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PARENT IMPLEMENTATION OF THE DEVELOPMENTAL, INDIVIDUAL DIFFERENCE, RELATIONSHIP-BASED (DIR) PROGRAM: CHANGES IN THE REPETITIVE BEHAVIORS OF CHILDREN WITH AUTISM

A Thesis

By

JESSICA S.GONZALEZ

Submitted to the Graduate School of the
University of Texas Pan-American
In partial fulfillment of the requirements for the degree of

MASTER OF ARTS

May 2006

Major Subject: School Psychology

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PARENT IMPLEMENTATION OF THE DEVELOPMENTAL, INDIVIDUAL DIFFERENCE, RELATIONSHIP-BASED (DIR) PROGRAM: CHANGES IN THE REPETITIVE BEHAVIORS OF CHILDREN WITH AUTISM

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ABSTRACT

Gonzalez, J. S. (2006). Parent implementation of the Developmental, Individual-Difference, Relationship-Based (DIR) program: Changes in the repetitive behaviors of children with autism. Master of Arts (MA), School Psychology, May 2006, 54 pp., 6 tables, 2 figures, references, 34 titles.

The study examined the changes in behavioral repetitive/stereotypies based on parent implemenation and non-implemenation in the Developmental, Individual-Difference, Relationship-Based (DIR) program designed for children diagnosed with Autism Spectrum Disorder (ASD). An experimental, 2x2 repeated measures analysis of variance (ANOVA) was used to measure the changes in behavioral repetitive/stereotypies such as: rocking or other whole body movements, hand-flapping, ritualism, finger/light stimulation, aggressive behavior to self, and aggressive behavior to others, based on parent implementation or non-implementation of the DIR program. Nine participants were randomly selected and assigned to a DIR treatment group and a control group. The study was conducted over an eight week period.

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CHAPTER I

INTRODUCTION

According to the Diagnostic and Statistical Manual of Mental Disorders -IV-TR, typical characteristics of a child with Autism Spectrum Disorder (ASD) include qualitative impairment in social interaction, qualitative impairments in communication, and restricted repetitive and stereotyped patterns of behaviors, interests, and activities. Recently, studies have shown that the number of children identified as having an ASD is increasing. "School-age children with autism receiving special education services rose from 10,135 in 1991-1992 to 53, 675 in1998-1999" (Odom et al., 2003) With the early identification and screening process called Child Find playing a major role in the Individuals with Disabilities Education Act (IDEA), the number of children identified with ASD will continue to rise.

Since the mid 1940s, when Leo Kanner first observed a child with characteristics of ASD, the education of students diagnosed with ASD has been developed around a behavioral approach. A behavioral approach to treating ASD is Applied Behavioral Analysis (ABA). "This approach is the most extensively studied in terms of specific interventions and comprehensive programs" (Volkmar, 2004). A recent theory, Developmental, Individual Difference, Relationship-Based (DIR) program, has modified the behavioral approach by making interactions, between the child and his/her parents or teachers, ordinary and feel like play time. "It is spontaneous and fun and does not make the intervention feel rigorous" (Greenspan, Wieder, & Simons, 1998).

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"Applied Behavioral Analysis uses a behavioral approach that requires the systematic application of environmental manipulations" (Cooper, 2001). One major component of Applied Behavioral Analysis is the use of reinforcers to reward positive behaviors. "The programme is based on the behavioural theory that children are likely to repeat learned behaviours that are positively rewarded and less likely to repeat behaviours that are negatively rewarded" (Wall, 2004). The program is led by adults, in that the adult is the model and chooses what activity and materials will be used in training. Research has shown ABA to be effective in reducing disruptive behaviors typically observed in autistic individuals, such as self-injury, tantrums, noncompliance and self-stimulation. "ABA has shown to be effective in teaching commonly deficient skills such as complex communication, social, play and self-help skills" (Leaf & McEachin, 1999).

The DIR program, according to Greenspan, Wieder and Simons, creates opportunities for a child to learn the critical developmental lessons at home, in school, and as part of a child's different therapies (i.e., occupational, speech, or physical therapy). Greenspan et al, describe DIR as an intensive one-on-one approach consisting of three parts: (1) parents do DIR with their child, creating the kinds of experiences that promote mastery of the milestones; (2) speech, occupational, and physical therapists, educators, and/or psychotherapists work with the child using specialized techniques informed by floor-time principles to deal with the child's specific challenges and facilitate development; (3) parents work on their own responses and styles of relating with regard to the different milestones in order to maximize their interactions with their child and create a family pattern that supports emotional and intellectual growth in all family members.

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Although both programs, ABA and DIR, are beneficial, the problem lies in determining which program has the greatest impact in supporting the growth of the necessary social and life skills and developmental milestones needed to achieve these skills. There is a need to understand why the child has not progressed developmentally and determine what is lacking if the child mastered developmental milestones but is now showing regression. The elements of the programs will need to effectively change the social and life skills of the child, when implemented, by correcting or recognizing the function of the current abilities.

School districts are continuously looking for programs that help children with ASD, but that cost less and require little effort for a teacher to use in the classroom; therefore, the DIR program needs to be investigated to determine if it is less demanding in terms of cost and is easier to implement, but is still beneficial to the education of children with ASD.

Based on a study done by Hurth, Shaw, Izeman, Whaley, and Rogers (1999), some programs for children with ASD were evaluated, and they found that certain elements were required to make the program effective. The elements included: "early intervention, individualization of services, systematic, planful teaching, specialized curriculum, intensity of engagement of the child, and family involvement".

Early intervention can take place in early childhood programs provided for children with ASD in the school and in the community. If early interventions are not consistently followed through, from the program to the home, the interventions ultimately fail because the child is not learning on a continuum. But when parents are trained and

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monitored to use program techniques with their child at home, further intervention is provided and the child benefits greatly.

