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# Early Childhood Special Educators' Perceived Effectiveness and Use of Behavioral Strategies Used with Challenging Behavior

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Early Childhood Special Educators' Perceived

Effectiveness and Use of Behavioral Strategies Used
with Challenging Behavior

(TITLE)

BY

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# THESIS

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# DEDICATION

This thesis project is dedicated to my family and my future husband. The efforts that went into producing this project required many hours and frustrating moments. I thank my fiancé, Jared for his understanding and comfort during those tireless frustrating times. My dear brothers I thank for inspiring me in ways they may never understand. To my father, my heartfelt thanks goes out for his continual support and level headed guidance. I truly thank him for reminding that the Lord was always in control. My mother, who is no longer with me in body, is worthy of jubilant praise. She taught me to persevere in the face of a struggle. She taught me that the true worth of an accomplishment was found in the pride you found in yourself and the pride you inspired in others. I completed this thesis not in her absence, but in her forever presence that I carry in my heart. I *will* dance, mom.

ABSTRACT

The increased number of young children with disabilities exhibiting challenging behavior and the negative effects that these challenging behaviors can have on early childhood special educators and the children indicate the need for a careful examination of strategies currently implemented by early childhood special educators. This study surveyed the perceptions of 154 early childhood special educators in the State of Illinois specific to their perceived use and effectiveness of six strategies. The strategies included; positive reinforcement, communication training, time-out, adjustments to the classroom environment, response cost, and medication. Results suggested that early childhood special educators are currently implementing best practice. The strategy participants deemed to be most effective and used most often was positive reinforcement. Participants perceived their use of medication to be the lowest in comparison to other strategies and response cost to be the least effective. Additionally, a relationship seemed to exist between early childhood special educators perceived use and effectiveness of each of the six strategies. In the future, it may be beneficial to conduct this study on a national level to promote generalizability of the results. Examination of a wider variety of studies using observation as a method for obtaining data may also be beneficial.

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CHAPTER 1

STATEMENT OF THE PROBLEM

Researchers have documented that 10-15% of preschool-aged children

demonstrate challenging behaviors (Cornely & Bromet, 1986). Webster-Stratton (1997)

documented that the number of younger children identified as having conduct problems

and temperament problems has increased. Moreover, it has been noted that the

prevalence of challenging behavior is greater among individuals with disabilities than it is

among individuals who have been identified as developing typically. Several studies have

documented high rates of challenging behavior among persons with disabilities (Fidura,

Lindsey, & Walker, 1987; Oliver, Murphy, & Corbett, 1987).

Based on this documented increase in challenging behaviors in students with

disabilities, we can expect an increase in the number of young children in inclusive

settings who are exhibiting challenging behavior. Forness and his colleagues (1996)

suggest that at least 6% of the children who are served in Head Start, an inclusive

environment, demonstrate significant behavioral concerns (Forness, Kavale, MacMillan,

Asarnow, & Duncan, 1996). Unfortunately, children included in these environments are

served by educators who are likely to have received less than two college courses in

dealing with students with disabilities and the behaviors sometimes associated with those

disabilities. Therefore, challenging behaviors present problems in the classroom for the

educators of these young children.

Challenging behavior in classroom settings requires inordinate amounts of

educators' time and effort, and decreases the amount of time available for promoting

appropriate behavior (Rhode, Jenson, & Reavis, 1992). These factors produce frustration

for early childhood educators. This frustration is likely to be exacerbated by the fact that many educators do not have adequate training in the prevention and redemption of challenging behavior (Rhode, et. al., 1992; Watkins & Durant, 1992). Even those trained in educating students with disabilities experience difficulty in dealing with young children's challenging behaviors. Due to this lack of training, it is important to ascertain which strategies early childhood special educators use in their classrooms and how they perceive the effectiveness of those strategies in order to adjust training and staff development to meet the need of those educators.

Not only are challenging behaviors difficult for early childhood educators to address, there are also negative implications for the children who exhibit challenging behaviors. On some occasions the negative aspects associated with addressing the challenging behavior in the classroom results in a different placement for the child exhibiting the behavior (Rhode, Jenson, & Reavis,1992). Children who engage in challenging behavior may have fewer opportunities for positive interactions with others in their environment. This may lead to isolation and poor self-esteem for the children, avoidance of the child by peers, and negative interactions with adults and children (Chandler, Fowler, & Lubeck, 1992). These negative effects for young children further indicate the need for examination of early childhood educators' perceptions of effective strategies for dealing with these damaging behaviors.

There seems to be a research base indicating the effectiveness of certain strategies based upon clinical observation of young children with disabilities. Several studies, published in the past ten years, indicate the effectiveness of positive reinforcement, adjustments to the classroom environment, communication training, time-out, response

cost, and medication (Artesani & Mallar, 1998; Chandler, Dahlquist, & Repp, 1999;

Handen, 1999; Harding, Wacker, Berg, 1999; Lawry, Danko, & Strain, 2000; Marcus &

Vollmer, 1996; Musten, 1997; Olmi, 1997; Peck, et al, 1996; Piazza, et al, 1997;

Rangasamy, 1994; Reynolds & Kelly, 1997; Ruff, Higgns, & Glaeser, 1998; Sigafoos &

Meikle, 1996; Stollar & Dye-Collins; Yeager, 1995).

Communication training, positive reinforcement, and adjustments to the

classroom environment are strategies that are supported by the Division of Early

Childhood (DEC, 2000).   Positive reinforcement seems to be effective in reducing

behaviors such as noncompliance and aggression in numerous studies involving

observation of the child's behavior (Harding, Wacker, Berg, 1999; Marcus & Vollmer,

1996; Peck, et al, 1996; Piazza, et al., 1997).  Communication training as an effective

strategy for reducing challenging behavior exhibited by young children with disabilities

is supported by studies conducted on the observation of children's behavior (Artesani &

Mallar, 1998; Marcus & Vollmer, 1996; Sigafoos & Meikle, 1996). Finally, making

adjustments to the classroom environment is also supported by recent theory (Lawry,

Danko, Strain, 2000; Ruff, Higgins, & Glaeser, 1998).  Additionally, research focused on

observation of children exhibiting challenging behavior seems to indicate that

adjustments to the classroom environment are effective in reducing the challenging

behavior (Chandler, Dahlquist, & Repp, 1999; Rangasamy, 1994).

Time-out, response cost, and medication seem to be effective and are supported

by research of the past ten years.  However, these strategies are not supported by the

Division of Early Childhood due to their aversive and negative nature. Time-out seems to

reduce the targeted behaviors of young children with disabilities.  Researchers conducted

observations of the children before and after implementation of time-out (Yeager, 1995; Olmi, 1997). Additionally, the use of response-cost seems to be effective in reducing challenging behavior exhibited by young children (Reynolds & Kelly, 1997; Stollar & Dye-Collins, 1994). Stollar and Dye-Collins (1994) observed a decrease in noncompliance exhibited by young children with disabilities upon implementation of a response cost system. Reynolds and Kelly (1997) found that after implementation of response cost systems children exhibited low rates of aggression to extinction of aggression. Additionally, Reynolds and Kelly (1997) conducted the only study found that indicated teachers' perceptions of this strategy. According to Reynolds and Kelly (1997) early childhood educators felt that response cost was beneficial to managing behavior.

Finally, medication such as Ritalin appears to be effective in reducing challenging behavior according to study by Handen (1999). Handen (1999) found that after young children received Ritalin; the children received decreased scores on the Hostile-Aggressive subscale of the Preschool Behavior Questionnaire. However, Musten (1997) found that young children did not show increased compliance with the distribution of Ritalin.

The aforementioned studies seem to indicate that young children exhibit decreased occurrences of challenging behavior with the implementations of the six strategies. However, the current research seems to lack focus on teachers' perceptions of the behavior management strategies, as only one study was found that focused on this topic. Therefore, it is necessary to determine early childhood special educators'

perceptions of these strategies regarding their use and effectiveness. Thus, the following research questions will be addressed in this study:

<u>Research Questions</u>

1. To what extent do early childhood special educators perceive their use of behavioral strategies most frequently cited within the last ten years?

2. To what extent do early childhood special educators perceive behavioral strategies to be effective that were most frequently cited within the last ten years?

3. To what extent do the perceptions of early childhood special educators differ on the use and effectiveness of behavior strategies most frequently cited in the literature in the last ten years?

4. To what degree is there a relationship between early childhood educators' perception of effectiveness of strategies for dealing with challenging behavior and their perceived use of the strategies?

CHAPTER 2

REVIEW OF LITERATURE

In the last decade, there has been an abundance of research addressing effective strategies for dealing with challenging behavior. The Reauthorization of IDEA (1997) outlined a framework for developing behavioral programs for students with disabilities (Yell, 1998). This legislation dictated that educators implement functional behavioral assessments before implementing programs for students who are being served in special education, that exhibit challenging behaviors (Yell, 1998). From this functional behavioral assessment, strategies are to be implemented concerning the targeted challenging behavior.

Some of these strategies are supported by the Division of Early Childhood of the Council for Exceptional children in their position statement on intervention for challenging behavior (DEC, 2000). The division supports designing environments and activities that utilize positive effective behavior intervention addressing the function of the challenging behavior (DEC, 2000). These interventions include arrangement of the environment, positive reinforcement, and communication training.

As per the literature, there are other interventions such as response-cost, time-out, and medication found to be effective with young children who demonstrate challenging behaviors. Although the DEC position statement does not endorse these interventions, they seem to continue to be used with challenging behavior (Scotti, et. al., 1994). The purpose of this chapter is to identify and discuss the use and effectiveness of interventions designed to address the challenging behaviors (noncompliance and aggression) of young children with disabilities.

Definition of Challenging Behavior

Challenging behavior has been defined as "any action produced by a child that results in self-injury or injury to others, causes damage to the physical environment, interferes with learning and/or socially isolates the child" (Doss & Reichle, 1991, p. 215). This definition includes a wide range of behaviors exhibited by young children. Therefore, various levels of challenging behavior have been identified. According to Davis, Kilgo, and Gamel-McCormick (1998), there are three levels of challenging behavior. The first level consists of behaviors that are developmentally typical for the child's age. An example of this type of challenging behavior would be a tantrum exhibited by a child approximately four years of age. The second level of challenging behaviors may be considered to be within the norms of behavior exhibited by young children. Yet, these behaviors are inappropriate and require adult intervention. Examples of behavior at this level include hitting or other physical aggression and noncompliance (Davis, Kilgo, & Gamel-McCormick, 1998). Challenging behaviors that consist of self-abuse, extreme hyperactivity, and severe aggression are examples of behaviors classified in the third level. The third level is considered to consist of intensely challenging behaviors. Due to these various levels of challenging behavior, there may be different strategies used with behaviors at varying levels.

