children? How is this handled? About how often? Where is this available?

3.2. Are there any toys for children to use with sand or water play? Please describe them.

7.2. Do you change the activities children do with sand and water?

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7

24. Dramatic play*

1.1 No materials or equipment accessible for dress up or dramatic play.

3.1 Some dramatic play materials and furniture accessible, so children can act out family roles themselves (Ex. dress-up clothes, housekeeping props, dolls).

3.2 Materials are accessible for at least 1 hour daily. *

3.3 Separate storage for dramatic play materials.

5.1 Many dramatic play materials accessible, including dress-up clothes. *

5.2 Materials accessible for a substantial portion of the day. *

5.3 Props for at least two different themes accessible daily (Ex. housekeeping and work). *

5.4 Dramatic play area clearly defined, with space to play and organized storage. *

7.1 Materials rotated for a variety of themes (Ex. prop boxes for work, fantasy, and leisure themes).

7.2 Props provided to represent diversity (Ex. props representing various cultures; equipment used by people with disabilities). *

7.3 Props provided for active dramatic play outdoors. *

7.4 Pictures, stories, and trips used to enrich dramatic play.

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 24. Dramatic play is pretending or making believe. This type of play occurs when children act out roles themselves and when they manipulate figures such as small toy people in a dollhouse. Thus, activities used to teach children to follow specific sequences to properly complete household chores, such as table washing or silver polishing activities, are not counted to meet the requirements of this item. Children must be free to use the materials in their own way, as part of their own make-believe play, to get credit for this item.

Dramatic play is enhanced by props that encourage a variety of themes including ***housekeeping*** (e.g., dolls, child-sized furniture, dress-up, kitchen utensils); ***different kinds of work*** (e.g., office, construction, farm, store, fire-fighting, transportation); ***fantasy*** (e.g., animals, dinosaurs, storybook characters); and ***leisure*** (e.g., camping, sports).

3.2. To give credit, the materials must be *accessible* for at least 1 hour daily in programs operating 8 hours or more. Less time is required for programs operating less than 8 hours a day, with the amount of time calculated proportionally (see "Explanation of Terms Used Throughout the Scale" on p. 7 for time required for shorter programs).

5.1. "Many" dramatic play materials means that three or more children can use the materials at one time, without undue competition, and the materials are plentiful enough to encourage more complex play. Dress-up clothes are required as part of the "many" materials, but many examples of dress-up clothes are not required. Hats, purses, and shoes count as dress-up clothes. However, since children are developing gender-role identity during the preschool years, they require concrete examples of dress-ups that are associated with being men or women. Thus, two or three gender-specific examples of dress-up items are required (such as ties, hard hats, or shoes to represent men's clothes; purses or flowery hats for women's). More generic clothing, such as sweatshirts or running shoes, can also be provided, but these do not count as gender-specific dress-ups.

5.2. Consider materials both indoors and outdoors when calculating accessibility for a substantial portion of the day. Dress-up clothes, required in 5.1, are not required for outdoor dramatic play because they might be dangerous. However, props outside must be complete enough to permit meaningful pretend play. For example, an outdoor house must have furniture and other props, doll strollers must have dolls, kitchen furniture must have things to use in a kitchen, child-sized riding cars should have a gas pump or things to transport, cars in the sandbox should have a toy garage or people.

5.3. Consider small toys that children can pretend with, both indoors and outdoors, when scoring this indicator (e.g., small dolls, trucks, animals). (For further discussion about dramatic play themes see *All About the ECERS-R*, pp. 239–241.)

5.4. Organized storage means that materials of the same type (e.g., dolls, dress-ups, cooking props, food props) are generally stored together (e.g., in containers or in furniture). Storage does not have to be perfectly neat.

7.2. Consider dolls of different races, cultures, ages, and abilities as props for this indicator, as well as dress-up clothes, play foods, and cooking utensils representing different cultures.

7.3. The intent of this indicator is that children are provided a large enough space so that their dramatic play can be very active and noisy without disrupting other activities. A large indoor space such as a gymnasium or multi-purpose room may be substituted for the outdoor space. Structures (such as small houses, cars, or boats) and props for camping, cooking, work, transportation, or dress-up clothes may be available to the children.

Questions

7.1. Are there any other dramatic play props children can use? Please describe them.

7.3. Are props for dramatic play ever used outside or in a larger indoor space?

7.4. Is there anything you do to extend children's dramatic play?

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
25. Nature/science*						
1.1 No games, materials, or activities for nature/science accessible.		3.1 Some developmentally appropriate games, materials, or activities from two nature/science categories accessible. * 3.2 Materials accessible daily. * 3.3 Children encouraged to bring in natural things to share with others or add to collections (Ex. bring fall leaves in from playground; bring in pet).		5.1 Many developmentally appropriate games, materials, and activities from three categories accessible. * 5.2 Materials are accessible for a substantial portion of the day. * 5.3 Nature/science materials are well organized and in good condition (Ex. collections stored in separate containers, animals' cages clean). 5.4 Everyday events used as a basis for learning about nature/science (Ex. talking about the weather, observing insects or birds, discussing the change of seasons, blowing bubbles or flying kites on a windy day, watching snow melt and freeze). *		7.1 Nature/science activities requiring more input from staff are offered at least once every 2 weeks (Ex. cooking, simple experiments like measuring rainfall, field trips). 7.2 Books, pictures, and/or audio/visual materials used to add information and extend children's hands-on experiences.