According to Hurth et al. (1999), there is a need for research on which program practices leads to specific outcomes for individual children. They also suggest "a need for continued research and evaluation on the effectiveness of various educational strategies on the youngest children who are at risk or have ASD". Strain and Schwartz (2001) suggest a need to know what strategies are most effective in facilitating generalization and maintenance of these skills (social) and whether specific child characteristics suggest specific treatment strategies. Therefore, there is a need to determine if the elements are present in the DIR program so that the children with ASD may have effective educational outcomes. It is also important to determine if DIR has the most effective strategy in helping produce acceptable social behavior in children with ASD.

The purpose of the study, therefore, is to examine the changes in the repetitive behaviors of children diagnosed with ASD when their parents implement the Developmental, Individual-Difference, Relationship-Based (DIR) program at home. The results of the study will determine if there is a change in behavioral repetitive/stereotypies as a result of the parent implementation of the program at home.

The results obtained from the study will be important to the educational community because they will allow school districts to see if parent involvement is a necessary and important component in the treatment of children with ASD. The results obtained will also be valuable to parents because they will see if the DIR program is effective and valuable in helping their child at home.

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CHAPTER II

REVIEW OF LITERATURE

What is Autism?

According to the literature, ASD is defined as impairments in communication and social engagement, and includes restricted repetitive and stereotyped patterns of behaviors, interests, and activities. The Diagnostic and Statistical Manual of Mental Disorders-IV-TR (DSM-IV-TR) defines impairments in social interaction as marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction; failure to develop peer relationships appropriate to developmental level; a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people; and lack of social or emotional reciprocity (American Psychiatric Association, 2000). The DSM-IV-TR defines impairments in communication as a delay in, or total lack of, the development of spoken language; marked impairment in the ability to initiate or sustain a conversation with others in individuals with adequate speech; stereotyped and repetitive use of language or idiosyncratic language; and lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level (DSM-IV-TR, 2000). The individual with autism, according to the DSM-IV-TR, may have an encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus; apparently inflexible adherence to specific,

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nonfunctional routines or rituals; stereotyped and repetitive motor mannerisms; and a persistent preoccupation with parts of objects (DSM-IV-TR, 2000). Since Autistic Disorder is a disorder classified as diagnosed in infancy or childhood, delays in the above named areas have an onset prior to age three years.

Although characteristics of Autism can vary greatly from child to child, the most common characteristics, according to Gail J. Richard, include: withdrawal, poor reality contact, delayed or splintered motor development, self-stimulation, splintered perceptual skills, perseveration, echolalia, poor identity concept, ritualism, mental rigidity, attention deficit, impaired social interaction, mechanical movement and/or speech, and perimeter walking (Richard, 1997).

The number of children diagnosed with Autistic Disorder has increased in recent years. This increase is most likely due to more precise diagnosis and the availability of better diagnostic services. Because ASD can range from mild to severe and is sometimes complicated by comorbid conditions, it is not easy to have a single treatment. "Each child requires an individualized approach to intervention" (Ruble & Dalrymple, 2002). Ruble and Dalrymple have also found that the most effective approach to treating children with autism involves consultation and collaboration between teachers and parents.

Parents who have children diagnosed with autism report seeing symptoms before their child was two years of age. However, "the average age of diagnosis for children with autism in the United States is three to four years of age" (Koegel et al., 2005). This data illustrates a need for early identification and intervention for children with autism.

Schools and/or clinics are currently implementing programs such as Applied Behavioral Analysis (ABA) and/or the Developmental, Individual-Difference

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Relationship-Based (DIR) program. Both programs can be used as early intervention programs designed to promote effective educational outcomes for children with ASD. They are designed to deter disruptive behaviors such as aggression toward self or others, self-injury, and tantrums; and replace the behaviors with socially acceptable ones. Both programs teach the child with ASD social and life skills that will later help in providing services, in the schools, to the child in the least restrictive environment. But the DIR program is less rigorous and allows interactions between the parents, child, and the family to develop and occur more frequently.

Behavioral Characteristics of Autism

Behavioral characteristics of Autism include self-stimulatory behaviors, ritualism, stereotypies, and aggressive behavior toward self and/or others. "Self-stimulatory behaviors can involve the eyes, mouth, hands, large body movements, and auditory or gustatory stimulation" (Lovaas, 2003). Ritualism involves the child imposing order to objects or routines. This could involve lining up blocks or cars, or entering and leaving through only one doorway in a room. "Stereotypies are most commonly defined as motor behaviours that are repetitive, topographically invariant, often rhythmical, and appearing without obvious purpose" (Symons, Sperry, Dropik, & Bodfish, 2004). Aggressive behavior toward self and/or others involves any behavior that seems to cause pain to the individual that is receiving the aggression. This can include, but is not limited to, self-biting, hitting one's own head, or hitting another person.

"There is evidence that the occurrence of repetitive behaviors in autism may be mediated by level of cognitive ability" (Lewis & Bodfish, 1998). Therefore, it is important for the reader to keep in mind that behavioral characteristics may not be

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evidenced in some children with autism as it may be with others. "Young children with autism are particularly at risk for the development of challenging behavior because of their delays in communication, language, and social development. Problem behavior, a form of communicative expression that is typical for young children without disabilities, often remains in the communicative repertoire of the child with autism because it works for the child (Donnellan, Mirenda, Mesaros, & Fassbender, 1984; Horner, Carr, Strain, Todd, & Reed, 2000)" (Buschbacher & Fox, 2003).

As children grow older, the types of displayed behavioral characteristics change. For this reason there is "a need for continued behavioral support as the stimulus conditions change and expanding repertoires lead to challenging behaviors with new topographies" (Barry & Singer, 2001).

Applied Behavioral Analysis

It is important to first discuss Applied Behavioral Analysis (ABA) because the focus of the current study will be on changes in behavioral-repetitions/sterotypies. "Applied Behavioral Analysis (ABA) is structured around the behavioral theory of learning in that a child repeats behaviors that are positively rewarded and is less likely to repeat behaviors that are negatively rewarded" (Richman, 2003). ABA uses reinforcers to reward positive behaviors. It is a very structured and rigorous program intended to produce results that allow the child with ASD to be mainstreamed into a regular education classroom. The child with ASD, if not mainstreamed, is expected to show gains in communication, social integration, play, and self-help skills. ABA aims to train the parents in becoming more involved with their child and the program, because it requires implementation at school as well as in the home. By involving more than one trainer to

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work with the child, the child is discouraged from being isolated (Richman, 2003). According to Leaf and McEachin (1999), results can range depending on several factors. These factors include age at onset of treatment, quality of treatment, the child's cognitive capacity and consistency in the home environment.