Assessing Function of Challenging Behavior

The reauthorization of IDEA (1997) outlined a framework for developing behavioral programs for students with disabilities. Educators must implement functional behavioral assessments before implementing programs for students who exhibit challenging behaviors and are in special education (Yell, 1998). Due to the fact that this

is the only strategy outlined in the legislation there is a dearth of research in this area for school aged students. However, only recently has the discussion regarding the application of the IDEA provisions for disciplinary measures to preschool aged children been addressed (Conroy & Davis, 1999). Therefore, the research in this area is not as extensive.

Functional assessment involves identification of the environmental factors that occur directly before the occurrence of the problem behavior. These are often referred to as environmental triggers (Artesani, 2001). The process of functional assessment also involves looking at the consequences of the behavior or identifying occurrences that happen after the behavior (Artesani, 2001). Careful evaluation of these consequences are important to the functional assessment process because they facilitate the identification of the function of the behavior (Artesani, 2001).

According to the Reauthorization of IDEA as cited in Yell (1998), identifying the function of a behavior is the first step to implementing a plan. Successful identification of the function of the challenging behavior exhibited by young children through the use of antecedent, behavior, consequence description form of functional behavior assessment has been documented (Conroy, Fox, & Crain, 1996; Cunningham & O'Neill, 2000). Conroy, Fox, and Crain (1996) used descriptive classroom observations or functional assessments of four male children's challenging behavior. The students' behaviors were classified as frequently interfering with the students' ability to learn. Examples of the behavior included noncompliance. The function of this challenging behavior was identified by implementation of a functional assessment (Conroy, Fox, & Crain, 1996). Cunnigham and O'Neill (2000) had similar results when determining the function of the

challenging behavior of three boys ranging in age from 3 to 5 years. Behaviors exhibited by these students with disabilities included noncompliance and aggression.

The use of functional assessment with challenging behavior also seems to result in effective interventions for challenging behavior exhibited by young children (Chandler, Dahlquist, & Repp, 1999; Repp, Felce, & Barton, 1988). In a study by Chandler, Dahlquist, and Repp (1999), functional assessment was conducted for 210 children ranging in age from 3 to 6 years. Child behaviors included noncompliance, destructive behavior, and aggression. Interventions were based on the findings of the functional assessment of the challenging behaviors. These interventions resulted in a 23% decrease in challenging behavior exhibited by young children in special education classroom (Chandler, Dahlquist, & Repp, 1999). Use of functional assessment to develop hypotheses about the function of the challenging behavior of three young children with mental retardation also resulted in the most effective treatment for the behavior (Repp, et al., 1999). Additionally, functional assessment was found to result in a successful intervention for a six year old child classified as having Down syndrome (Rangasamy, 1994). The child ran out of the classroom an average of 22 times a day before the functional assessment based intervention (Rangasamy, 1994). After implementation of the intervention, the behavior was eliminated completely (Rangasamy, 1994).

<p style="text-align:center">Most Frequently Cited Positive Behavioral Interventions</p>

Reinforcement

The position statement on challenging behavior by the Division of Early Childhood supports the use of positive interventions (DEC, 2000). It is believed that positive reinforcement teaches a child to act in a certain way by rewarding that child for

appropriate or positive behavior. The theory centers on a premise that if a person is rewarded for an action, that person is more likely to repeat that action (Ruff, Higgins, & Glaeser, 1998). It is suggested that the best use of this method is to reinforce those positive behaviors that are most useful and beneficial to the student (Ruff, Higgins, & Glaeser, 1998). Providing young children with positive reinforcement in the form of tangible items, attention, and preferred activities or toys has been shown to increase the reinforced behavior and decrease other behaviors such as noncompliance and aggression (Harding, Wacker, & Berg, 1999; Marcus & Vollmer, 1996; Peck, et al., 1996; Piazza et. al., 1997).

Using the choice of parent attention or specific toys as a reinforcer decreased noncompliance and aggression exhibited by two four-year-old children with developmental disabilities (Harding, Wacker, Berg, 1999). Not only did the challenging behavior exhibited by the children decrease to 0%, but the children's' appropriate social interactions also increased. Marcus and Vollmer (1996) had similar results when providing three young children ranging in age from 4 to 5 years old with positive reinforcement for appropriate requesting. The students' challenging behaviors, which included aggression, decreased to near-zeros rates.

Additionally, combinations of positive reinforcement and negative reinforcement have been linked to decrease in challenging behavior (Peck, et al., 1996; Piazza et al.., 1997). According to Peck (1996), use of negative reinforcement in the form of increasing duration of breaks from classroom demands resulted in the decrease of inappropriate behavior. Piazza et al. (1997) evaluated the effects of reinforcing compliance with combinations of positive reinforcement (tangible items, attention) and negative

reinforcement (break from demands). This combination resulted in increased compliance (Piazza, et al, 1997). Although reinforcement seems to be linked to decreases in challenging behavior in young children, some challenging behavior requires a replacement skill to reduce occurrence of that challenging behavior. Communication training is a method of teaching replacement skills that seems to reduce challenging behavior exhibited by young children.

Communication Training

Communication development has been linked to the display of challenging behavior in young children with developmental disabilities (Sigafoos, 2000). Over three years a group of preschool children were assessed to determine a correlation between challenging behavior and communication ability (Sigafoos, 2000). It seemed that children that exhibited difficulty related to communication ability demonstrated challenging behavior more often than children who demonstrated an ability to communicate (Sigafoos, 2000). Due to this link between communication ability and challenging behavior, researchers have focused on the effectiveness of functional communication training as a method for teaching young children alternative behaviors (Artesani & Mallar, 1998; Marcus & Vollmer, 1996; Siagafoos & Meikle, 1996).

Functional communication training is a method of replacing a challenging behavior with a socially appropriate communicative response (Sigafoos & Meikle, 1996). These communicative responses may be through speech, sign language, or communication boards (Sigafoos & Meikle, 1996). In this process it is important that the replacement communication skills be functionally equivalent to the challenging behavior (Neef, 1994). The use of this strategy seems to be effective when dealing with aggressive

behavior and noncompliance (Artesani & Mallar, 1998; Marcus & Vollmer, 1996; Siagafoos & Meikle, 1996).

Aggressive behaviors exhibited by two boys 20 to 24 months of age with developmental disabilities were decreased after children were taught to point to communicative responses in pictures or utter one word responses (Sigafoos & Meikle, 1996). Similar results occurred with a six-year-old child exhibiting challenging behaviors of noncompliance and aggression (Artesani & Mallar, 1998). The student was taught alternatives to the challenging behavior for communicating his needs or feelings. Challenging behavior was decreased and the student demonstrated increased participation in classroom activities (Artesani & Mallar, 1998).

The aforementioned study by Marcus and Vollmer (1996) on the use of functional assessment involved the use of communication training as a functionally based intervention. The young children with disabilities were given instruction on the use of appropriate requests that would replace the function of their challenging behavior. The combined interventions of functional communication training and positive reinforcement resulted in a decrease of challenging behavior (Marcus & Vollmer, 1996).

Adjustments to the Classroom Environment

Theorists have proposed that making adjustments to the classroom environment may help prevent challenging behavior exhibited by young children with disabilities (Lawry, Danko, & Strain, 2000; Ruff, Higgins, & Glaeser, 1998). Considerations regarding classroom environment include room arrangement, schedules, materials, and activities. It is suggested that centers be adequately spaced so that activity levels are not disruptive and to avoid unnecessary physical contact between children. Additionally, wide-open

spaces should be avoided to prevent running (Lawry, Danko, & Strain, 2000). Schedules may also play a role in preventing challenging behavior. According to Ruff, Higgins, and Glaeser (1998), the schedule should be consistent so that students are aware of the daily routine. Finally, theorists suggest providing new and appropriate activities and materials to increase appropriate behaviors in the early childhood special education classroom (Lawry, Danko, & Strain, 2000; Ruff, Higgins, & Glaeser, 1998).

Recent research indicates that adjustments to the environment after the demonstration of challenging behavior may also decrease challenging behaviors (Chandler, Dahliquist, & Repp, 1999; Rangasamy, 1994). In a study done by Rangasamy (1994), functional analysis of challenging behavior exhibited by a six-year-old in early childhood special education was conducted. The functional analysis indicated that environment adjustments may need to be implemented (Rangasamy, 1994). After closing the classroom door, moving the child closer to toys in the classroom, and making toys and favored activities available to the child, his target behavior was eliminated (Rangasamy, 1994). Therefore, it seems that environmental adjustments based upon functional analysis may decrease challenging behavior.

Further support of the correlation between environmental adjustments and challenging behavior may be evident in the research of Chandler and colleagues (1999). Functional assessment was conducted for challenging behavior exhibited by children in a preschool classroom for students with special needs. Classrooms then implemented strategies such as changes to the physical environment, consistent schedules, and modifying activities. The challenging behavior in the special education classroom decreased from 23% to 4% (Chandler, Dahliquist, & Repp, 1999). This may indicate that

general adjustments to the classroom environment prior to demonstration of challenging behavior are effective strategies.

Other Behavioral Interventions Most Frequently Cited

Response-Cost

Response cost is the removal or loss of a positive reinforcer held by the child (or one that would normally be available) if a target behavior is performed (Barnett, Bell, & Carey, 1999). The use of this strategy with young children with special needs has received some attention in the research (Reynolds & Kelley, 1997; Stollar & Dye Collins, 1994).

The use of response cost for preschool children exhibiting aggressive behavior seems to decrease this challenging behavior. Four preschoolers identified as demonstrating aggressive behavior were given smiley faces that were lost contingent upon aggressive behavior (Reynolds & Kelley, 1997). After implementation of response cost all students exhibited very low rates of aggression to extinction of aggression (Reynolds & Kelley, 1997).