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 25. Nature/science materials include the following categories: ***collections of natural objects*** (e.g., rocks, insects, seed pods), ***living things*** to care for and observe (e.g., house plants, gardens, pets), ***nature/science books, games,*** or ***toys*** (e.g., nature matching cards, nature sequence cards), and ***nature/science activities*** such as cooking and simple experiments (e.g., with magnets, magnifying glasses, sink-and-float). The term *collections of natural objects* requires that there are groups of similar objects that can be classified together. For example, look for a collection of seashells, fall seeds, leaves, pinecones. Sufficient numbers of the objects in each collection must be present to allow children to explore similarities and/or differences. The collections must be of natural things; plastic collections (e.g., insects, zoo animals) are counted as science/nature toys. Collections must be accessible to the children if they are to count towards meeting indicator 5.2, requiring a substantial portion of the day.

3.1. Open-ended nature/science materials that children can explore in their own way are usually developmentally appropriate for a wide range of ages and abilities. Materials that require skills beyond the ability of individual children or that do not challenge children sufficiently are not developmentally appropriate. For example, having children fill in the height of the red line on a thermometer to tell hot from cold may be appropriate for kindergartners but not for 2-year-olds.

3.2. Materials must be accessible for at least 1 hour in a program of 8 hours or longer, prorated for shorter programs (see "Explanation of Terms Used Throughout the Scale" on p. 7).

5.1. "Many" means *approximately* 3–5 examples of three categories of nature/science materials. However, this can vary as long as three of the four categories are represented. In some cases you might give credit for more than 3–5 of one type and less than 3–5 of another. This will also depend on the ages and number of children in the group. (For a description of each of the four categories of nature/science materials, see *All About the ECERS-R*, pp. 253–256.)

5.2. Consider materials both indoors and outdoors when calculating accessibility for a substantial portion of the day. Requirements for 5.1 must be met in order to give credit for 5.2. If outdoor time is included in calculating substantial portion of the day, materials from at least two categories must be accessible during outdoor time.

5.4. Must observe one example or see clear evidence (e.g., photos, drawings). (For examples of everyday events see *All About the ECERS-R*, pp. 259–260.)

Questions

3.3. Do children bring in nature or science things to share? How do you handle this?

7.1. Can you give me some examples of nature/science activities you do with the children in addition to what I've seen? About how often are these activities done?

7.2. Do you use nature/science books or AV materials with the children? Please describe.

Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7

26. Math/number*

1.1 No math/number materials accessible.

1.2 Math/number taught primarily through rote counting or worksheets. *

3.1 Some developmentally appropriate math/number materials accessible. *

3.2 Materials accessible daily. *

5.1 Many developmentally appropriate materials of various types accessible (Ex. materials for counting, measuring, learning shape and size). *

5.2 Materials are accessible for a substantial portion of the day.

5.3 Materials are well organized and in good condition (Ex. sorted by type, all pieces needed for games stored together). *

5.4 Daily activities used to promote math/number learning (Ex. setting table, counting while climbing steps, using timers to take turns). *

7.1 Math/number activities requiring more input from staff are offered at least every 2 weeks (Ex. making a chart to compare children's height, counting and recording number of birds at bird feeder). *

7.2 Materials are rotated to maintain interest (Ex. teddy bear counters replaced by dinosaur counters, different objects to weigh).

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 26. Different types of materials for math/number help children to experience ***counting, measuring, comparing quantities, recognizing shapes***, and to become familiar with ***written numbers***. Examples of math/number materials are: small objects to count, balance scales, rulers, number puzzles, magnetic numbers, number games such as dominoes or number lotto, and geometric shapes such as parquetry blocks.

1.2. "Taught primarily through rote counting or worksheets" means that such experiences make up the vast majority of children's math/number learning opportunities.

3.1. Developmentally appropriate math/number materials allow children to use concrete objects to experiment with quantity, size, and shape as they develop the concepts they need for the more abstract tasks required later in school, such as adding, subtracting, and completing paper and pencil math problems. Whether a material or activity is appropriate is based on the abilities and interests of the children. An occasional math worksheet offered to kindergartners who have many other concrete materials to manipulate may be developmentally appropriate for them, but not for 2- and 3-year-olds. Look around the room carefully to find math materials because they might not be organized into a center. "Some" means at least two different materials from at least three of the five types listed. (For a list of examples of the categories of math materials see *All About the ECERS-R*, pp. 267–269.)