ABA requires that the curriculum include skills that a person would need to be able to function in the real world. The curriculum is sequenced according to developmental milestones. The teacher presents easy skills, first, to the child with ASD and then, when prerequisite skills are learned, the teacher teaches complex skills. The focus of the curriculum is mainly to develop verbal communication skills. ABA also requires that there is a one-to-one student-teacher ratio, and that there be at least thirty to forty hours per week of intensive training. In ABA, there is little down time for the child, and each break is quickly followed by a brief lesson. As previously mentioned, family involvement is crucial to the ABA program. "Parents should be involved in developing the child's play, social and self-help skills, and should allow hired therapists to be involved in most of the intensive work" (Schopler & Mesibov, 1994). The parents are encouraged to use every day activities, such as going grocery shopping, bath time, or dinner time, as teaching moments.

According to Wall (2004), she suggests that the ABA approach teaches skills in a 'robotic' fashion and, although the child may be able to complete tasks or a set of learned skills successfully, they may have difficulties transferring the skills to another situation. It is also argued that since the activities are adult-selected, the child may not wish to be involved in the curriculum, and may therefore react through aggression or tantrums, which may be the only ways the child with ASD knows how to communicate his/her

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anger. The ABA program also requires a lot of intensity and patience on the part of the parents and the staff involved. It is important for those involved in the child's education and well being to keep in mind that results will not come about easily and it will take time for the child to get used to the structure and rigidity of the program.

Graff, Green, and Libby (1998) stated that intensive behavioral intervention, such as ABA, is effective but the resources required to provide the instruction over extended periods of time are not readily available to many programs and families. For this reason, it is necessary to investigate other programs that are similar to ABA but require less intensity, are less costly, and are easy to implement. Strain and Schwartz (2001) commented that if we want to improve our ability to have an impact on the social lives of children with ASD, then we must develop interventions that can be implemented across settings, by a number of different providers, and within the context of ongoing activities and routines.

Developmental, Individual-Difference, Relationship-Based (DIR)

The DIR program is a comprehensive intervention program that focuses on the building blocks of relating, communicating, and thinking. "The DIR assessment and intervention program also addresses the individual variations in sensory processing (auditory and visual-spatial processing), sensory discrimination and modulation (including tactile, sound, vestibular, proprioceptive, olfactory, taste, pain, and sight), and motor planning and sequencing (including muscle tone, and coordination), as well as family interactive patterns" (Wieder & Greenspan, 2004). DIR is intended to be a strictly developmental approach to the treatment of ASD.

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DIR has also been called Floor Time by Stanley Greenspan because "the approach to treatment is like ordinary interaction and play that is supposed to be spontaneous and fun" (Greenspan & Wieder, 1998). The DIR/Floor Time approach has four main goals: "encouraging attention and intimacy, two-way communication, encouraging the expression and use of feelings and ideas, and logical thought" (Greenspan & Wieder, 1998). The first goal, encouraging attention and intimacy, requires the child to be able to focus on the parent or caregiver and enjoy the interactions that can occur or even to enjoy the mere presence of each other. The second goal, two-way communication, is achieved when the child is able to easily engage in communicative interactions, either verbally or non-verbally. The third goal, encouraging the expression and use of feelings and ideas, requires that the child learn to express his/her feelings, ideas, and needs through pretend play and eventually to express them verbally. The fourth and final goal, logical thought, is achieved when the child can understand his/her thoughts and can connect them to the outside world.

The DIR approach tries to help the parent discover which of the six developmental milestones their child has reached and which milestones need to be achieved. The milestones are defined by Greenspan and Wieder (1998) as: Milestone 1: Self-Regulation and Interest in the World, Milestone 2: Intimacy, Milestone 3: Two-way Communication, Milestone 4: Complex Communication, Milestone 5: Emotional Ideas, and Milestone 6: Emotional Thinking.

Milestone one, self-regulation, is defined as a child's ability to not be overwhelmed by sensory stimuli that he/she is surrounded by on a daily basis. Milestone two, intimacy, is reached when a child can divulge in and absorb the love of parental and

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family relationships. When the child can respond to and enjoy attention from a loved one, he/she is ready to move to milestone three.

Two-way communication, milestone three, is accomplished when the child can engage in verbal or nonverbal communication with his/her parents and family members. During this time communication circles are opened and closed successfully. According to Greenspan and Wieder (1998), communication circles can be child-initiated or parent initiated. A child-initiated communication circle is defined as an interaction, verbal or nonverbal, initiated by the child, responded to by the parent or caregiver, and closed by the child. For example, if a child looks at his mother, he has opened the circle. If his mother responds and makes eye contact and smiles at him, she has responded to his interaction. If the child looks away or smiles in return, the communication circle has closed. A parent-initiated communication circle is similar except the parent is in charge of opening and closing the circle. The fourth milestone, complex communication, immediately follows two-way communication as the child learns to open and close communication circles rapidly and with more successions. When the child can use a sequence of gestures to communicate to his/her parent or caregiver, the child has mastered milestone four.

Milestone five, emotional ideas, is defined as the child being able to play out his/her emotions and ideas through imaginative and pretend play. Eventually, the child should be able to "manipulate ideas, to use them in ways that meet his needs" (Greenspan & Wieder, 1998). By doing so, the child can quickly move on to the final milestone. Milestone six, emotional thinking, is acknowledged as the final developmental milestone in that it is much more complex and requires logical thinking applied to the outside

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world. In this milestone, the child can link emotions with play and eventually understand and know that he/she is connected with and is a part of the world. The child also "begins to understand emerging concepts of space and time in a personal, emotional way" (Greenspan & Wieder, 1998).