Not only does response cost appear to be useful in decreasing aggression, it may also be helpful in decreasing noncompliance. Fourteen children who were identified by parents and teachers for behavioral concerns such as noncompliance were targeted for a response cost intervention (Stollar & Dye Collins, 1994). Students were not allowed to choose play in special areas if they exhibited the targeted behavior within ten-minute time periods. This system resulted in a decrease of targeted behavior (Stollar & Dye Collins, 1994).

Unlike other strategies mentioned in this literature review, there is research regarding teacher perceptions of response cost. Preschool teachers rated response cost as a favorable treatment alternative. The teachers indicated that the strategy was easily incorporated into their current teaching methods and was beneficial to managing behavior (Reynolds & Kelley, 1997). It is possible that early childhood special educators would have similar perceptions of response cost.

Time-Out

Time-out involves removing the child to a position away from any reinforcing conditions in response to misbehavior (Davis, Kilgo, & Gamel-McCormick, 1998). The use of this strategy has received attention. The use of time-out appears to be useful in reducing challenging behaviors (Olmi, 1997; Yeager & McLaughlin, 1995).

An increase of compliance was noted with a four year old child with a disability during circle time when time out was used by the teacher (Yeager, 1995). Additionally, time-out seemed to be effective in reducing targeted behaviors of a young child with a language disability and a moderate mental disability (Olmi, 1997). This study indicated a continued rate of high compliance upon follow-up visits (Olmi, 1997).

Although time-out seems to reduce target behaviors, there are negative components to this behavioral intervention. It has been proposed that because of young children's limited knowledge and experience, he or she may internalize the negative label associated with time out and react accordingly (Gartrell, 1995). Additionally, critics of time out note that this method fails to teach the child desirable behavior (Betz, 1994).

Medication

Ritalin or methylphenidate is a medication that is widely used as treatment for

young children with behavior problems (Minde, 1998). One recent study seems to

indicate that medication may reduce aggression. Handen (1999), reported decreased

scores on the Hostile-Aggressive subscale of the Preschool Behavior Questionnaire of

eleven children aged 4.0 to 5.11 years. Yet it is important to note that in Handen's (1999)

study, five children experienced significant social withdrawal. Two subjects experienced

increased crying, irritability, and severe social withdrawal. These two subjects withdrew

from the study due to the intensity of the side effects. Therefore, when weighing the side

effects associated with the medication it may not be an overall beneficial treatment.

Although, a connection may be made between medication and decreased aggression

similar conclusions do not seem applicable with noncompliance. Thirty-one children

ranging in age from 48 months to 70 months participated in a double blind placebo

crossover design study by Musten (1997). Musten's results seem to indicate that children

aged 48 months to 70 months show increased cognitive ability when receiving

methylphenidate but there was no evidence of medication effects on a child's

compliance. Musten's (1997) study also indicated that there was an increase in the

number of side effects experienced by the average child in the study.

CHAPTER 3

METHOD

The main focus of this study is to examine the perceptions of early childhood special education teachers regarding the most frequently cited behavioral strategies in the literature for addressing noncompliance and aggression exhibited by young children with special needs. Research questions that will be addressed using information gained from the questionnaire developed for this study include:

1. To what extent do early childhood special educators perceive their use of the behavioral strategies most frequently cited in the literature of the last ten years?

2. To what extent do early childhood special educators perceive behavioral strategies to be effective that were most frequently cited in the literature of the last ten years?

3. To what extent do the perceptions of early childhood special educators differ on the use and effectiveness of behavioral strategies most frequently cited in the last ten years?

4. What is the correlation between early childhood special educators' perception of effectiveness of strategies for dealing with challenging behavior and their perceived use of the strategies?

Participants

The sample surveyed was derived from 1,411 early childhood special educators from across the State of Illinois. Using systematic sampling procedures, 370 early childhood special educators were selected from the list obtained from the Illinois State Board of Education. The list contained educators currently teaching in early childhood special education settings across the State of Illinois. Northern, Southern, and Central

regions of the state were all represented. Once the researcher obtained the list of names, every third name was selected. These early childhood special educators were then sent a cover letter (See Appendix A) and a survey. Of the 370 early childhood special educators that received surveys, 164 surveys where returned. This resulted in a return rate of 44.3%. Ten of the surveys were unusable resulting in 154 useable surveys. Due to the fact that the study attempts to explore the views of one particular group in depth, this homogeneous sampling is deemed to be most effective for this purpose (Gall, Borg, Gall, 1996). In addition to being a homogenous sample the participants were also a volunteer sample. This type of sampling is likely to result in higher return rates (Gall, Borg, Gall, 196)

Of the 154 participants 100% were female with almost 96% being Caucasian. Eighty-three percent reported having a letter of approval for early childhood special education, a letter of approval is currently the only certification available for early childhood special education and it equates to full licensure. A Bachelor of Science was reported held by 86% of the participants. Demographics of the sample are included in Table 1.

Table 1: Teacher Frequency and Percentage of Responses to Demographic Items

| Demographic Items | f | % |
|---|---|---|
| Gender | | |
|   Female | 154 | 100 |
| Cultural Background | | |
|   Hispanic | 1 | .6 |
|   Caucasian | 147 | 95.5 |
|   African American | 5 | 3.3 |
|   Other | 1 | .6 |

(table continues)

Table 1 (continued)

| Demographic Items | f | % |
|---|---|---|
| Types of Certification | | |
|    Elementary Ed. (03) | 65 | 42.2 |
|    Early Childhood (04) | 72 | 46.8 |
|    Special Ed. (10) | 97 | 63 |
|    Letter of Approval ECSE | 128 | 83.1 |
|    Secondary Ed. (09) | 4 | 2.6 |
|    Administration (75) | 1 | .6 |
| Degree | | |
|    Bachelor of Arts | 21 | 13.6 |
|    Bachelor of Science | 133 | 86.4 |
|    Master of Arts | 22 | 14.3 |
|    Master of Science | 75 | 48.7 |

*Note n=154

Survey Development

In order to obtain information regarding early childhood special educators perceptions of strategies used with challenging behavior exhibited by young children in their classrooms, early childhood special educators were mailed a survey based on a descriptive research design. According to Isaac and Michael (1990) survey studies, a form of descriptive research, are useful when collecting information describing an existing phenomena and making comparisons and evaluations of that information. Therefore, a survey was used in gaining information for this study.

A 19-item survey (See Appendix B) was developed based on a review of literature from the past ten years. In Part I of the survey participants were requested to provide demographic information to nine specific questions. Questions requested

participants to report their gender, cultural background, certification, degrees obtained and the number of years of teaching in early childhood special education. Finally, educators were asked to specify the types of challenging behaviors exhibited by children in their classroom, the cultural background of students in their classrooms, and the number of children exhibiting noncompliance and/or aggression.

Strategies cited most frequently in the literature in the past ten years were those included in Part II of the survey. These strategies include environmental adjustments, positive reinforcement, communication training, response cost, time out, and medication. In the second part of the survey, six questions required respondents to indicate their use and perceived effectiveness of all of the strategies on two separate Likert like scales. Participants where asked to double rate each of the six most frequently cited interventions on two Likert like scales. This type of Likert like scale is useful when determining participants' attitudes, which is the purpose of this study (Gall, Borg, Gall, 1996). Definitions for each of the six strategies where provided on the survey instrument. However, in order to account for respondents' possible lack of familiarity with a given strategy a "no opinion" (1) option was offered. The other four categories of the Likert type scale for use included (5)use daily, (4) use weekly, (3) rarely use, or (2) don't use. The other four categories of the Likert type scale for effectiveness included (2) highly effective, (3)effective, (4)somewhat effective, or (5) not effective. The scale for effectiveness was inverted in order to reduce the chance of participants making matching responses for use and effectiveness for each strategy.

Part III of the survey included three questions presented in an open-ended format. One question requested educators to explain other interventions than those listed on the

survey they may perceive to be useful. The second question asked participants to explain why they prefer the strategies that they use. The final question asked early childhood special educators to indicate why the do not implement certain strategies.

Prior to use of the survey, three university faculty members were consulted. The three faculty members represented early childhood, early childhood special education, and special education (K-12). Suggestions from the three faculty-member team were incorporated into the final draft of the survey.

Procedures

Upon request the Illinois State Board supplied a list of early childhood special educators in the state of Illinois including their name, school address, and telephone number. Every third educator on this list was chosen to receive a cover letter and survey. A cover letter, survey, and postage paid envelope was mailed to 370 early childhood special educators indicating the purpose of the study and requesting their participation. Their return of the completed survey qualified them for a drawing with the prize of a fifty-dollar cashier's check. The one-page survey was included with the cover letter with a self-addressed stamped return envelope. The participants were given a 10 day period in which to return the surveys. However, surveys were accepted after that date. The return rate was 44.3% with 164 of 370 participants returning the survey. A second mailing was not done. The data was then prepared for analysis.

Data Analysis

In preparing surveys for data analysis, the six survey items from Part II and 10 demographic items from Part I of the survey were numerically coded. The six survey items from Part II of the survey were coded using the following scale (1) no opinion, (5)

highly effective, (4) effective, (3) somewhat effective, and (2) not effective. Although

this scale was different than that listed on the survey, recoding of this data for data

analysis was necessary to allow for sensible results due to the inversion of the scale on

the survey. Data was then entered into a SPSS data file to be analyzed. To insure accurate

date entry, each data line was checked and rechecked with the data reported on each of

the surveys. Additionally, a faculty member in the department of special education

entered sample data lines. Statistical analysis was conducted using SPSS for windows.

Descriptive Research Questions

Descriptive measures were used to answer the first and second research questions:

"To what extent do early childhood special educators perceive their use of behavioral

strategies most frequently cited interventions with in the last ten years?", and

"To what extent do early childhood special educators perceive behavioral strategies to be

effective that were most frequently cited within the last ten years?". Frequencies, and

percentages were calculated for the 10 demographic items. For the six items requiring

participants to respond as to use and perceived effectiveness, frequencies, percentages

and mean ratings were calculated for both perceived use and perceived effectiveness.

Inferential Research Questions

The research question "To what extent do the perceptions of early childhood

special educators differ on the use and effectiveness of behavioral strategies most

frequently cited in the last ten years?" was addressed using a paired t-test. The paired t-

test was used to analyze the means of each of the six strategies. This test was performed

to determine the differences between the means of the ratings for effectiveness and use

for each of the six strategies and the statistical significance of those differences. Difference in means were found to be statistically significant at p<.01.

