

The Effect of Home Visits on the Parents of Preschool Children with Autism and Special Needs

By

Julie Adams

Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Education

December 2013

Graduate Programs in Education

Goucher College

Table of Contents

List of Tables	i
Abstract	ii
I. Introduction	
Overview	1
Statement of Problem	2
Hypothesis	2
Operational Definitions	2
II. Review of the Literature	
Overview of Autism	4
Impact on Families	4
Family Coping	5
Supporting Families	6
Summary	7
III. Methods	
Design	11
Participants	11
Instrument	13
Procedure	14
IV. Results	
Results	17
V. Discussion	
Implications of the Results	19
Threats to Validity	19
Connections to Previous Studies/ Existing Literature	20
Implications for Future Research	23
Conclusion/ Summary	25
References	27

List of Tables

1. Descriptive Statistics and Results of t-Test Comparing Pre and Post Knowledge Test Scores	18
2. Descriptive Statistics and Results of t-Test Comparing Pre and Post Implementation Test Scores	18

Abstract

The purpose of this study was determine whether or not the implementation of home visits for the parents of preschool children with autism and special needs has increased their understanding of the components of the program and their use at home. The Autism Knowledge and Intervention Scale was used to determine the effective of the home visits. The six parents were from a convenience sample. The results of the non- independent sample t-test revealed that there was no significant difference in the parents' knowledge of the components of their child's preschool program as measured on the pretest (Mean=72.33, SD=18.07) and posttest (Mean=84.66, SD=6.56) [$t(5) = -1.63, p > .05$]. In addition, there was also no statistically significant difference in the implementation scores between the pretest (Mean= 31.33, SD= 3.72) and the posttest (Mean= 32.66, SD= 2.58) test [$t(5) = -1.58, p > .05$]. Practical and theoretical implications, threats to validity, and recommendations for future research are discussed.

CHAPTER I

INTRODUCTION

Overview

With the growing diagnosis of autism spectrum disorder, more research needs to be done on how teachers can support parents in their understanding of the components of autism programs and how they can implement strategies to improve behavior and promote cognitive, social, and emotional development at home. Studies have shown that parents of a child with autism report that they have a difficult time with their child's behavior at home and they don't know how to teach them academically (Altieri & Kluge, 2009).

Studies of early intervention services have shown that they are necessary since children are being diagnosed at a young age (Solomon & Chung, 2012). County wide, the Infants and Toddlers Program services the child at home or in the community. Unfortunately, there is not much follow through with some parents because they don't understand the techniques and interventions that are used. As reported in several studies, other training programs that are in place for parents often require them to travel, adding inconvenience and stress to their life (Suppo & Floyd, 2012).

A school-based program that provides preschool children with services such as speech, occupational therapy, and academic skills has proven to be successful (McConkey & Cassidy, 2010). However, there also needs to be implementation of the same strategies for the child at home. This can make a difference for the child as well as the parent.

Statement of the Problem

The purpose of the study was to determine if the implementation of home visits for the parents of preschool children with autism and special needs would increase their understanding of the components of the program and their use of the program strategies at home.

Hypothesis

The null hypothesis is that there will be no statistical difference in the parents' knowledge of the intervention components used in the school-based autism preschool program and their use of these strategies at home, as measured by scores on the Autism Knowledge and Intervention Scale, prior to the home visitation program and after the home visitation program.

Operational Definitions

The independent variable in this study is whether or not the parent had received the home visits. *Home visits* involved the teacher going to the students' homes and meeting with the parents to explain the intervention components of the school-based autism program and teaching the parents how they can use some of the strategies at home.

The *school-based autism program* is a specially designed preschool for children who have significant language delays and show characteristics of autism spectrum disorder. The methodologies used in the program are based on teaching children with autism. There were handouts given at each visit that the parents could keep.

The dependent variable was the parents' knowledge of the components and the use of the strategies at home as measured by scores on the Autism Knowledge and Intervention Scale.

Parents were assessed on their knowledge of the components of the *school-based autism program* including discrete trial, pivotal response training, schedules, music, and joint attention. They were assessed on their implementation of strategies at home including using a picture schedule, doing tasks (academic), incorporating language into daily activities, rewarding the child, using music and movement, playing with the child, and making eye contact.