"A milestone is fully mastered when a child can exhibit that skill even at times of high emotion; she should be able to be *intimate* with her caregiver shortly after being angry, to sustain *two-way communication* even while upset, to *express feelings through words or play* shortly after frustration, and to *connect ideas logically* even when she is disappointed" (Greenspan & Wieder, 1998). The four main goals of DIR are each directly linked to the six developmental milestones. Milestone one and two are linked to goal one, milestone three and four are linked to goal two, milestone five is linked to goal three, and milestone six is linked to goal four.

In DIR the parent has a developmental role in which his/her job is to follow their child's lead and play at whatever captures the child's interest, but it must be done in a way that encourages the child to interact with the parent.

Greenspan and Wider require that the parent follow Floor Time guidelines when working with the child on the skills they are trying to build. The guidelines are: "pick a time when you know you can give your child an uninterrupted 20 to 30 minutes; try to stay patient and relaxed; empathize with your child's emotional tone; be aware of your own feelings because they will affect how you relate to your child; monitor your tone of voice and gestures; follow your child's lead and interact!; tune in to your child's multiple developmental levels; and no hitting, breaking, or hurting" (Greenspan & Wieder, 1998).

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The DIR approach is an early intervention treatment for ASD. For this reason, it is much easier to use this approach with younger children than it is with teenagers. But, in a paper by Wieder and Greenspan (2004), they state that the most important lesson [in the DIR approach] is that progress can continue into the adolescent years and further. "Therefore, it is most important to continue to try to work with the child and his or her family on the most essential capacities for relating, communicating, and thinking." Furthermore, when using the DIR approach, it is important for parents to keep this in mind so that their child can continue to benefit from the approach.

DIR also requires that parents work together with other family members living in the household so that communication and relationships can develop amongst everyone involved. If any one person is not involved, it may prove more difficult when working with the child's communication and relating skills.

Because children with ASD can have comorbid disabilities, the DIR approach may only help the child in one area. If the parent does not know this, he/she may feel that the approach did not work because it didn't create a change in all deficits or symptoms of ASD. DIR is a long term approach that may even require months to master only one skill. Change will happen, but in most cases, it will happen slowly.

Therefore, if parents choose to use DIR, it is important for them to be actively involved in the goals and outcomes of the program. It can be assumed that when parents are trained and monitored to use a specific program, the outcome of their child's potential will be greatly increased. It can also be assumed that when parents are trained but not monitored, the effectiveness on their use of the program techniques at home decreases; consequently causing the outcomes and goals of the program to decrease.

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What is parent monitoring?

In order for a child to develop the necessary skills taught through the DIR or any other program, parental involvement is a critical factor. All parents and/or caregivers, that the child lives with, need to be trained and monitored in the techniques of the program. At the same time, it is important for everyone who is trained to follow through with the program techniques consistently.

"Parents have successfully learned to design and implement behavioral, social, and communication programs for their children with special needs. Within these programs, the parent trainers typically demonstrate and model techniques for the parents and provide the family with information. The goal is for the parents to absorb the information and learn to use the techniques themselves" (Symon, 2005). Once parents have learned the techniques, the trainer uses parent monitoring to provide feedback to the parents and make adjustments to their training if needed. Monitoring also provides a way for the trainer to oversee the outcomes of a program when parent training is involved. The eventual goal of parent monitoring is to allow the parents to be actively involved in the education and interventions that their child is receiving. According to Symon (2005), parents and caregivers have also been shown to successfully provide learning opportunities within the context of natural daily routines after they have received training in an intervention program. "Behaviors that generalize to novel settings may be seen as independent of training stimuli and are, therefore, likely to be maintained after training" (Lovaas, 2003). In a study done by Elder et al., 2003, based on social interaction theory, it was hypothesized that "while parental behavior influences children, child behavior also affects parent behavior as parents are attempting to train their children." If this is true, an

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outcome of parental monitoring and training could result in a stronger involvement amongst the family members. This outcome is a beneficial factor to the understanding of the need for the parental role in the treatment of children with autism.

With regard to the current study, the goal for monitoring parents is to see a decrease in negative behaviors, including stereotypies. To set up this goal, parents first need to be aware of their child's cues. The parents need to observe their child and look for specific environmental cues or stimuli that cause a behavior to begin. They also need to understand the function of the behavior and determine what will help deter the behavior. For example, if their child is being aggressive toward a sibling, the parents need to know what started the aggression and what can be done to stop it. Stopping a behavior could be as simple as separating the children or having them share the toy that started the aggression. By doing these things, the parents may be able to make a difference in their child's behavioral repetitive/stereotypies.

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CHAPTER III

METHODOLOGY

Introduction

The current study examined the changes in the repetitive behaviors of children with Autism Spectrum Disorder (ASD) when their parents implemented the Developmental, Individual-Difference, Relationship-Based (DIR) program at home. The results of the study determined there were no significant differences in the behavioral repetitive/stereotypies of the children as a result of the parent implementation of the program at home.

Following the Institutional Review Board's (IRB) approval, this examiner obtained consent from the parents so that they and their child can participate in the study. The form also allowed the examiner to view and analyze videotaped sessions of parent-child interactions. The IRB forms and the consent forms can be found in the appendix section of this thesis.

Population and Sample

Participants were solicited from the Region One Area, Rio Grande Valley school districts, Early Childhood Intervention Programs and/or private practice. The training subjects were parents of children who are between the ages of 18 months and 5 years old,

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and who have been diagnosed with ASD. The type of sampling used was convenience sampling, because participation was based on willingness and grouping. The sample size included nine children of the training subjects. Because one training subject had two children diagnosed with ASD, random assignment was based on training subjects, not on randomization of children. One training subject assigned to the DIR treatment group dropped at the end of the study.