Correlation measures were used to answer the research question "What is the correlation between early childhood educators' perception of effectiveness of strategies for dealing with challenging behavior and their perception of use of the strategies". The six survey items requiring a double rating by participants (use and effectiveness) were examined. Specifically, the items were paired according to responses for use and effectiveness ratings for each strategy and a correlation was calculated to determine a possible relationship between the use and effectiveness for each of the six strategies.

## Open-ended Questions

The three open-ended questions were analyzed to ascertain what methods, in addition to those on the survey, early childhood special educators' were using. Additionally, the questions were analyzed to ascertain why early childhood special educators prefer the strategies that they use and why they chose not to implement certain strategies. The validity of the use of this type of data seems to be evident (Johnson & LaMontagne, 1993). The researcher analyzed the answers to these three open ended questions. Responses were assigned a frequency count. Those responses that were similar were combined into one category. For example star charts, sticker charts, behavior checklists, the 1-2-3 Magic Program, and the 2nd Step Program were combined into a behavior management program category and assigned a frequency count. The summaries of this information will be presented in the following chapter.

CHAPTER 4

RESULTS

This chapter contains the results of the statistical analyses conducted on each of

the four research questions.  Specifically, results of a survey designed to examine the

perceptions of early childhood special educators regarding their use and the effectiveness

of most frequently cited behavioral interventions when managing challenging behavior

will be presented.  Finally, a summary of open-ended questions will be provided. Results

will be presented by research question after the discussion of demographic information.

Demographic Information

Early childhood special educators were asked to complete a 19-item survey

designed to ascertain their perceived use of behavioral strategies.   Part I of the survey

was used to obtain demographic information. The first set of demographic questions is

presented in Chapter 3 as part of the participant information in Table 1. In the second set

of demographic questions, participants responded to survey questions requesting

information regarding their undergraduate and post-graduate training in managing

challenging behavior, their use of functional assessment components, and their number of

years in early childhood special education. Nearly 52% (n=80) of the participants

reported that they did not receive training in their undergraduate program in managing

challenging behavior, while almost 91% (n=140) reported receiving training after

receiving their degree.  Of the 154 participants 94% (n=145) reported receiving their

degree prior to 1997; the legislative mandate requiring the use of functional assessment

was passed in 1997. Given over 80% reported using each of the functional assessment

components when assessing challenging behavior, it appears that training after degree completion has occurred.

Table 2: Teacher Frequency and Percentage of Responses to Training Demographic Item

|  | f | % |
| --- | --- | --- |
| Training in Undergraduate Program In Managing Challenging Behavior |  |  |
| Yes | 74 | 48.1 |
| No | 80 | 51.9 |
| Training in Managing Challenging Behavior After Receiving Degree |  |  |
| Yes | 140 | 90.9 |
| No | 14 | 9.1 |
| Components of Functional Assessment Used When Assessing Challenging Behavior |  |  |
| Identify Target Behavior | 152 | 98.7 |
| Identify Consequences | 145 | 94.2 |
| Analyze Antecedents | 129 | 83.8 |
| Examine Effectiveness of Past Interventions | 141 | 91.6 |
| When Degree was Received |  |  |
| 1997-Present | 9 | 5.8 |
| Prior to 1997 | 145 | 94.2 |
| Number of Years Employed in Early Childhood Special Education |  |  |
| 1-3 | 21 | 13.6 |
| 4-7 | 32 | 20.8 |
| 8-11 | 32 | 20.8 |
| 12-14 | 8 | 5.2 |
| 15+ | 61 | 39.6 |

*Note n=154

Two of the demographic questions on the survey requested elaboration on the part of the participants. Participants were asked to explain the preparation they received in their undergraduate programs. Seventy-four of the 154 (48%) participants responded that they did receive training in their undergraduate program. Fifty-six of the 74 (76%) participants that reported receiving training in their undergraduate program gave details regarding their undergraduate preparation. One participant identified case studies and one participant identified an applied behavior analysis class as components of their undergraduate training in managing challenging behavior. Two participants indicated training in each of the following categories: classroom management courses, assessment classes, play therapy classes, and early childhood behavior management as part of a class. Classes in behavior modification were indicated by 13 participants or 23.2% as part of their undergraduate training in managing challenging behavior. Eleven participants (19.5%) stated that they received training through general information presented in classes. Behavior management classes were identified by 17.8%, ten participants, as a component of their undergraduate preparation. Classes on behavior disorders were identified by nine (16%) of the participants as their training in managing challenging behavior. Eight participants or 12% indicated they received training in challenging behavior through practicum experience. Student teaching was identified by 7.6%, five participants, as part of their undergraduate training in challenging behavior.

Participants were also asked to explain training they might have received in managing challenging behavior after receiving their initial degree. One hundred forty participants responded that they did receive training in managing challenging behavior after receiving their degree. Of the 140 participants 133 (95%) gave written responses

for this question. Seventy-two of the participants (54%) indicated they received training through workshops. Twenty or 15% indicated training through inservices and five through conferences. Graduate coursework was identified by 19.5%, 26 participants, as post-degree training. Physical restraint training or CPI training was a response for 14 participants or 10.5%. Ten early childhood special educators (9.7%) indicated having received training through behavior consultants. Six participants or 4.5% responded that their post-degree training in managing challenging behavior was gained through their behavior disorder certification process. Training in autism was identified by 5.2%, seven participants. Five participants (3.7%) indicated that experience was their source of training after receiving their degree. Five participants identified reading books and viewing videos was indicated by two of the participants. The 1-2-3 Magic Program (Phelan, 1990) was the post degree training for four or 3% of the participants. Three participants (2.2%) identified functional analysis training. Three participants (2.2%) identified collaborating with peers and three identified ABA (Applied Behavior Analysis) training. Mini courses in behavior management were reported by two participants as their post-degree training in managing challenging behavior. Regional technical assistance, the 2nd Step Program, a course in teaching children to get along, a positive discipline class, and an assertive discipline class were each identified by one participant.

Early childhood special educators were asked to give responses on the survey related to the students in their classrooms. The survey format provided for respondents to give multiple responses to indicate the cultural background of students in the classroom, number of students in the classroom exhibiting challenging behavior, and the types of challenging behavior exhibited by students in the classroom. Of the 154 early childhood

special educators 151 (98%) indicated that students in their classrooms where of

Caucasian background and 104 (67%) indicated that students in their classrooms were of

African American background. Additionally, 95.5% (n=147) of the participants indicated

that students in their classroom exhibit noncompliance and 86.4% (n=133) indicated that

their students exhibit aggression. Student demographics are presented in Table 3.

Table 3: Teacher Frequency and Percentage of Responses to Student Demographic Items
Demographic Items

| | $\underline{f}$ | % |
|---|---|---|
| Cultural Background | | |
| American Indian | 4 | 2.6 |
| Hispanic | 87 | 56.5 |
| Asian | 45 | 29.2 |
| Caucasian | 151 | 98.1 |
| African American | 104 | 67.5 |
| Other | 28 | 18.2 |
| Types of Challenging Behavior Exhibited | | |
| Noncompliance | 147 | 95.5 |
| Aggression | 133 | 86.4 |
| Tantrums | 132 | 85.7 |
| Self-Abuse | 51 | 33.1 |
| Extreme Hyperactivity | 128 | 83.1 |
| Other | 28 | 18.2 |
| 1-3 | 53 | 34.4 |

Table 3: (continued)

| Demographic Items | f | % |
|---|---|---|
| 4-7 | 81 | 52.6 |
| 8-11 | 16 | 10.4 |
| 12-14 | 2 | 1.3 |
| 15+ | 2 | 1.3 |

* Note n=154

One question on the survey regarding student demographics requested respondents to indicate other challenging behaviors exhibited by students in their classroom. Of 154 participants 28 indicated other challenging behaviors. Autism was identified by 15 participants or 53.5% as another challenging behavior exhibited by students in their classroom. Four participants (14.2%) identified verbal abuse. Attention Deficit Disorder, nonexpression/withdrawal, impulsivity control, selective mutism, self-stimulation, obsessive compulsive activities, and screaming were each identified by two participants as other challenging behaviors. Hallucinations, excessive crying, poor interaction, attention seeking behavior, echolalia, non existence of self help skills, bi-polar disorder, and oppositional defiant disorder were each identified by one participant as other challenging behaviors exhibited by student in their classroom.

Early Childhood Special Educators

Perceived Use of Behavioral Strategies

Six items of the survey were used to determine early childhood special educators perceived effectiveness and perceived use of strategies. For each of these six items the response pattern was on a Likert type scale. Educators were asked to rate their use of

each strategy by indicating one of the following responses: 1(no opinion), 2 (do not use), 3 (rarely use), 4 (use weekly), or 5 (use daily). Table 4 reports the frequency and percent for early childhood special educators' responses regarding their use of given strategies.

According to the early childhood special educators' responses, the strategy used most frequently was positive reinforcement with 137 (89%) of the 154 respondents indicating they used this strategy daily. Only one participant indicated that they did not use positive reinforcement when managing challenging behavior. Communications training was used daily by 104 participants or 67.5%. None of the participants indicated that they did not use communication training. Every participant reported an opinion regarding the use of time out and 37% of the participants indicated they used this strategy weekly. Nearly 72% of the participants indicated that they made adjustments to the classroom environment either weekly or daily. However, seven (4.5%) participants indicated that they did not make adjustments to the classroom environment. In regard to response cost the highest percentage (35.7%) of respondents indicated that they rarely used response cost. Table 4 indicates that the strategy early childhood special educators used least was medication. Of the 154 respondents 44 (28.6%) indicated that they did not use medication.

Table 4: Use Frequency and Percent

| Survey Items | No Opinion (1) | Do Not Use (2) | Rarely Use (3) | Use Weekly (4) | Use Daily (5) |
|---|---|---|---|---|---|
| Positive Reinforcement | 1 | 1 | 3 | 12 | 137 |
| | .6% | .6% | 1.9% | 7.8% | 89.0% |
| Communication Training | 5 | 0 | 12 | 33 | 104 |
| | 3.2% | 0 | 7.8% | 21.4% | 67.5% |
| Time Out | 0 | 8 | 42 | 57 | 47 |
| | 0 | 5.2% | 27.3% | 37.0% | 30.5% |

Table 4: (continued)

| Survey Items | No Opinion (1) | Do Not Use (2) | Rarely Use (3) | Use Weekly (4) | Use Daily (5) |
|---|---|---|---|---|---|
| Adjustments to the Classroom Environment | 4 2.6% | 7 4.5% | 32 20.8% | 53 34.4 % | 58 37.7% |
| Response Cost | 7 4.5% | 22 14.3% | 55 35.7% | 39 25.3% | 31 20.1% |
| Medication | 27 17.5% | 44 28.6% | 27 17.5% | 1 .6% | 55 35.7% |

Note: n=154

Means and standard deviations for use are listed in Table 5. Mean ratings for early childhood special educators perceived use of the six strategies ranged from M=3.08 to M=4.838 on a 5.0 scale. The highest mean rating for use was positive reinforcement, whereas the lowest mean rating reported by early childhood special educators was medication. The standard deviations ranged from .542 to 1.56. The standard deviation for positive reinforcement was .542, while the standard deviation for medication was 1.56.