The *Autism Knowledge and Intervention Scale* is a five-point Likert scale on which a parent endorses his or her knowledge about an intervention component of the school-based autism program as very well (4), well (3), moderately well (2), somewhat (1), or not at all (0) and his or her use of the program at home as everyday (4), 5 times per week (3), 3-4 times per week (2), 1-2 times per week (1), or never (0).

CHAPTER II

REVIEW OF THE LITERATURE

For many people, life involves a job, family, friends, communication and the connections between them. But, for 1 in every 91 children diagnosed with autism, life may be very different for them and their families (Solomon & Chung, 2012). It is the impact on the families of children with autism that is just beginning to be researched and studied. Providing support for these families as well as for the child is critical, but it is not being done. This literature review details the current research and studies about how to best support the families and the concerns that they have living with a child with autism.

Section one provides an overview of autism, including identifiable characteristics of people with autism spectrum disorder. Section two addresses the impact of autism on families. Section three takes up the issue of how families do and can cope with autism and its effects. Finally, section three provides information on the support that is necessary and available to families affected by autism.

Overview of Autism

ASD is the medical diagnosis term for what is referred to as autism. The acronym stands for autism spectrum disorder, and, as the name suggests, it occurs on a spectrum from ‘full blown’ autism, to pervasive developmental disorder not otherwise specified (PDD-NOS), to the mildest form of autism, Asperger’s Syndrome (Solomon & Chung, 2012). “In the recently published Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition, autism spectrum disorder is no longer differentiated into subtypes” (American Psychiatric Association, 2013)

The diagnostic criterion for autism is based on certain behavior patterns that are exhibited including delayed or atypical social interaction, communication (verbal and or nonverbal), and rigid, ritualistic behaviors that are observed over a prolonged period of time (Dillenburger, Keenan, Doherty, Byrne, & Gallagher, 2010). Other indications of autism include speech, educational, self-care, and adaptive functioning skills. According to the CDC, 40% of children diagnosed with autism do not speak, while others perseverate on topics or items of interests. In addition, a number of children with autism have reduced intellectual functioning, deficits with self-care skills, and more commonly, associated difficulties with maintaining a regular sleep schedule (Suppo & Floyd, 2012).

According to Hall and Graff (2011), “Adaptive behaviors are those daily living skills that assist an individual in becoming an independent member of society” (p. 6). When adaptive behaviors develop poorly, children with autism may refuse to accept changes in their food, clothing, or schedules; fixate on everyday skills such as repetitively brushing their teeth or washing their hands; engage in repetitive behaviors such as assembling toys or other items; make peculiar sounds or wave their arms; or respond inappropriately to noise, light, or human contact (Hall & Graff, 2011). Causes of autism are thought to include genetic as well as environmental factors, although the exact cause is not yet established (Dillenburger et al., 2010).

Impact on Families

Autism affects the entire family, including the parents and other siblings. This impact may include community and recreational restrictions because of the child’s behavioral challenges. For example, families may find it a difficult or impossible undertaking to go to a restaurant for a family dinner (Suppo & Floyd, 2012). Siblings of children with autism also face

challenges. Therapy, specialized social groups, and schools for the child with autism make it challenging for the siblings to enjoy typical activities such as baseball, soccer, and dance.

“Typically developing siblings’ activities often have to take a backseat to the critical intervention therapies a child with autism needs in order to successfully function in society” (Suppo & Floyd, 2012, p. 23). “With the parental demands of raising a child with autism, it is not surprising that siblings of children with autism often have feelings of neglect and resentment, and they have more behavior and emotional difficulties than their peers who do not have a sibling with autism” (Suppo & Floyd, 2012, p. 23).