Instruments

Data was collected through the use of an investigator constructed instrument, BOI. The BOI is provided in the appendix section of the thesis. This instrument was used as a pre-study and post-study measure. The instrument was designed to address the current behavioral functioning of the child. The investigator used the BOI to calculate the frequency of behavioral repetitive/stereotypies that the child demonstrated during a ten minute segment of the twenty to thirty minute family video tape. The behavioral repetitive/stereotypies are defined in the appendix section of this thesis. In addition to the BOI, an investigator constructed parent rating scale was used to evaluate the effectiveness of the study, based on the training subjects' perception. This scale is provided in the appendix section of the thesis.

Research Design

An experimental 2x2 repeated measures analysis of variance (ANOVA) design was used to measure the differences in behavioral repetitive/stereotypies when parents implemented the DIR program at home.

Throughout the study, the investigator collected observation data using the Behavioral Observation Instrument (BOI) which measures the behavioral functioning of

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the child in eight domains. Each of the domains are meant to determine the effectiveness of parent implementation based on ten minute video segment observations.

The parents were randomly assigned to either the DIR treatment group or the control group. The parents read and signed an informed consent form prior to participating in the study. The DIR treatment group was composed of five sets of parents receiving information about DIR and implementing this program at home. The second group in the study was a control group, which involved three sets of parents who did not receive any information on DIR and who did not implement the program at home. An overview of the program and training techniques were given to each parent in the DIR treatment group at the beginning of the study. Upon completion of the investigation, the parents in the control group had the option of receiving an overview and training techniques for the DIR program, which included receiving parent training from the investigator for a period of six weeks after the study was completed.

The parents in both the DIR treatment group and the control group were required to submit a pre-study and a post-study video tape. These video tapes were between twenty to thirty minutes in length and consisted of family interactions with their children. The data gathered from the tapes was used to determine if there was a significant difference in behavioral repetitive/stereotypies due to the implementation or non-implementation of DIR.

The participants chosen in the study were required to attend three to four sessions so they could be provided with information and/or training in the DIR program.

Session one was held on February11, 2006. At this time, all parents that attended signed consent forms. The DIR treatment group and the control group attended the

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sessions at different times so that either group did not overlap. The parents in the DIR treatment group were provided with an introduction to the study as well as an overview of the DIR program and training techniques. All parents were required to submit the pre-study family video depicting the child interacting with family members. This data was used as baseline data.

After parents in the DIR treatment group were trained on the DIR techniques, they were asked to continue using the techniques at home. Home training consisted of 4 to 5 focused training sessions per week and totaled from 45 minutes to 1 hour per day. Each daily session was broken into 3 to 4 fifteen minute segments. The training sessions consisted of the techniques that the parents learned during the first session.

Sometime during their home training sessions, the parents in the DIR treatment group were required to record approximately 20 to 30 minutes of the training sessions using a video cassette recorder. This video was used to provide corrective feedback and was brought to the next meeting with the investigator.

Session two was held on March 4, 2006. The parents in the DIR treatment group were required to bring the training session video showing the parents training the child. This video was used for corrective feedback. The parents and child attended this session, but the interaction was only between the parent and child, with the investigator providing corrective feedback to the parent. The training session video was returned to the parents after this one-on-one session. At the end of the session, they were asked to continue the training at home and prepare to record their final home video of family interactions with the child.

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The parents in the control group did not receive instruction in home training; therefore, they provided only a pre-study and post-study video depicting the child engaging in natural play or interaction.

Session three was held on April 8, 2006. Only parents needed to attend this session, and all post-study videos from both groups were collected at this time. In this session, all parents were given the opportunity to provide anonymous input about the study to the investigator via a investigator made parent questionnaire.

Session four was a debriefing session and was held on April 29, 2006. Only parents needed to attend this session. No materials were needed for this session since only preliminary results from the data collection was discussed at this time.

At the end of the debriefing session, the parents in the control group were given the opportunity to sign up to receive training in the DIR method. For those who opted for the training, instruction was given to them for a period of six weeks, which was the same amount of time the DIR treatment group received. The parents were provided with specific guidelines and techniques for the DIR program and were provided with corrective feedback. The corrective feedback was given in two scheduled one-on-one meetings. The parents also received guidelines that explained how long the home training sessions should occur per day, as well as how many times per week to work with their child, and what is expected for each of the scheduled one-on-one meetings.

Data Collection and Analysis Procedure

The pre-study and post-study data was collected over an eight week period through the use of the BOI. Pre-study and post-study measures were gathered by viewing five minutes of the videos without coding, and then coding the subsequent ten minutes

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using the BOI. However, some videos were coded from the beginning of the tape due to extenuating circumstances, such as not having sufficient video tape data to code. Coding reliability was obtained by obtaining inter-rater reliability between four trained graduate students. The reliability was checked by the supervising professor. Reliability was maintained at 90 to 100 percent reliability.

The BOI, designed to address the current behavioral functioning of the child, calculates the frequency of certain behaviors. For this study, behavioral repetitive/stereotypies were measured, and of those include:

1. Rocking or other repetitive whole body movements,
2. Hand flapping,
3. Ritualism,
4. Finger/light stimulation,
5. Aggressive behavior to self, and
6. Aggressive Behavior to others.

Additionally, the parents attended from three to five sessions, depending on which group they were assigned, and received training in the DIR program or received an overview of the study. The DIR treatment group signed a consent form and then received DIR training, which included watching video clips from the P.L.A.Y. Project video by Dr. R. Solomon, and watching an investigator designed power point presentation based on the book *The Child with Special Needs: Encouraging Intellectual and Emotional Growth* by S. Greenspan and S. Wieder (1998). The control group signed a consent form and was given an overview of the study. Both groups submitted a pre-study and post-

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study family video tape. During the course of the study, the parents in the DIR treatment group received feedback about their progress with their children.

At the end of the study, all parents were asked to complete an investigator constructed parent rating scale. This rating scale measures the effectiveness of the study, based on the training subjects' view and their participation.

The various means of the data obtained were compared to determine if there was a change in behavioral repetitive/stereotypies as a result of the parent implementation or non-implementation of the DIR method.