Table 5: Use Means and Standard Deviations

| Survey Item | Use | |
|---|---|---|
| | M | SD |
| Positive Reinforcement | 4.85 | .54 |
| Communication Training | 4.50 | .89 |
| Time Out | 3.93 | .89 |
| Adjustments to the Classroom Environment | 4.00 | 1.00 |

Table 5 continued

| Survey Item | Use | |
| --- | --- | --- |
| | M | SD |
| Response Cost | 3.42 | 1.10 |
| Medication | 3.08 | 1.56 |

Note: n=154

Early Childhood Special Educators'

Perceived Effectiveness of Behavioral Strategies

The frequency and percentage of responses given by early childhood special educators for the 6 items on perceived effectiveness of given strategies are presented in Table 6. Early childhood special educators were asked to rate their perceived effectiveness of the six strategies on a scale ranging from no opinion to highly effective.

According to the early childhood special educators responses, the strategy perceived to be most effective was positive reinforcement, 88 (57.1%) of the 154 respondents indicating that this strategy was highly effective. Four or 2.6% of the participants indicated that this strategy was not effective. Approximately 68% of the participants indicated that communication training was an effective to highly effective strategy. Time out was perceived effective by 45.5% of the participants. Three participants (1.9%) indicated that making adjustments to the classroom environment was not effective. Adjustments to the classroom environment was reported as effective by 37% of the participants and highly effective by 35.7% of the participants. The strategy early childhood special educators perceived to be least effective was response cost. Of the 154 respondents 20 (13.0%) indicated that they did not perceive response cost to be effective. Response cost was perceived to be effective by 31.2% of the participants. The

highest percentage of participants had no opinion regarding medication (29.2%). Of the

154 participants 32 (20.8%) reported that medication was highly effective, 36 (23.4%)

indicated that it was effective, and 34 (22.1%) reported that they perceived medication to

be somewhat effective.

Table 6: Effectiveness Frequency, Percent

| Survey Items | No Opinion | Highly Effective | Effective | Somewhat effective | Not Effective |
|---|---|---|---|---|---|
| Positive Reinforcement | 5 | 88 | 41 | 16 | 4 |
| | 3.2% | 57.1% | 26.6% | 10.4% | 2.6% |
| Communication Training | 7 | 51 | 54 | 39 | 3 |
| | 4.5% | 33.1% | 35.1% | 25.3% | 1.9% |
| Time Out | 4 | 27 | 70 | 42 | 11 |
| | 2.6% | 17.5% | 45.5% | 27.3% | 7.1% |
| Adjustments to the Classroom | 15 | 55 | 57 | 24 | 3 |
| Environment | 9.7% | 35.7% | 37.0% | 15.6% | 1.9% |
| Response Cost | 20 | 24 | 48 | 42 | 20 |
| | 13.0% | 15.6% | 31.2% | 27.3% | 13.0% |
| Medication | 45 | 32 | 36 | 34 | 7 |
| | 29.2% | 20.8% | 23.4% | 22.1% | 4.5% |

Note: n=154

Mean ratings and standard deviations for effectiveness are reported in Table 7.

Mean ratings for early childhood special educators perceived effectiveness of the six

strategies ranged from M=4.32 to M=3.02 on a 5.00 scale. The highest mean rating for

effectiveness was positive reinforcement, whereas the lowest mean rating reported by

early childhood special educators was medication. Standard deviations ranged from .99

to 1.51.

Table 7: Effectiveness Means and Standard Deviations

| Survey Item | Effectiveness | |
|---|---|---|
| | M | SD |
| Positive Reinforcement | 4.32 | .99 |
| Communication Training | 3.88 | 1.04 |
| Time Out | 3.67 | .94 |
| Adjustments to the Classroom Environment | 3.85 | 1.21 |
| Response Cost | 3.25 | 1.24 |
| Medication | 3.02 | 1.51 |

Note: n=154 a Effectiveness scale (1) no opinion, (2) not effective, (3) somewhat effective, (4) effective, (5) highly effective

Difference between Use and Effectiveness of

Behavioral Interventions

Paired t-tests were used to the answer the research question, "To what extent do the perceptions of early childhood special educator differ on the use and effectiveness of behavioral strategies most frequently cited in the last ten years?". Table 8, reflects that the paired t-test for use and effectiveness for the strategies of positive reinforcement, communication training, and time out were statistically significant ($p<.01$).

The paired t-tests ranged from $t=.556$ to $t=6.877$. The highest paired t-test calculation was $t=6.877$ for positive reinforcement. Medication was the strategy with the lowest paired t ($t=.556$).

Table 8: Paired T Test

| Survey Item | aUse | | bEffectiveness | | Paired T |
| --- | --- | --- | --- | --- | --- |
| | M | SD | M | SD | |
| Positive Reinforcement | 4.848 | .542 | 4.32 | .99 | 6.877* |
| Communication Training | 4.50 | .89 | 3.88 | 1.04 | 8.108* |
| Time Out | 3.93 | .89 | 3.67 | .94 | 3.741* |
| Adjustments to the Classroom Environment | 4.00 | 1.00 | 3.85 | 1.21 | 1.793 |
| Response Cost | 3.42 | 1.10 | 3.25 | 1.24 | 2.340 |
| Medication | 3.08 | 1.56 | 3.02 | 1.51 | .556 |

Note *=(p<.01) a Use scale (1) no opinion, (2) do not use, (3) rarely use, (4) use weekly, (5) use daily, b Effectiveness scale (1) no opinion, (2) not effective, (3) somewhat effective, (4) effective, (5) highly effective

Correlation Between Early Childhood Educators'

Perceptions of Effectiveness and Use of Behavioral Strategies

Paired sample correlation was used to the answer the research question, "What is the correlation between early childhood educators' perception of effectiveness for strategies for dealing with challenging behavior and their perception of use of the strategies?". Table 9 contains correlation for the participants perceived use and effectiveness pairs for each of the six behavior strategies. Correlations ranged from .692 to .36. The correlation between use and effectiveness of positive reinforcement was .36. Correlation of use and effectiveness for response cost was .692. Paired sample correlation for all of the strategies were statistically significant at p< .01.

Table 9: Correlation

| Survey Item | <sub>a</sub>Use | | <sub>b</sub>Effectiveness | | r |
|---|---|---|---|---|---|
| | M | SD | M | SD | |
| Positive Reinforcement | 4.848 | .542 | 4.32 | .99 | .36* |
| Communication Training | 4.50 | .89 | 3.88 | 1.04 | .533* |
| Time Out | 3.93 | .89 | 3.67 | .94 | .554* |
| Adjustments to the Classroom Environment | 4.00 | 1.00 | 3.85 | 1.21 | .579* |
| Response Cost | 3.42 | 1.10 | 3.25 | 1.24 | .692* |
| Medication | 3.08 | 1.56 | 3.02 | 1.51 | .556* |

Note *=(p<.01) <sub>a</sub> Use scale (1) no opinion, (2) do not use, (3) rarely use, (4) use weekly, (5) use daily, <sub>b</sub> Effectiveness scale (1) no opinion, (2) not effective, (3) somewhat effective, (4) effective, (5) highly effective

Responses to Open-ended Questions

To enhance the richness of the survey data, three open-ended questions were included in the survey. These questions addressed other interventions that the participants might use and the participants reasoning for their use or non-use of given strategies. Analyses of the three open –ended questions are organized by the question.

1. *"Are there other interventions not listed in the survey you perceive to be useful with young children who demonstrate challenging behavior? If so explain."*

The analysis of the 115 participants' responses (74.67%) to this open-ended question were done by the author of this paper. First of all, the largest number of participants 18 (15.6%) indicated they used visual strategies when dealing with challenging behavior exhibited by young children in their classrooms. Examples of these visual strategies include visual schedules or picture schedules, visual rules, and visual cues. Additionally, 8 (6.95%) participants indicated that providing structured schedules,

cueing for change, providing choices and developmentally appropriate activities were useful in managing behavior. Four participants (3.4%) deemed non-verbal hand over hand direction and physical prompts effective.

Also, twelve participants (10.4%) identified many preventative measures that focused on teaching appropriate behaviors as being useful when managing challenging behavior in their classrooms.  These strategies include social stories, social skills lessons, peer tutoring, direct instruction, and violence prevention training.  In addition to preventative strategies, 12 participants (10.4%) also indicated use of various behavior management programs such as star charts, sticker charts, stoplight (students changes color from red to green according to behavior), behavior checklists, positive discipline, $2^{nd}$ Step Program, 1-2-3 Magic Program (Phelan, 1990). Nine participants (7.8%) responded that they felt ignoring of certain behaviors and redirection were helpful interventions.  Two  participants (1.7%) also identified natural consequences.

Thirteen of the participants (11%) emphasized the importance of parental involvement.  This parental involvement took many different forms according to participant responses. Six participants (5.2%) indicated the options of sending home behavior charts or daily notebooks.  Three participants (2.6%) mentioned phone calls or conversations with the parents.  Four participants (3.4%) indicated that this parental involvement was important to maintain a consistency of behavioral programs.

Developing a positive rapport and components of developing a positive relationship with the young child with special needs was mentioned by four of the participants (3.4%) as an intervention. Participants felt that affirming a child's feelings, using direct eye contact, using I statements, being friendly, and forming a bond with the

students were important interventions when dealing with challenging behavior in early childhood special education classrooms. Additionally, six participants (5.2%) felt that once a student was exhibiting a challenging behavior it was useful to assist the student in calming down. Strategies identified for helping a student calm down included, taking a walk with the student, holding the student, rocking the student, using relaxation breathing with the students, providing a place for the child to calm down, and using a calming touch with the student.