Family Coping Strategies

In addition to the assistance provided by professionals for the child, it is important that parents and families be provided with coping strategies. Parents are on the front lines for helping their child, but they must be able to hold the family together and adapt to things that may happen with their child. According to Altieri and Kluge (2009),

The family system is an important part of the environment and plays a central role in the developmental outcome of children. Studies of families with a child with autism have traditionally examined this interaction by focusing on the effect parents have on the child, not the child’s effect on the parent. More recently, research has focused on the difficulties that parents face related to caring for a child with autism, and the strategies employed to cope with the stress associated with raising these children. (p. 84)

Recent and past studies generally look at the stress level of the mother and their interactions with the child, not necessarily the father as an individual. ”However, the majority of

studies on autism focus on the mother-child relationship and typically do not include an analysis of the father” (Altiere & Kluge, 2009, p. 85). A study that was completed in 2009 surveyed 26 pairs of parents from a local autism organization in Michigan. The average age of the children was 7.5 years, but ranged in age from 3-16 years (Altiere & Kluge, 2009). The assessment tools that were used included the *Family Adaptability and Cohesion Evaluation Scale-III*, (Olson, 1985) *Family Crisis Oriented Personal Evaluation Scale*, (McCubbin, Olson, & Larsen, 1991) and the *Perceived Social Support from Family and from Friends* (Procidano & Heller, 1983). All of these assessment tools were self- assessments (Altiere & Kluge, 2009) and measured the parents’ individual perceived ability to adapt to change and their cohesiveness, the coping strategies described by each parent and to look at their effectiveness, and the perceived social support from family and friends (Altiere & Kluge, 2009). The results of the study concluded that mothers and fathers unexpectedly agreed in their ratings of cohesion, adaptability, satisfaction with family functioning, and family coping mechanisms, but differed reliably in their ratings of social support (Altiere & Kluge, 2009).

Supporting Families

Just like the child with autism, parents and families can be supported in many different ways and in different settings. As every child and his or her treatments are unique and individualized, the assistance that is provided should be tailored to the family and parents’ individual needs. Described in the next several paragraphs are programs that have been implemented by a various number and types of people and their effectiveness for the families that they served.

One research study conducted at the University of California was a pilot program that looked at an evidence-based treatment approach that involved parents and their child, known as *Parent-Child Interaction Therapy* (Solomon, Ono, Timmer, & Goodlin-Jones, 2008). This program is an intervention that is specifically focused for 19 boys aged 5-12 with significant behavior problems who have a high functioning degree of autism. In addition to the effect of the therapy, the study also included an investigation of the shared positive affect during the course of therapy on the child and parent outcomes (Solomon et al., 2008). Once the parents completed a number of surveys that included evaluating their child's behavior and significance of the problem behaviors, including one that evaluated the parents' stress levels in relation to the child's behavior, the therapy was divided into two phases, each lasting six sessions (Solomon et al., 2008).

The first phase was known as Child Directed Interaction. The parent was instructed to let the child take the lead by giving positive attention and praise, ignoring negative behaviors, not criticizing, disciplining, making requests, giving commands, and asking questions (Solomon et al., 2008). The next phase was known as Parent Directed Interaction. During an activity chosen by the parent, parents they were instructed to give demands that were clear, direct, age appropriate and simple and consistently positively reinforce the child's compliance. Parents were taught during this phase how to use the time out chair when children did not comply (Solomon et al., 2008).

Results found that although there were no statistical reductions in the problem behaviors, parents no longer perceived the behaviors as so distressing, the children showed improvements in adaptive functioning and, the therapy led to an increase in the effect the parent had on the child

and the child had on the parent. Overall, however, parents did not report a decrease in their stress levels which still remained high despite the intervention (Solomon et al., 2008).

A review of literature for parent trainings and the most effective way to deliver the support to families was conducted by West Virginia University (Suppo & Floyd, 2012). Here, WVU studied various types of services, their impacts, and their effectiveness. These included home-based services, service facility-based, a combination of home-based and service facility and alternative training services in related fields. The study concluded that all service models were effective in giving parents support which in return had a positive outcome on the child. It concluded also that the advancements in technology can play a role in facilitating parent trainings as well (Suppo & Floyd, 2012).

Providing support for parents through school-based programs has also proven to be successful. A study from the United Kingdom evaluated a program known as the Keyhole Early Intervention Model. It is specifically focused on supporting preschoolers diagnosed with autism and their families (McConkey & Cassidy, 2010). The four key components to the program included a resource kit for newly diagnosed families, a home-based training program by a speech and language pathologist to develop social and communication skills, training workshops for parents, and an education module for personnel working in early years services (McConkey & Cassidy, 2010). The program took place using 35 families, each receiving 15-18 home visits over a nine-month period of time. The results, based on parent interview and child developmental testing, were very positive from the study which concluded that community nurses and health visitors can also have a positive impact on parents and providing them with support for their child.