A 2x2 repeated measures analysis of variance (ANOVA) was utilized in the analysis of obtained data. The first factor was a repeated measure or within-subjects factor between DIR treatment and control. The second factor was a between-subjects factor among pre-study and post-study data. The two null hypotheses were tested with an F distribution, with a working alpha of .05 and a reporting alpha of .05 (Box, 1953). Confirmatory and exploratory data analysis was used side by side (Tukey, 1977). In addition, when the null hypothesis is rejected the effect size is addressed through a partial eta squared.

Research Questions

Research Question One. Does a significant difference exist in the aggressive behavior of children with Autism in the DIR treatment condition and those in the control group?

The 95 percent confidence level ($P<.05$) was used as the criterion level for determining a statistical significance because of the small sample size that participated in the experimental design.

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Research Question Two. Does a significant difference exist in the self-stimulating behavior of children with Autism in the DIR treatment condition and those in the control group?

The 95 percent confidence level ($P<.05$) was used as the criterion level for determining a statistical significance because of the small sample size that participated in the experimental design.

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CHAPTER IV

RESULTS

The primary focus of this study was to determine if differences exist in the behavioral repetitive/sterotypies of children with Autism, specifically self-stimulating behaviors as well as aggressive behaviors. In order to address the research questions proposed in this study, several statistical analyses were performed. Initially, descriptive statistics were computed to obtain a better understanding of the data and to ensure that the data was adequate for conducting inferential statistics. The research questions are listed below for the convenience of the reader.

Two research questions were addressed in this study. These research questions are as follows:

1. Does a significant difference exist in the aggressive behavior of children with Autism in the DIR treatment condition and those in the control group?
2. Does a significant difference exist in the self-stimulating behavior of children with Autism in the DIR treatment condition and those in the control group?

Research Question One

Does a significant difference exist in the aggressive behavior of children with Autism in the DIR treatment condition and those in the control group?

In order to answer research question number one, a 2 x 2 repeated measures ANOVA was conducted. The descriptive statistics for this analysis can be found in Table 1.

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Table 1.

Descriptive Statistics for Aggressive Behavior

Descriptive Statistics

	Treatment Group	Mean	Std. Deviation	N
Pre Aggressive Total Score	Control	.00	.000	4
	DIR	.00	.000	4
	Total	.00	.000	8
Post Aggressive Total Score	Control	3.75	7.500	4
	DIR	.00	.000	4
	Total	1.88	5.303	8

The within-subjects factor was time and included the total aggressive behavior score before and after the intervention had taken place. The between-subjects factor was membership in a treatment group and had two levels (i.e. DIR or control group). Results of this within-subjects analysis can be found in Table 2. Results of the between-subjects analysis can be found in Table 3.

Table 2.

Within-subjects Repeated Measures Analysis for Aggressive Behavior

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
TIME	Sphericity Assumed	14.062	1	14.062	1.000	.356	.143
	Greenhouse-Geisser	14.062	1.000	14.062	1.000	.356	.143
	Huynh-Feldt	14.062	1.000	14.062	1.000	.356	.143
	Lower-bound	14.062	1.000	14.062	1.000	.356	.143
TIME * TG	Sphericity Assumed	14.062	1	14.062	1.000	.356	.143
	Greenhouse-Geisser	14.062	1.000	14.062	1.000	.356	.143
	Huynh-Feldt	14.062	1.000	14.062	1.000	.356	.143
	Lower-bound	14.062	1.000	14.062	1.000	.356	.143
Error(TIME)	Sphericity Assumed	84.375	6	14.062			
	Greenhouse-Geisser	84.375	6.000	14.062			
	Huynh-Feldt	84.375	6.000	14.062			
	Lower-bound	84.375	6.000	14.062			

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Table 3.

Between-subjects Repeated Measures Analysis for Aggressive Behavior

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	14.062	1	14.062	1.000	.356	.143
TG	14.062	1	14.062	1.000	.356	.143
Error	84.375	6	14.062			

Results of this analysis indicate that time had no significant influence in the aggressive behavior of children ($F = 1$, $p > .05$). In addition, there was no interaction effect between time and the treatment conditions ($F = 1$, $p > .05$). Furthermore, results did not yield any significant effects related to treatment conditions ($F = 1$, $p > .05$). Figure 1 illustrates the results obtained with respect to the aggressive behavior of children with Autism.

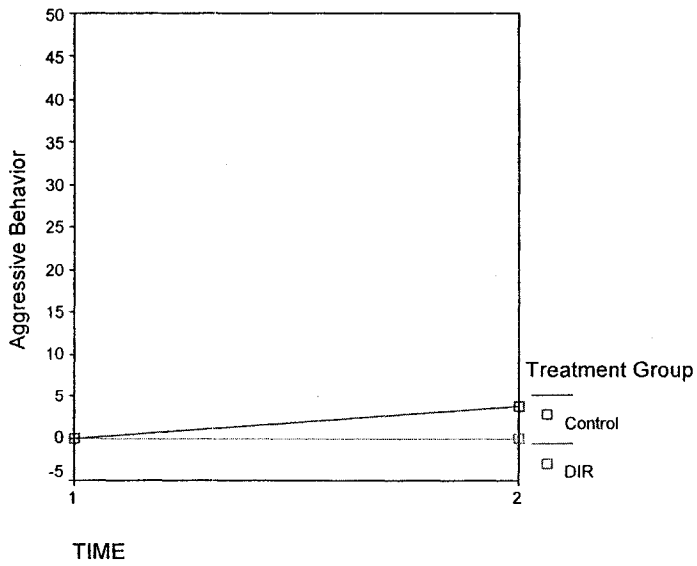

Figure 1. Repeated Measures Means Plot for Aggressive Behavior

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Research Question Two

Does a significant difference exist in the self-stimulating behavior of children with Autism in the DIR treatment condition and those in the control group?

In order to answer research question number two, a 2 x 2 repeated measures ANOVA was conducted. The descriptive statistics for this analysis can be found in Table 4.

Table 4.