Five participants (4.3%) identified the use of sensory experiences or sensory integration as useful when managing challenging behavior exhibited by young children. Examples of these include spinning, bouncing, tactile stimulation and swinging.

Few participants indicated that they used more aversive and physical interventions. Five participants (4.3%) indicated that physical restraint was useful in managing challenging behavior. One participant indicated the use of aversive mist (water) as an intervention.

In response to this open-ended question, participants indicated other strategies that they implemented than those listed on the survey. In summary, these strategies included visual strategies, preventative measures, behavior management programs, parental involvement, developing positive rapport, physical interventions, and sensory integration.

2. *"Why do you prefer the strategies that you use? (If there are reasons that you prefer a particular strategy, please specify)"*

Participants chose to answer this question in a variety of ways. Some participants answered by given specific reasons for using certain strategies, while other participants

indicated reasons for implementing strategies in general. Out of the 154 participants 112 (72.7%) responded in some way to this question.

Thirty-three participants (29.46%) indicated that they felt positive reinforcement was effective. Yet, they implemented this strategy for a variety of reasons. Some participants indicated they used positive reinforcement because it works for young children, it is appropriate for young children, it is easy to use, and paraprofessionals could be involved. Others indicated they preferred positive reinforcement because it increased positive behavior, shaped appropriate behavior, and increased the self- esteem of the students.

Time-out was identified as an effective intervention by five participants (4.46%). These participants supplied various reasons for their choice of this intervention. Some participants felt time out allowed the student time to cool off and took a short amount of time to be effective. Others felt this strategy was effective because it gave them time to be with the child one-on-one and removed the negative behavior from the rest of the group.

Four of the participants (3.5%) indicated specific reasons for using communication training. Some participants felt that communication training gave children a foundation on which to build relationships. Additionally, participants indicated they used communication training because they felt that many challenging behaviors resulted from the child's inability to express their wants, needs, or feelings.

Picture schedules, social stories, and 1-2-3 magic were also strategies that participants indicated using for specific reasons. Seven participants (6.25%) indicated that they preferred using picture schedules because they helped with transition, they

helped students prepare for new activities, they could be easily adapted, and that this visual strategy seemed to be helpful with students with lower levels of comprehension. Social stories were preferred by three participants (2.67%) due to the fact that they helped children make the correct choice, they taught children to deal with difficult situations, and helped children find different options. Four participants (3.57%) identified 1-2-3 Magic as a strategy they used because they perceived the program to be effective, allow for modification according to teacher and student needs, to the point, and the program requires the children to become responsible for their own behaviors.

Parent involvement was a strategy that six participants (5.35%) reported to be an intervention they use. Participants indicated that they used this strategy because it allowed for consistency, it seemed to be more effective, and it facilitated parents and teachers working together as a team.

Five participants (4.45%) used strategies because they followed research findings or were suggested by a collaborative team. Three participants (2.67%) also indicated they used strategies that were easily used by paraprofessionals and parents in order to promote consistency. One participant indicated the use of strategies because the principal and the school's board of education accepted them.

Twelve (10.7%) participants indicated that, in general, they implement strategies per the individual child. Eight participants (7.1%) indicated that different interventions seem to be effective with different children. Additionally, six participants (5.35%) noted that the strategies they used need to benefit the individual child and work for the child. Seven participants (6.25%) indicated they would use a combination of strategies. Finally,

nine participants (8%) indicated that they implemented strategies based upon personal preference.

3. *"Why do you choose not to implement certain strategies?"*

Of 154 participants 76 (49.3%) gave a response to this question. Responses to this question were given in conjunction with specific strategies and in general for all strategies not implemented. Specific responses were given for response cost, time-out, tangible reinforcers, and medications. Four participants (5.2%) indicated that they did not use tangible items because they were difficult to wean to other reinforcers, they offered short term effectiveness, the students became dependent on the reinforcers and their use was not fair to other student in the classroom. Additionally, six participants (7.89%) gave specific reasons for not using response cost. These reasons include the following; response cost is a negative system, it seems to escalate challenging behavior, it is not understood by young children, and early childhood educators do not like to take things away. Specific reasons for not implementing time-out were also reported. Nine participants (11.8%) indicated that they did not use time out because it is an aversive strategy, it was not allowed by a given school district, it was not effective, it did not allow children to problem solve, and time out is not understood by young children. Finally, participants gave specific reasons for not using medication. Four educators (5.26%) felt that giving medication to young children was wrong due to side effects and dangers of medicating children under the age of five. Additionally, two participants (2.6%) preferred not to use medication because they felt behavior could be managed through other strategies. Twelve participants (15.78%) indicated that they did not use medication because it is a strategy that is distributed by parents and physicians.

Participants cited many reasons for not implementing certain behavior management strategies in general. Nine (11.8%) referred to their comfort level with a strategy, lack of information on a strategy, and unawareness of other strategies. Eleven participants (14.47%) indicated that they did not use strategies because they were difficult to implement, time consuming, difficult to be consistent with, or hard to implement with multiple staff. Additionally, five participants (6.57%) indicated they did not use strategies that were adverse, did not respect the child, caused children to feel badly about themselves, were too difficult for the students to understand and caused distress for other students in the classroom. Fourteen participants (18.42%) also reported not implementing strategies that did not teach students appropriate behaviors.

CHAPTER 5

DISCUSSION

The purpose of this study was to examine early childhood special educators'
perceptions of their use and effectiveness of behavioral strategies used with young
children with special needs who exhibit challenging behaviors of noncompliance and
aggression in their classrooms. Using a survey design, the perceptions of early childhood
special educators in the state of Illinois were obtained.

The research questions examined were:

1.  To what extent do early childhood special educators perceive their use of behavioral
    strategies most frequently cited within the last ten years.

2.  To what extent do early childhood special educators perceive behavioral strategies to
    be effective that were most frequently cited within the last ten years?

3.  To what extent do the perceptions of early childhood special educators differ on the
    use and effectiveness of behavior strategies most frequently cited in the literature in
    the last ten years?

4.  To what degree is there a relationship between early childhood educators' perception
    of effectiveness of strategies for dealing with challenging behavior and their
    perceived use of the strategies?

Demographic Information

Of the 154 participants 133 (84%) had been practicing in early childhood special
education for four or more years at the time of the study. The largest number of
respondents, 61, indicated that they had been employed in early childhood special
education for fifteen or more years. This indicates that the group of participants surveyed

for this study did have experience in the field of early childhood special education. Additionally 140 of the participants (90.9%) received training in managing challenging behavior, 74 (48.1%) received training in their undergraduate degrees. Although only nine participants (5.8%) indicated receiving their degree after the Reauthorization of IDEA, which required the use of functional assessment when establishing interventions to use with challenging behavior, over 80% of participants indicated that they used each component of functional assessment. The components of functional assessment include identifying a target behavior, identify consequences to the behavior, analyzing antecedents, and examining the effectiveness of past interventions. Of the 154 participants 152 (98.7%) indicated that they identified target behaviors, 145 (94.2%) responded that they identified consequences, 129 (83.8%) indicated that they analyzed antecedents, and 141 (91.6%) participants examined the effectiveness of past interventions. Due to this high use of the components of functional assessment, it is likely that the majority of participants received training in functional assessment after receiving their degree. The participants' use of functional assessment might have some impact on the types of interventions they implement when dealing with challenging behavior.

Early Childhood Special Educators

Perceived Use of Strategies

Descriptive findings from the present study suggest that early childhood special educators perceive their use of positive reinforcement to be the highest of all strategies in the study. Of 154 respondents 137 (89%) indicated using this strategy daily this is supported by a mean rating of 4.848 on a 5-point scale. Thirty-three participants (29.46%), the highest percentage responding to the open-ended question requesting

reasons for use, indicated that they used positive reinforcement. This seems to support the quantitative data.

In the open-ended responses, participants indicated that they used positive reinforcement because it was appropriate for young children, and it was easy to use. Others indicated that they used positive reinforcement behavior because it increased the self-esteem of students. This may be supportive of an early study by Harding, Wacker, and Berg (1999), that indicated children receiving positive reinforcement increased appropriate social interactions. It is possible that the students higher self-esteem reported in the study could lead to more frequent social interactions.

Communication training was used, on a daily basis, by 137 participants of the 154 taking part in this study (67.5%). The mean rating of 4.50 (use daily to weekly) seems to indicate that this strategy was used less frequently than positive reinforcement, but more frequently than any of the other strategies. None of the participants indicated that they did not use this strategy. These results seem to indicate that early childhood special educators perceive their use of communication training to be fairly high. In response to the open-ended question requesting reasons for use, participants indicated that they used this strategy because many challenging behaviors resulted from a child's inability to express their wants, needs, or feelings. This particular perception seem to be supported by Sigafoos (2000). Over three years, Sigafoos analyzed the behavior of preschool children after which a correlation between challenging behavior and communication ability was determined.

All participants indicated that they had an opinion in regard to their use of time-out. Of the 154 participants, 47 (30.5%) indicated that they used this strategy daily and

57 (37%) indicated that they used this strategy weekly. Additionally, the mean rating for time out (3.93) indicates a lower use for time-out as compared to positive reinforcement, communication training and adjustments to the classroom environment. It is possible that a lower number of participants indicated that they used this strategy daily, because this strategy may not need to be used on a daily basis. Additionally, educators' responses to the open-ended question requesting reasoning for not using specific strategies seem to indicate the educators decreased use of this strategy. Nine participants responding to this question (11.8%) indicate that they did not use time out for various reasons. These reasons include the following, it is an aversive strategy, it was not allowed by a given school district, it was not effective, time-out does not allow children to problem solve, and time out is not understood by young children. These comments seem to be reflective of criticisms of time-out made by Gartrell (1995) and Betz (1994). Gartrell (1995) proposed that because of young children's limited knowledge and experience, he or she may internalize the negative label associated with time out and react accordingly. Additionally, Betz (1994) indicated that this method fails to teach the child a desirable behavior.

A large number of early childhood special educators indicated that they used adjustments to the classroom environment when dealing with challenging behavior (M=4.00). Of the 154 participants 53 (34.4%) indicated that they used adjustments to the classroom environment weekly and 58 (37.7%) indicate that they used this strategy daily. As with time- out, it is possible that more educators did not indicate using adjustments to the classroom environment daily because this strategy is not conducive to daily use. Due to the fact that adjustments to the classroom environment include things such as room

arrangement, schedules, materials, and activities, it is not likely that educators would make such changes on a daily basis. However, none of the participants indicated reasons for use in response to open-ended questions for this strategy.