As previously stated, recreational and leisure activities are often a challenge for children with autism as well as for their families to engage in. A program known as *Family Fun Days* is implemented through the education program at Texas Tech University and engages children with autism, their parents, grandparents, and siblings in community recreational activities (Lock Hendricks, Bradley, & Layton, 2010). The study examined the results of surveys and follow-up interviews that were conducted for families of children with autism who attended the events (Lock et al., 2010). In general, the parents reported that being able to connect with others also coping with autism gave them opportunities for quality interaction and that they liked participating in something fun to do with their children while having the opportunity for support (Lock et al., 2010).

Summary

In conclusion, more research needs to be done to study how to best help parents and families of children with autism. The resources that are being provided do seem to be making a difference; however, not all parents and families have access to them. Geography is a factor in the availability of these resources. Parents are very willing to work with the children and are reaching out for support. Although interventions can be effective at any age, research is continuing on interventions with families who have a preschool-aged child just diagnosed with autism. As with autism, one size does not fit all, so ideally, support should be individualized to the family's needs.

CHAPTER III

METHODS

Design

This study had a pretest/posttest design and was conducted using parents from a convenience sampling. The independent variable in this study was whether or not the parents had received the home visits from the teacher. The dependent variable was the parents' knowledge of the components and the use of the strategies at home as measured by scores on the Autism Knowledge and Intervention Scale.

Participants

The participants in this study were six parents of preschool-aged children in a special program designed for students with autism and other special needs. One parent participated for each child. The students and their parents are from a suburban and rural area in the mid-Atlantic region. The class is held four days a week from 8:05-3:05 at a special education school in that county. The school is a public school that services students aged 3-21 with moderate to severe disabilities. The students at this school require education and services that are not able to be provided by their home school. The school also houses the county's Infants and Toddler Programs, which provides services to children aged birth–two years. The services include special education instruction, speech, occupation and physical therapies, and nursing. These services are provided in the home or day care centers in the community. The staff also works with the parents and families to give them resources and strategies for working with their child.

Five of the six parents received support and their child received services through the Infants and Toddlers Program. When the five children were aged 3, they were eligible to receive services at school through an IEP, Individual Education Program. Initial educational and psychological testing was performed to support the fact that the students needed services and to identify areas of need. All of the students demonstrated delays in early academics, behavior, social skills, play, joint attention, and communication. They all show varying degrees of the characteristics of autism spectrum disorder; however, they were all diagnosed with developmental delay as their primary disability.

The autism preschool program was designed and the curriculum was written by two speech pathologist who are in a private practice. It is a communication rich program that also addresses pre-academic skills (reading, math, phonics), social skills, play, and joint attention.

The amount of experience with special education services, including those particularly related to autism, varied among the participants. In 2011-2012, there was one preschool autism class of six students. In 2012-2013, the second class was added. The participants in this study are the parents of the students of the second class. There were six students who are here referred to as a-f.

Student *a*, a four-year-old male began in the class last year in January 2012. He received services in his home through the Infants and Toddlers program. Student *b* is a four-year-old male as well, and, like student *a*, was in the class last year and started the program in January. He did receive infants and toddlers services in his home. Student *c*, a three-year-old male received infants and toddlers services in his home. He began in the class in September of 2012. He was previously in the two-year-old program. This is a class that is also held at the school. It

takes place two mornings per week. In addition to the two-year-old, student *c* continued to receive home services until he was three years old. Student *d*, a four-year-old male also received special education services through the Infants and Toddlers Program as well. He began in September of 2012 when the school year started in the other class. Because of special circumstances, he was moved to the other class in late November 2012. Student *e*, a three-year-old female joined the class in late October of 2012. The family moved from another state in the summer of 2012 and began receiving services through the Infants and Toddlers Program until she turned three in early October. Student *f*, a four-year-old male started the class in early November. He did not receive infants and toddlers services in his home or day care center. All parents participating in the study were female and were English speaking.