Descriptive Statistics for Self-Stimulating Behavior

Descriptive Statistics

	Treatment Group	Mean	Std. Deviation	N
Pre Self-Stimulation Total Score	Control	5.00	10.000	4
	DIR	4.75	5.500	4
	Total	4.88	7.473	8
Post Self-Stimulation Total Score	Control	6.75	7.805	4
	DIR	4.50	8.347	4
	Total	5.62	7.577	8

The within-subjects factor, as in research question one, also was time and included the total self-stimulating behavior score before and after the intervention had taken place. The between-subjects factor was membership in a treatment group and also had two levels (i.e. DIR or control group). Results of this within-subjects analysis can be found in Table 5. Results of the between-subjects analysis can be found in Table 6.

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Table 5.

Within-subjects Repeated Measures Analysis for Self-Stimulating Behavior

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
TIME	Sphericity Assumed	2.250	1	2.250	.031	.866	.005
	Greenhouse-Geisser	2.250	1.000	2.250	.031	.866	.005
	Huynh-Feldt	2.250	1.000	2.250	.031	.866	.005
	Lower-bound	2.250	1.000	2.250	.031	.866	.005
TIME * TG	Sphericity Assumed	4.000	1	4.000	.055	.822	.009
	Greenhouse-Geisser	4.000	1.000	4.000	.055	.822	.009
	Huynh-Feldt	4.000	1.000	4.000	.055	.822	.009
	Lower-bound	4.000	1.000	4.000	.055	.822	.009
Error(TIME)	Sphericity Assumed	432.750	6	72.125			
	Greenhouse-Geisser	432.750	6.000	72.125			
	Huynh-Feldt	432.750	6.000	72.125			
	Lower-bound	432.750	6.000	72.125			

Table 6.

Between-subjects Repeated Measures Analysis for Self-Stimulating Behavior

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	441.000	1	441.000	7.565	.033	.558
TG	6.250	1	6.250	.107	.754	.018
Error	349.750	6	58.292			

Results of this analysis indicate that time had no significant influence in the self-stimulating behavior of children ($F = .031$, $p > .05$). In addition, there was no interaction effect between time and the treatment conditions ($F = .055$, $p > .05$). Furthermore, results did not yield any significant effects related treatment conditions ($F = .107$, $p > .05$). Figure 2 illustrates the results obtained with respect to the self-stimulating behavior of children with Autism.

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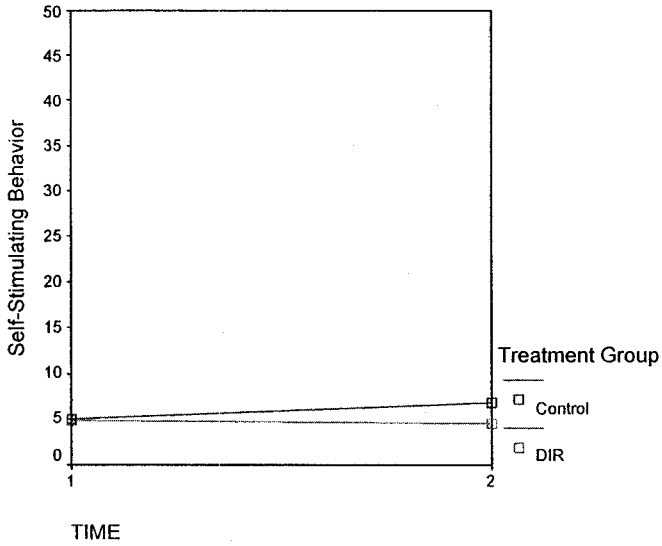

Figure 2. Repeated Measures Means Plot for Self-Stimulating Behavior

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CHAPTER V

CONCLUSION

Summary of the Literature Review

The number of children diagnosed with Autistic Disorder has increased in recent years. This increase is most likely due to more precise diagnosis and the availability of better diagnostic services.

According to the literature, Autism Spectrum Disorder (ASD) is defined as impairments in communication and social engagement, and includes restricted repetitive and stereotyped patterns of behaviors, interests, and activities. Although characteristics of Autism can vary greatly from child to child, the most common characteristics, according to Gail J. Richard, include: withdrawal, poor reality contact, delayed or splintered motor development, self-stimulation, splintered perceptual skills, perseveration, echolalia, poor identity concept, ritualism, mental rigidity, attention deficit, impaired social interaction, mechanical movement and/or speech, and perimeter walking (Richard, 1997).

Behavioral characteristics of Autism include self-stimulatory behaviors, ritualism, stereotypies, and aggressive behavior toward self and/or others. "Young children with autism are particularly at risk for the development of challenging behavior because of their delays in communication, language, and social development. Problem behavior, a form of communicative expression that is typical for young children without disabilities, often remains in the communicative repertoire of the child with autism because it works

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for the child (Donnellan, Mirenda, Mesaros, & Fassbender, 1984; Horner, Carr, Strain, Todd, & Reed, 2000)" (Buschbacher & Fox, 2003).

"Applied Behavioral Analysis (ABA) is structured around the behavioral theory of learning in that a child repeats behaviors that are positively rewarded and is less likely to repeat behaviors that are negatively rewarded" (Richman, 2003). ABA uses reinforcers to reward positive behaviors.

The Developmental, Individual-Difference, Relationship-Based (DIR) program, on the other hand, is used as an early intervention program to address and facilitate an improvement in the communication, thinking ability, and relating ability of a child diagnosed with an autism spectrum disorder. The DIR approach tries to help the parent discover which of the six developmental milestones their child has reached and which milestones need to be achieved. The milestones are defined by Greenspan and Wieder (1998) as: Milestone 1: Self-Regulation and Interest in the World, Milestone 2: Intimacy, Milestone 3: Two-way Communication, Milestone 4: Complex Communication, Milestone 5: Emotional Ideas, and Milestone 6: Emotional Thinking.