Response cost was reported as being rarely used by the highest percentage of participants and this lower use is supported by the mean rating for this strategy (M=3.42). Fifty-five participants (35.7%) indicated that they rarely used this strategy. Participants' responses to the open-ended question requiring them to indicate why they did not use strategies and this may indicate why early childhood special educators rarely use this strategy. Six participants (7.89%) gave reasons for not using response cost. These reasons include the following; response cost is a negative system, it seems to escalate challenging behavior, it is not understood by young children, and early childhood special educators prefer not to take things away from children. Due to the fact that response cost is a negative system, it is not a strategy supported by the Division of Early Childhood (DEC, 2000). Therefore, the rare use of response cost may indicate best practice on the part of participants included in this study.

The largest percentage ( 28.6%) of participants reported not using medication as a strategy when dealing with challenging behavior and this strategy received the lowest mean rating (M=3.08). Yet, 35.7% (n=55) of participants indicated that they used medication daily. Participants reported low use of medication may be further explained by responses given to the open-ended questions requesting participants to explain why they chose not to implement certain strategies. Four educators (5.26%) felt that giving medication to young children was wrong due to side effects and dangers of medicating children under the age of five. This belief seems to be supported by the previous studies

of Musten(1997) and Handen (1999). Children in Handen's (1999) study on the effectiveness of Ritalin with young children experienced significant social withdrawal, increased crying, and irritability. Musten's (1997) study indicated similar side effects experienced by young children. Additionally, two participants (2.6%) preferred not to use mediation because they felt behavior could be managed through other strategies. Twelve participants (15.78%) indicated that they did not use medication because it is a strategy that is implemented by parents and physicians. This response may indicate that this was a poorly constructed survey question due to the fact that educators do not directly control the use of this particular strategy. Additionally, this response may indicate why 35.7% of the respondents indicated that they used this strategy daily. Although educators do not have control over this strategy, it is often used daily per the recommendation of physicians and through distribution by parents.

Although, the descriptive research results suggest that early childhood special educators perceive the strategies to be used to some degree, the most frequently used strategies include positive reinforcement, communication training, and adjustments to the classroom environment. The strategies of positive reinforcement, communication training, and adjustments to the classroom environment are positive strategies and are supported by the Division of Early Childhood (DEC, 2000). Therefore, these results seem to indicate that early childhood special educators participating in this study, are following best practices as outlined by the Division of Early Childhood in regard to managing challenging behavior.

Early Childhood Special Educators'

Perceived Effectiveness of Strategies

Frequency data was used to answer the question "to what extent do early

childhood special educators perceive behavioral strategies to be effective that were most

frequently cited within the last ten years". The data suggests that the strategy early

childhood special educators perceive to be most effective is also the strategy they

perceive to use most often. Eighty-eight participants, 57.1%, indicated that they

perceived positive reinforcement to be highly effective, and this high percentage is

supported by the high mean rating for this strategy (M=4.32). Although no previous

studies were found that focused on educators' perceptions of the effectiveness of positive

reinforcement, some studies did focus on the effectiveness of positive reinforcement.

These studies found that positive reinforcement was successful in reducing challenging

behavior exhibited by young children (Harding, Wacker, Berg, 1999; Marcus & Vollmer,

1996; Peck, et al.: Piazza et al., 1997). Participants' responses to open-ended questions

indicated that they felt that positive reinforcement was a successful strategy with young

children. Additionally, they indicated that they felt this strategy was effective because it

increased positive behavior and shaped appropriate behavior. This seems to support

Ruff, Higgins, and Glaeser's (1998) proposal that if a person is rewarded for an action,

that person is more likely to repeat that action.

Fifty-five (35.7%) of participants indicated that using adjustments to the

classroom environment was highly effective and fifty-seven (37%) indicated that it was

effective. The frequency data coupled with the mean rating of this strategy (M=3.85)

seem to indicated that educators' perceived adjustments to the classroom environment to

be less effective than positive reinforcement and communication training. Although there were no studies found requesting educators to rate the effectiveness of making adjustments to the classroom environment, studies were found that indicated that this strategy is effective when managing noncompliance and aggression exhibited by young children (Chandler, Dahliquist, Repp, 1999; Rangasamy, 1994). Observation of child behavior before and after implementation of adjustments to the classroom environment indicate that these environmental adjustments decrease challenging behavior (Chandler, Dahliquist, Repp, 1999; Rangasamy, 1994).

Communication training (M=3.88) and adjustments to the classroom environment (M=3.85) were perceived to be similar in regard to their effectiveness. Of 154 participants 52 (33.1%) felt that communication training was highly effective and 54 (35.1%) felt it was effective. These findings may expand on studies by Artesani and Mallar (1998), Marcus and Vollmer (1996), and Sigafoos and Meikle (1996). Sigafoos and Meikle (1996) found that aggressive behavior exhibited by two boys 24 to 20 months of age with developmental disabilities were decreased with the use of communication training. Marcus and Vollmer (1996) had similar results with a six-year-old child exhibiting the challenging behaviors of noncompliance and aggression. Marcus and Vollmer (1996) found that communication training seems to decrease the challenging behavior exhibited by young children when the training is implemented as the result of a functional assessment. Although none of these studies require educators to rate the effectiveness of this strategy, it seems that this study may indicate the educators agree that communication training is effective.

Time-out has a mean rating of 3.67. Although this indicates a lower level of perceived effectiveness than the DEC supported strategies of communication training, adjustments to the classroom environment, and positive reinforcement, it is close to the mean ratings for these strategies. Of the 154 participants 70 (45.5%) reported this strategy to be effective. In response to the open ended question requesting information on why educators use the strategies they use, time-out was identified as an effective intervention by 4.46% of respondents. Participants indicated that this strategy was effective because it allowed the student time to cool off, took a short amount of time to be effective, it allowed time for one-on-one interaction with the child, and it removed the negative behavior from the rest of the group. Studies by Yeager and McLaughlin (1995) and Olmi (1997) indicate that time-out may be effective in reducing targeted behaviors of young children including the behavior of non-compliance. These studies focused on behavioral observation of the children before and after implementation of time-out. Yet, it is possible that the participants' perceptions of time-out as effective strategy can add to these research findings.

Additionally, 11 of the participants (7.1%) indicated that time-out was not effective, the second highest percentage for the not effective rating. It is possible that this high rating for non-effectiveness, is related to the fact that some of the participants feel time-out is a negative strategy. This perception is in alignment with DEC recommended practice (DEC, 2000).

Response cost was indicated as the least effective strategy by the participants (M=3.25). Twenty of 154 participants (13%), responded that response cost was not an effective intervention. This finding seems to contradict recent studies found on the use of

response cost with young children exhibiting challenging behavior. Reynolds and Kelly (1997) found that the aggressive behavior demonstrated by four preschoolers was decreased after the implementation of response cost. Response cost also appeared to be effective in decreasing aggressive behavior exhibited by young children (Stollar & Dye-Collins, 1994). Additionally, unlike other strategies focused on in this study, research exists regarding educators' perceptions of the effectiveness of response cost. Reynolds and Kelly (1997) found that early childhood teachers felt response cost was beneficial to managing behavior. The findings of this study seem to contradict the findings of the study by Reynolds and Kelly (1997). This difference in findings may be due to educators' misunderstanding of response cost or different use of this strategy.

Participants' responses regarding the effectiveness of medication as a strategy for managing challenging behavior were widely varied which is indicated by standard deviation rating of 1.51, the highest standard deviation rating of all of the strategies. Forty-five of the participants (29.2%) indicated that they had no opinion regarding the effectiveness of medication. This may be due to the fact that educators do not have direct control of this strategy, the ability to prescribe this strategy, nor do they oversee its use. Due to the fact that physicians are those individuals responsible for this intervention, educators may not have perceived they had the ability to rate the effectiveness of this strategy. However, 102 respondents (66.2%) perceived that medication had some level of effectiveness. This high percentage of educators reporting some level of effectiveness may support Handen's (1999) study indicating a decreased score for preschool age children on the Hostile-Aggressive sub-scale of the Preschool Behavior Questionnaire with the use of Ritalin. However, the percentage of educators reporting effectiveness of

medication may be contradicted by Musten's (1997) findings. Using a double-blind placebo crossover design, Musten (1997) found no evidence of the effect of medication on preschool children's compliance. Therefore, it seems that the results are mixed regarding medication as a behavior management strategy with young children. This contradiction in findings may be due to participants' perception that a combination of strategies is most effective, which was supported by participants when indicating other strategies they may use.

<div align="center">Summary of Descriptive Statistics</div>

According to the descriptive statistics, strategies used most by early childhood special educators participating in this study include positive reinforcement (M=4.85), communication training (M=4.50) and adjustments to the classroom environment (M=4.00). Additionally, the participants also deemed these three strategies most effective. These strategies are the three strategies on the survey that are positive and therefore are supported by the Division of Early Childhood (DEC, 2000). It is possible that this best practice may be linked to the participants' reportedly high use of the components of functional assessment: identifying target behaviors (98.7%), identifying consequences (94.2%), analyzing antecedents (83.8%), and examining effectiveness of past interventions (91.6%).

<div align="center">Difference Between Use and Effectiveness of</div>

<div align="center">Behavioral Interventions</div>

Many studies were found that focus on the effectiveness of the six strategies cited in this study (Artesani & Malar, 1998; Betz, 1994; Barnett, Bell, & Carey, 1999; Chandler, Dahliquist, & Repp, 1999; Conroy, Fox, & Crain, 1996; Cunningham & O-

Neill, 2000; Doss & Reichle, 1991; Handen, 1999; Harding, Wacker, & Berg, 1999;

Lawry, Danko, & Strain, 2000; Marcus & Vollmer, 1996; Musten, 1997; Neef, 1994;

Olmi, 1997; Peck et al., 1996; Piazza et al., 1996; Rangasamy, 1994; Reynolds & Kelley,

1997; Ruff, Higgins, & Glaeser, 1998; Sigafoos, 2000; Sigafoos & Meikle, 1996; Stollar

& Dye Collins, 1994; Yeager & McLaughlin, 1995). However, no studies were found

that compared educators' perceived use and effectiveness of the strategies. Therefore, no

connections can be made between the inferential data from this study and other studies.