3.2. To give credit, materials must be accessible for 1 hour in programs of 8 hours or more, prorated for programs operating fewer hours (see "Explanation of Terms Used Throughout the Scale," p. 7).

5.1. "Many" means *approximately* 3–5 of each type. However, this can vary, as long as all four types are represented. In some cases you might give credit for more than 3–5 of one type and less than 3–5 of another. This will also depend on the ages and number of children in the group. Credit should be given for materials obviously designed for math learning (e.g., puzzle with graduated sizes or different shapes, pegboard with number printed and holes to match, balance scale with things to weigh, nested cups that require size recognition). To give credit for more generic materials (blocks, beads for stringing, sets of bears with many pieces), it must be observed that the materials are used for math learning.

5.3. In order to give credit for "well organized and in good condition," about 75% of the materials that are accessible should meet this standard.

5.4. The intent of this indicator is for adults to link math and numbers to practical life events in the children's daily schedule. Therefore, look for use of numbers during meals or getting ready for meals (such as setting the table), transition times, using a timer to take turns, counting who is absent, etc. Do not give credit for play activities such as number games or computer games in determining the score for this indicator. "Number talk" or number experiences as part of practical life events should be observed *more than once* during the observation to give credit for this indicator. (For examples of number talk see *All About the ECERS-R*, pp. 272, 273.)

7.1. For a list of activities see *All About the ECERS-R*, pp. 273, 274.

Questions

7.1. Could you give me some examples of math activities you do with the children in addition to what I've seen?

7.2. Are there any other math materials used with the children? How is this handled?

Inadequate		Minimal		Good		Excellent
1	2	3	4	5	6	7

27. Use of TV, video, and/or computers*

1.1 Materials used are not developmentally appropriate (Ex. violent or sexually explicit content, frightening characters or stories, computer game too difficult). *

1.2 No alternative activity is allowed while TV/computer is being used (Ex. all children must watch video program at same time).

3.1 All materials used are nonviolent and culturally sensitive. *

3.2 Alternative activities accessible while TV/computer is being used.

3.3 Time children allowed to use TV/video or computer is limited (Ex. TV/videos limited to one hour daily in full-day program; computer turns limited to 20 minutes daily). *

5.1 Materials used are limited to those considered "good for children" (Ex. Sesame Street, educational video and computer games, but not most cartoons). *

5.2 Computer used as one of many free choice activities.
NA permitted.

5.3 Most of the materials encourage active involvement (Ex. children can dance, sing, or exercise to video; computer software encourages children to think and make decisions).

5.4 Staff are actively involved in use of TV, video, or computer (Ex. watch and discuss video with children; do activity suggested in educational TV program; help child learn to use computer program).

7.1 Some of the computer software encourages creativity (Ex. creative drawing or painting program, opportunities to solve problems in computer game).
NA permitted.

7.2 Materials used to support and extend classroom themes and activities (Ex. CD ROM or video on insects adds information on nature theme; video on farms prepares children for fieldtrip).

(See Notes for Clarification and Questions on next page)

*Notes for Clarification

Item 27. If neither TV, video, nor computer is used, score the item NA (Not Applicable). You must always ask about the use of TV and computers as they are often shared by several classrooms and may not be evident on the day of your visit. If TV/video are used very infrequently, less than once a month, and only for relatively short periods during which all children are interested, mark this item NA. However, even if TV is used infrequently, but for longer periods at a time, causing problems for the children, score the item as written.

1.1, 3.1. To judge whether materials are non-violent and culturally sensitive, consider the content of the materials. Unfortunately, many children's videos or TV programs contain violence and are therefore inappropriate even though they have been created for the children's market. This may include some natural wildlife productions and cartoons. The appropriateness of videos or games brought from children's homes also must be judged, if these materials are used with the group of children.

3.3. The intent of this indicator is to ensure that children participate in play in which they can actively be creative, imaginative, and have hands-on experiences with real materials rather than spending inordinate amounts of time watching TV or playing computer games. The amount of time given in the example is a general indication of a required time limitation and can vary. When deciding whether adequate limits are set on amount of time children can use the computer, consider not just how long each child's turn is, but also the number of turns each child is allowed to have, and if children spend time watching others at the computer. Computer time should be relatively short, compared to other activities.

5.1. Materials that are developed specifically to enhance children's learning and understanding are considered to be more educational and "good for children." (For examples see *All About the ECERS-R*, p. 282.)

Questions

Are TV, videos, or computers used with the children? How are they used?

1.1, 3.1, 5.1, 7.1. How do you choose the TV, video, or computer materials to use with the children? Are staff familiar with the content of materials before allowing use in the program? Are requirements for appropriateness considered before showing materials brought from home?

1.2, 3.2. Are other activities available to children while TV or videos are used?

3.3. How often are TV, video, or computers used with the children? For what length of time are these available?

5.3. Do any of the materials encourage active involvement by the children? Please give some examples.

7.2. Do you use TV, video, or the computer related to topics or themes in the classroom? Please explain.

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