Instrument

The Autism Knowledge and Intervention Scale is a parent survey that is based on a five-point Likert scale designed by this researcher based on her knowledge of the literature. There is no reliability or validity data for the scale. It was designed as the pre and post instrument to measure the parents' knowledge of the intervention components and strategies used in the school program as well as their frequency of use of these strategies at home. The survey was divided into two sections, the knowledge section and the implementation section. There were ten questions for the knowledge section and nine questions for the use section. The knowledge section included questions about discrete trial, play, schedule, music and joint attention.

The parents circled 0 if they had no understanding at all, 1 if they understood the concept somewhat, 2 for moderately-well understanding, 3 for understanding the concept well and 4 for very well. The implementation scale included questions that were related to the same topics but

evaluated how often the parents used the strategies at home that were discussed by the teacher. Ratings were based on frequency throughout a week. The parent circled 4 if she used the strategy/component every day; 3 for 5 times a week, 2 for 3-4 times a week, 1 for 1-2 times a week, and 0 for never. The parents filled out the survey as a self- assessment.

Procedures

The participants were parents of the students of the researcher's class. As part of the design of the program, home visits were included. These took place one time per month on Friday. The teacher and the parent collaborated to find a convenient time. Most home visits took place in the morning or early afternoon. The length of time of the visits varied depending on the discussion with the parent and any previous knowledge that they had about the topic. They lasted from 30 minutes to 90 minutes, depending on the families. The children were present for the home visits in five of the six families.

Prior to the home visits covering the topics, the teacher collected pre-data on the parents' understanding and home use the concepts. She did this by giving the parents the Autism Knowledge and Intervention Scale to complete. This was a self- assessment that the parents completed and returned to school in their child's folder.

The teacher then went to the students' homes each month and discussed the topics with the parents. There were a total of three home visits per family in which specific topics were discussed. Because of timing, some of the concepts were combined. During the first home visit, the teacher discussed Discrete Trial and Pivotal Response Training. The teacher did not have the students who were home participate in the discussion. Discrete Trial is the 1:1 work time that

the student has with the teacher/adult. The students' IEP objectives are used to generate the work tasks that the student performs. At the end of the task, the student is rewarded by a preferred toy or food. The teacher explained the process to the parents while showing them a video of their child doing the work at school. Pivotal Response Training is the play-based therapy that the child receives at school. The teacher's goal was to show a video of the play and explain it to the parent. The goal of PRT is to engage the child with an adult through a toy or activity of their choice. Communication is encouraged, and attempts to communicate are rewarded by the child being able to play with the toy or do the activity.

During the second home visit, the use of schedules was discussed. Prior to this home visit, the teacher asked the parent to write down a schedule for what they do at home. The teacher prepared and laminated the picture/word that represents the various activities in the schedule. During this home visit, the parent and teacher worked on an area in the child's home to place the schedule and how to use it.

The third home visit was to discuss the topics of music and joint attention. The use of music involved the parents singing songs with their child and pausing to have the child fill in the blanks with the words. The teacher brought samples of the songs sung at school that are based on the theme that the class is doing. Joint attention was also discussed with the parents at this visit. The teacher explained that many children have difficulty maintaining eye contact, a characteristic behavior of people on the autism spectrum. They also have difficulty focusing on an object that an adult is looking at. This is the first step in joint attention. The teacher showed the parents the other steps that are a hierarchy of skills. Next, the child will look when the adult points and says 'look'. The child will next follow the adult's eye gaze when given the prompt

word 'look' to visualize what the adult is looking at. The last step is for the child to engage the adult by pointing and saying 'look'. The teacher explained what level the child was on at school so that the parent could work with them at home on joint attention. At the last home visit, the researcher gave the parents the surveys again as a post self- assessment to analyze how their knowledge and use of the program strategies discussed with them. The parents completed the questionnaires at home and returned to school in their children's folders. A knowledge score and an implementation score were generated from the questionnaire responses. The pre- and post-scores were compared by non-independent sample t-tests.