The paired t tests for adjustments to the classroom environment, response cost,

and medication were not statistically significant. This implies that the differences in the

mean ratings for these three strategies were random and therefore very little can be

concluded as to the differences in the ratings of perceived use and perceived

effectiveness. However, the paired t tests for positive reinforcement, communication

training, and time-out were all statically significant indicating that there may be some

reason for the differences in these means.

The means for positive reinforcement indicate that early childhood special

educators participating in this study felt that they used positive reinforcement daily

(M=4.85). Participants indicated that this strategy was effective (M=4.32). Although

participants felt this strategy was effective, they did not rate it as highly effective.

Educators reported using this strategy more than they felt it was effective. This may be

related to early childhood special educators perception that this strategy was easy to use.

In response to an open ended question participants indicate that they used certain

strategies because of their ease of implementation. It is possible, due to the fact that

positive reinforcement is a fairly easy strategy to implement, participants may use this strategy more often due to its ease of implementation.

Similar differences in the means for use and effectiveness of communication training were noted. Participants indicated that they used communication training daily to weekly (M=4.50). This strategy was deemed somewhat effective to effective by participants (M=3.88). This difference in mean rating may be due to the fact that communication training may involve more training for those who implement it and therefore may be more difficult for teachers to incorporate paraprofessionals when using this strategy. This additional time spent training staff may lead educators to perceive this strategy to be effective but not highly effective. It is important to note, however, that educators do deem this strategy to be effective.

Time-out also received statistically significant t test scores, which seem to indicate the differences in the use and effectiveness of this strategy. Participants indicated that they used this strategy weekly (M=3.93) and they felt this strategy was somewhat effective to effective (M-3.67). This difference in means may be due to the fact that the time-out used by the educators was not a deterrent to the child. The child may prefer not to be a part of a given activity. In this situation time-out may serve as a reinforcer of challenging behavior. This reinforcement of the challenging behavior may cause the behavior to increase as opposed to decrease, which may explain the participants rating of this strategy as somewhat effective to effective. Additionally, it is possible that this difference may be related to the possibility that time-out may be a strategy that may not be required every day.

The differences in the mean ratings for each of the strategies may be due to various possibilities. When responding to open ended questions some participants (n=7) indicated that they used a combination of strategies. Participants may feel using the strategies in combination results in highly effective interventions for challenging behavior. This may explain why early childhood special educators perceived the strategies, when used alone, to be effective but not highly effective.

Correlation Between Early Childhood Educators'

Perceptions of Effectiveness and Use of Behavior Strategies

All of the strategies used for this study received statistically significant correlations for effectiveness and use. This indicates a relationship between educators perceived use and effectiveness for the six strategies. The correlation for response cost was the highest correlation found in this study (r=.692). This indicates a moderately high correlation of use and effectiveness of the strategy response cost. Therefore, a statistically significant relationship exists between participants' use and perceived effectiveness of the response cost.

The strategies of communication training (r =.533), time-out (r =.554), adjustments to the classroom environment (r =.579), and medication (r =.556) all received moderate correlations. This indicates a moderate relationship between participants' perceived use and effectiveness of these strategies. The participants' perceived use and effectiveness of medication as a strategy indicated a moderate relationship between these variables (r = .556). It is possible that the moderate relationship of medication existed due to educators not perceiving that they have a great impact on the use of this strategy. Positive reinforcement was the strategy that received

the lowest correlation (r = .36). This slight relationship may be explained by participants' responses to open-ended questions. Participants indicated that they use positive reinforcement to increase a child's self-esteem. This may indicate that participants may use positive reinforcement for other purposes than managing challenging behavior. Given that early childhood special educators' perceptions of use and effectiveness for all six strategies received statistically significant correlations, the results may indicate that early childhood special educators use strategies that they deem effective.

<div align="center">Limitations of the Study</div>

A limitation of the study exists in respect to the generalizabilty of the findings. Caution should be taken when attempting to generalize the findings of this study to early childhood special educators in the state of Illinois due to the small sample size. Of the 370 participants, 44.3% returned the surveys. This return rate limits the generalizability of the results of the surveys. Due to time constraints, a second mailing was not possible. However, a second mailing was likely to have resulted in a higher return rate. Therefore, the lack of a second mailing was also a limitation of the study, which resulted in problems regarding generalizability.

An additional concern relates to the use of surveys. Survey methodology or self-report methods, may not result in responses representative of the participants' actual perceptions or practice. In this case, it is possible that participants responded indicating higher use and effectiveness of strategies that are positive, because these strategies indicate best practice on the part of the participants.

Recommendations and Implications for Future Research

The findings from the current study seem to indicate that there is a relationship between the strategies early childhood special educators deem effective and the strategies that they use when managing challenging behavior. However, more research needs to be conducted to support the findings of this study. It may be beneficial to conduct this study on a national level so that the results can be generalized to early childhood special educators in the United States. Additionally, it is possible that the results of this study may be built upon with the use of observation as a method for obtaining data. Observing the practice of early childhood special educators in regard to managing challenging behavior may build on the research findings of this study.

In the future, researchers may want to examine the relationship of perceived effectiveness and use of a wider variety of strategies than those presented in this study. Due to the fact that 115 respondents (74.67%) indicated that they used strategies other than those listed on the survey, it may be helpful for researcher to explore early childhood special educators' perceptions of the effectiveness and use of some of these other strategies.

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# APPENDIX A

## Letter to Participants

April 16, 2001

Dear Participant,

I am currently working on my graduate degree in special education from Eastern Illinois University. The focus of my thesis is early childhood special educators' perceptions of strategies used with young children exhibiting challenging behavior in their classrooms. I feel this research will further validate the methods early childhood special educators are currently implementing for dealing with challenging behaviors in their classrooms.
In order to collect my research data, I need your assistance in completing the enclosed survey.  The survey will take approximately 5 minutes for you to complete. Responses will be reported as a group, not by individual, as to insure anonymity.  All of the early childhood special educators who complete and return the survey will have a chance at winning $50. Upon request, results of the study will be available. I would greatly appreciate the return of the survey, in the enclosed envelope, by April 26, 2001.  If you have any questions or concerns related to the study, please feel free to contact me at (217)-581-3230 or via e-mail at cunll@eiu.edu.
Sincerely,


Naomi J. Lukomski
Graduate Student
Eastern Illinois University



Rebecca J. Cook
Thesis Advisor, Special Education Department
Eastern Illinois University

# APPENDIX B

Survey Instrument

The survey below has been developed to ascertain your perceptions relative to strategies used with young children with disabilities who exhibit challenging behavior, specifically noncompliance and aggression. The survey has been organized into three parts and should not take you more than 5 minutes to complete. Your responses to the survey will be reported as a group not by individual as to insure anonymity.

**Part I-Teacher/Classroom Demographics**

> Indicate your answers to the following questions by recording the appropriate responses in the blanks provided.

1.  Gender: Female_____ Male_____

2.  Your Cultural Background
    ___ American Indian        ___ Asian        ___ African American
    ___ Hispanic               ___ Caucasian    ___ Other

3.  What types of certification do you hold?_____

4.  What type of degree(s) do you hold (i.e. Bachelors of Science in Education with a Major in Special Education)?_____

5.  When did you receive your degree?_____

6.  Number of years/months employed in early childhood special education:_____

7.  Did you receive training in your undergraduate degree program in managing challenging behavior? If yes, explain. _____
    _____

8.  Since receiving your degree have you received training in managing challenging behavior? If yes, explain._____
    _____

9.  Cultural background of the students in your classroom (Check all that apply)
    ___ American Indian        ___ Asian        ___ African American
    ___ Hispanic               ___ Caucasian    ___ Other

10. What types of challenging behavior do children in your classroom exhibit? (Check all that apply)
    ____ Noncompliance        ___ Tantrums       ___ Extreme Hyperactivity
    ____ Aggression           ___ Self-abuse
    ____ Other (Please, Explain)_____
    _____

11. How many students in your classroom exhibit the challenging behaviors noncompliance and/or aggression?_____

12. What components of functional assessment do you use when assessing challenging behavior exhibited by young children in your classroom? (Mark all that apply)
    ___ Identify target behavior       ___ Analyze antecedents
    ___ Identify consequences          ___ Examine effectiveness of past interventions

Part II Perceptions of Strategies used with Challenging Behavior

Using the scale in the left-hand column, rate each item by circling the number that represents your perceptions of your **use** of the item. Using the scale in the right-hand column, rate each item by circling the number that represents your perceptions of the **effectiveness** of the item. Use the following scales:

| **Use** | **Effectiveness** |
|---|---|
| 1=No opinion (**NO**) | 1=No Opinion (**NO**) |
| 2=Do Not Use (**DU**) | 2=Highly Effective (**HE**) |
| 3=Rarely Use (**RU**) | 3=Effective (**E**) |
| 4=Use Weekly (**UW**) | 4=Somewhat Effective (**SE**) |
| 5=Use Daily (**UD**) | 5=Not Effective (**NE**) |

Use                  Effectiveness

NO DU RU UW UD              NO HE E SE NE

1   2   3   4   5    **Positive Reinforcement**-providing children with tangible items, attention, or preferred activities in response to an appropriate behavior    1   2   3   4   5

1   2   3   4   5    **Communication training**-replacing challenging behavior with a socially appropriate communicative response    1   2   3   4   5

1   2   3   4   5    **Time out**-removing the children to a location or position away from any reinforcing conditions in response to an inappropriate behavior    1   2   3   4   5

1   2   3   4   5    **Adjustments to the classroom environment**-changes room arrangement, schedules, materials, and activities.    1   2   3   4   5

1   2   3   4   5    **Response Cost**-removal or loss of a positive reinfrocer held by the child (or one that would normally be available) in response to an inappropriate behavior    1   2   3   4   5

1   2   3   4   5    **Medication**-Ritalin or other psychotropic medications    1   2   3   4   5

Part III Additional Comments

Indicate your responses to the following questions of the blanks provided. Please be specific.

2. Are there other interventions not listed in the survey you perceive to be useful with young children who demonstrate challenging behavior? If so explain.

_____

_____

_____

2. Why do you prefer the strategies that you use? (If there are reasons that you prefer a particular strategy, please specify._____

_____

3. Why do you choose not to implement certain strategies?_____

_____