CHAPTER IV

RESULTS

The purpose of the study was to examine the effect of home visits on parents of preschool children with autism and special needs. A total of six parents participated in this study. The results of the non-independent sample t-test revealed that there was no significant difference in the parent's knowledge of the components of their child's preschool program as measured on the pretest (Mean=72.33, SD=18.07) and posttest (Mean=84.66, SD=6.56) [$t(5) = -1.63, p > .05$] (See Table 1). In addition, there was also no statistically significant difference in the implementation scores on the pretest (Mean= 31.33, SD= 3.72) and the posttest (Mean= 32.66, SD= 2.58) test [$t(5) = -1.58, p > .05$] (See Table 2).

The null hypothesis was that there will be no statistical difference in the parents' knowledge of the intervention components used in the school-based autism preschool program and their use of these strategies at home, as measured by scores on the Autism Knowledge and Intervention Scale prior to the home visitation program and after the home visitation program. Thus, the null hypothesis failed to be rejected.

Table 1

Descriptive Statistics and Results of t-test Comparing Pre- and Posttest of the Knowledge Scores Before and After Intervention

CONDITION	N	MEAN	SD	T	SIG. (2-tailed)
Pre	6	72.33	18.07	-1.63	.16*
Post	6	84.66	6.56		

*Non-significant at $p \leq .05$

Table 2

Descriptive Statistics and Results of t-test Comparing Pre- and Posttest of the Implementation Scores Before and After Intervention

CONDITION	N	MEAN	SD	T	SIG. (2-tailed)
Pre	6	31.33	3.72	-1.58	.18*
Post	6	84.66	6.56		

*Non-significant at $p \leq .05$

CHAPTER V

DISCUSSION

The results of the study failed to reject the null hypothesis that there would be no statistically significant difference in the parents' knowledge of the intervention components used in the school-based autism preschool program and the use of the strategies at home prior to and after the home visits.

Implications of the Results

Discussion of the increase in support for parents of children with autism and their families is prevalent among psychologists, special educators, and doctors because of the rise in the rate of children being diagnosed with autism. Especially important is the intervention for young children's families so that the child can be the most successful in school, independent living, and social functioning. Although this study did not produce statistically significant results to support the notion, the study was valuable in that it encouraged teachers to connect with parents by sharing the best practices for working with children with autism and how they can incorporate them into the home. By going to the students' home, the teacher was able to see the child's living environment and tailor the suggestions to meet the needs of the child and family. The home visits allowed the teacher an opportunity to follow up with the suggestions given to the family. Despite the non-significant results, the parents provided positive feedback with the home visits in general and felt that they made a difference in helping to improve the child's communication skills and behavior. These improvements in the students were also evident in class as well.

Threats to Validity

In this study, there were several factors that may have impacted the validity of the results. One important factor that influenced the external validity of the study was the variability in the background of the children and families. This had a definite impact on the results of the parents' pretest scores for knowledge and implementation. Three of the children received early intervention services through the Infants and Toddlers Program. These services include special instruction to improve play skills, cognitive knowledge, and social interaction. Speech therapy was also provided to increase receptive and expressive communication skills. The amount and length of time per session depended on the needs of the child. The services were provided in the child's home, child care center, or in the community. Part of this program included assistance and suggestions for the child's parents and family. In addition, five of six children also received outside services and testing through Kennedy Krieger Institute. Through the program, parents are also given resources and training as well. Due to these other sources of intervention, some of the families would have already been well informed about strategies to use with autistic children prior to the current study which could have created multiple treatment-interference. Consequently, the pretest scores were relatively high for many of the families.

Another factor was that not all interventions were relevant to all children. It depended on the needs of the child. Consequently, not all of the suggestions were used by every parent because not all interventions would be effective for all children. This created a selection-treatment interaction threat to external validity. If a particular strategy was not relevant for a child and thus not implemented, the post-implementation score was limited.

Another factor that could have affected the results is the duration of the intervention. The parents received a total of eight home visits. It was during three of the home visits that data for the research was recorded. Parents may have needed more time to review some of the topics and implement the suggestions at home. This was a threat to internal validity since the length of the intervention may not have been long enough to demonstrate the effectiveness of the intervention.

Finally, the small sample size of six parents for the case study affected the results of the study. There was not enough power to show a statistically significant difference. An increase in the number of parents was not feasible for the current study. This is a threat to external validity because it limited the generalizability of results.

Another limitation of the study was that it used one group pretest/posttest design. This does not control for a variety of validity threats. For example, maturation or history could have influenced the internal validity if parents could have become more knowledgeable over time even without the intervention provided through the school system. An external validity concern related to the study design is that study participants may have responded differently to the intervention due to the exposure to the pre-test.

Connections to Previous Studies/Existing Literature

Providing early intervention services for children diagnosed with autism and those who exhibit communication difficulties and atypical behaviors is critical to support their future. However, what a lot of therapists and teachers don't realize is that is just as important to support the child's family and parents. Parent trainings and workshops are helpful, but not all of the suggestions given are practical or necessary for individual children and their families. Several

researchers have examined the effectiveness of programs that provided individualized parent training and education.

A study called *Parent and Child Interaction Therapy* was individualized to each child and parent (Solomon et al., 2008). There were two phases of the program and a total of six sessions in which parents were coached by a therapist in an individual setting playing with their child and working with their behavior. In comparing the design of the two studies, there were similarities and differences. The studies were similar in that families were provided direct instruction from a professional experienced with autism. There were some differences in who received the services. In the home visits program, the special educator worked with the parents to provide them with information and strategies for their child at home. In the *Parent and Child Interaction Therapy*, the children were directly involved and present during the intervention. Another difference includes where the study took place. The *Parent Child Interaction Therapy* study took place in a central location and the parent provided transportation for their child, whereas the home visit program took place directly in the parent's/child's home. In the *Parent Child Interaction Therapy* study, the results indicated no statistically significant results in terms of a decrease the children's problem behaviors and the parent's stress level. Although those exact factors were not measured in the home visit study, the results of the home visit study also did not show significance in outcome variables. In the *Parent Child Interaction Therapy* study, the result of the children improving adaptive functioning skills was statistically significant as supported by the Adaptability Scale that was completed by the parents about the child's behavior as a pre and post assessment. This outcome measure was not included in the home visit study. However, the parents from the home visit study reported positive feedback about the information and strategies provided.

Another study that provided parent training was conducted out of the United Kingdom is known as the *Key Hole Early Intervention Model* (McConkey & Cassidy, 2010). In this program, the educational personnel such as the speech therapist and the special education teacher were provided with training. The speech therapist trained the parents involved in the study in the home environment and each of the parents was given a Resource kit with such things as toys and educational materials. The results included positive feedback from the parents and also included suggestions that community nurses and health visitors can play in role in interventions for families of children with autism. There were similarities and differences found in the two studies. The idea of providing home visits for the parents was similar in both studies. The materials needed were provided for the parents in each study. Both studies were designed for parent and children of preschool age. The measures used in each study were different. In the home visit study, a survey was used and completed by the parents. For the *Keyhole Early Intervention Model* study, the results were based on parent interview, and measures of child development. Despite the differences, both studies reported positive parental feedback.

Implications for Future Research

Teaching children and making a difference in their life is the job of a teacher. But for teachers who work with children with autism and other special needs, this must extend to the parents and the family as well. It is evident that based on the concerns of doctors, psychologists, and therapists that more research needs to be done in supporting families of children with autism.

Although the results of the home visit program were not statistically significant, the program showed a trend in improvement in the knowledge and implementation post test scores of the parents after the visits. Consequently, additional research should be conducted in order to

further examine the effectiveness of home-based parent training interventions. Future research with the ideas of this study that yield statistically significant results would raise awareness of the need for the program to be implemented in other schools and areas and create funding for the program to be implemented.

Changes to the design and measures of the current study may yield different results. An increase in the number of parents participating in the study is necessary. In the current study, there were six parents. This would include more data and increase the chances of the results being statistically significant. In addition, the measures of the study could be different. In future studies, another measure could be to analyze the affect that the interventions being used at home has had on the child's behavior and functioning as perceived by the parent. Since this researcher observed that parents provided positive feedback for the intervention, it would be helpful to have an outcome measure that could provide an objective measure of parental satisfaction. Future research should use an experimental design with a control group. This would help control for the validity concerns associated with variability in the individual needs and backgrounds of the children and families because presumably there would also be variability within the control group. By using a control group and having just a post-intervention measure, it would control for issues such as the pre-test influencing participants' responses to the intervention. It would also reduce the impact of maturational and history factors.

Expanding this program to include a speech therapist, behavior specialist, and occupational therapist coming to see the children and parents in their homes could be a further researched program. A special education teacher with a background in autism education can provide general feedback and suggestions related to speech and language, behavior, and fine

motor skills depending on their level of training and experience; however, the therapist in his or her area of specialty can offer and show the parents more specific ideas using the home resources. This would essentially be expanding the Infants and Toddlers Program. A researcher could examine changes in knowledge about autism intervention strategies and changes in implementation frequency after parents received this specialized instruction.

Connecting with parents is, of course, important and providing feedback that is individualized is beneficial; however, often the siblings of the child are left out. More research needs to be done on supporting the siblings of children with autism. Often, they do not understand what is going on with their brother or sister especially if they are younger. For young siblings, a study could set up sibling play groups to help them interact and play with them in a supportive setting with a therapist. For older siblings, a study could examine the effectiveness of providing support groups in which siblings discuss challenges and get help on how they can better work with their brother or sister with autism.

In conclusion, this study was conducted based on the current concerns and need to increase support for parents and families of children with autism. Parents and families cannot go about raising a child with special needs alone because they cannot be expected to be knowledgeable about the interventions that may be required to support the child. In addition, teachers who work with children with autism in the school setting need support from the parents and families of the child at home. This relationship between the parent and the child's teacher is important and can make the difference in the success of the child. The current study although it did not yield statistically significant results, was a positive beginning for ideas that teachers can use for building a relationship with the child and their family. More research and studies need to

be conducted with a wider variety of children and outcome measures so that educators will be better prepared to help autistic children and their families.

References

- Altieri, M., & Kluge, S. (2009). Family functioning and coping behaviors in parents of children with autism. *Journal of Child & Family Studies*, 18(1), 83-92. doi: 10.1007/s10826-008-9209-y
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Dillenburger, K., Keenan, M., Doherty, A., Byrne, T., & Gallagher, S. (2010). Living with children diagnosed with autistic spectrum disorder: Parental and professional views. *British Journal of Special Education*, 37(1), 13-23. doi: 10.1111/j.1467-8578.2010.00455.x
- Hall, H. R., & Graff, J. C. (2011). The relationships among adaptive behaviors of children with autism, family support, parenting stress, and coping. *Issues in Comprehensive Pediatric Nursing*, 34(1), 4-25. doi: 10.3109/01460862.2011.555270
- Lock, R. H., Hendricks, C. B., Bradley, L. J., & Layton, C. A. (2010). Using family leisure activities to support families living with autism spectrum disorders. *Journal of Humanistic Counseling, Education & Development*, 49(2), 163-180.
- McConkey, R., & Cassidy, A. (2010). Working with families who have children with autism spectrum conditions. *Learning Disability Practice*, 13(2), 19-22.

- McCubbin, H., Olson, D., & Larsen, A. (1991). *Family crisis oriented personal evaluation scale*. In Measures for Clinical Practice: A Sourcebook. 3rd Ed. (2 vols.) New York: Free Press. V. 1, 294-297.
- Olson, D.H. (1985). *FACES III (Family Adaptation and Cohesion Scales)*. St. Paul, MN: University of Minnesota.
- Procidano, M., & Heller, K. (1983). Perceived social support from family and friends. *American Journal of Community Psychology*, 11(1), 1-24.
- Solomon, A.H., & Chung, B. (2012). Understanding autism: How family therapist can support parents of children with autism spectrum disorders. *Family Process*, 51(2), 250-264.
doi: 10.1111/j.1545-5300.2012.01399.x
- Solomon, M., Ono, M., Timmer, S., & Goodlin-Jones, B. (2008). The effectiveness of parent-child interaction therapy for families of children on the autism spectrum. *Journal of Autism & Developmental Disorders*, 38(9), 1767-1776. doi: 10.1007/s10803-008-0567-5
- Suppo, J., & Floyd, K. (2012). Parent training for families who have children with autism: A review of the literature. *Rural Special Education Quarterly*, 31(2), 21-26.