In order for a child to develop the necessary skills taught through the DIR or any other program, parental involvement is a critical factor. Parents can be taught program techniques, and a parent-trainer can use parent monitoring to provide feedback to the parents and make adjustments to their training if needed. Monitoring also provides a way for the trainer to oversee the outcomes of a program when parent training is involved. The goal is for the parents to absorb the information and learn to use the techniques themselves (Symon, 2005). An eventual goal of parent monitoring is to allow the parents to be actively involved in the education and interventions that their child is receiving.

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In this study, parent implementation of the Developmental, Individual-Difference, Relationship-Based (DIR) program was examined to determine if it had any effect on the changes in behavioral repetitive/stereotypies of children diagnosed with an Autism Spectrum Disorder (ASD).

The children involved in the study displayed varying levels of verbal and nonverbal abilities, as well as varying degrees of behavioral repetitive/stereotypies. These factors, along with others, contributed to the progress of the child receiving DIR treatment. The training subjects that participated were monitored to ensure they were correctly implementing the DIR program at home.

The behavioral repetitive/stereotypies of the children were observed. These behaviors consisted of the following: rocking or other whole body movements, hand-flapping, ritualism, finger/light stimulation, aggressive behavior to self, and aggressive behavior to others.

Results of the statistical analysis of the data yielded two research questions: (1) Does a significant difference exist in the aggressive behavior of children with Autism in the DIR treatment condition and those in the control group? and (2)Does a significant difference exist in the self-stimulating behavior of children with Autism in the DIR treatment condition and those in the control group? Repetitive and stereotyped behaviors were condensed into two groups. The first group was labeled aggressive behavior. This group consisted of the displayed aggressive behavior to self and aggressive behavior to others. The second group was labeled self-stimulating behaviors. This group consisted of the displayed rocking or other whole body movements, hand-flapping, and finger/light

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stimulation. The ritualism behavior was not considered in the statistical analysis because this behavior was not observed throughout the study.

The results of the statistical analysis indicated that there were no statistically significant differences in aggressive behaviors in the DIR treatment group or the control group. The results also indicated that there were no statistically significant differences in self-stimulating behaviors in the DIR treatment group or the control group.

Since the DIR program is focused on developing the social interactions and communication in children with autism, it is hypothesized that this may be the reason there was no statistical significance in behavioral repetitive/stereotpyies. The DIR program was chosen as the treatment of choice for this study because it is identified as an early intervention program. And, since the children in the study were between the ages of 18 months and 5 years, choosing the DIR program appeared to be the most appropriate choice of treatment.

The parent rating form collected at the end of the study, however, demonstrated important qualitative results. The parents assigned to the DIR treatment group reported feeling satisfied with the overall study, and reported seeing a decrease in their child's behavioral repetitive/stereotypies. The parents assigned to the control group, however, reported seeing a continuation of the behavioral repetitive/stereotypies in their children, and in some instances, an increase in behavioral repetitive/stereotypies.

It is important to keep in mind, however, that some children with ASD display behavioral repetitive/stereotypies due to a lack of communication/verbal abilities. Behavioral repetitive/stereotypies are also identified as being a part of the identifying characteristics of ASD. Therefore, results of this study indicate that the observed

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behavioral/stereotypies cannot be immediately changed if they are part of the child's natural array of characteristics.

During the debriefing session, after the parents were notified of their role in the study, the parents in the DIR treatment group expressed their desire to continue the treatment at home. They also acknowledged a need for the DIR treatment to be offered in the school setting as well. After the parents in the control group listened to the statements of the parents in the DIR treatment group, they expressed a willingness to receive the DIR treatment for six weeks after the study, as was promised to them. All parents agreed to participate in future research if it were offered to them.

Limitations of the study

The first limitation in the study was the study's length of time. The amount of time given to complete this study was not sufficient to be considered statistically significant. This may be due to the children's developmental levels. Because the children in the study were younger than five years old, immediate change in developmental differences cannot be observed.

A second limitation in the study was the small sample size. Out of the nine participants that were randomly selected, one participant dropped out at the end of the study, leaving four assigned to the DIR treatment group and four assigned to the control group. Although some differences may exist, the small sample size did not yield enough power to detect significant differences between the groups nor did it detect changes in the behavioral repetitive/stereotypies. Furthermore, the study cannot be generalized to the entire population of children diagnosed with ASD.

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A third limitation in the study was the lack of investigator environmental control. The families that participated in the study were asked to tape their videos at home. However, some families returned videos of their children outside the home environment. Also, the toys the families used to play with their children as well as the time of day the videos were taped may have also had an effect on the resulting behaviors of the children.

A fourth limitation in the data collection of this study was the differences in the children's level of intelligence and differences in derived diagnosis. The intelligence level was not considered in the group assignment, therefore, children who were functioning at different intellectual levels were grouped together. This factor may explain the continuation of the behavioral repetitive/stereotypies in some of the children. Furthermore, the children were diagnosed by various doctors and psychologists and with various assessments. This factor was also not considered during the group assignment.

A fifth limitation in the study was the lack of control of the outside therapies that some families were receiving. Some families reported receiving DIR or ABA treatment at home or school, whereas some families did not have these treatments. All families reported receiving some type of speech therapy or occupational or physical therapy.

Recommendations for future research

Future research should consider using a sample size of at least 30 participants for each group. A longer period of time for the study and using more data points is also recommended. Having more opportunities for observations and data collection may show a significant trend line or changes in behavioral repetitive/stereotypies.

Future researchers should also consider taping the videos in a controlled environmental setting, or should consider the implementation of the DIR program in a

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school setting to determine if there is any changes in behavioral repetitive/stereotypies. Although controlling the families' receipt of outside therapies is unethical, the acknowledgement of the outside therapies in future studies is necessary.

Lastly, future researchers should consider assessing the children's intellectual levels using the same type of intelligence test. Researchers should also consider performing a diagnostic test with all participants prior to beginning the study. This may aid in controlling for variables such as intelligence and diagnosis.

Summary

Overall, the statistical analysis of the implementation of the DIR program at home did not yield a significant change in the behavioral repetitive/stereotypies in children diagnosed with autism spectrum disorder. However, the parent's perspective of their children's behavioral repetitive/stereotypies, as demonstrated through the parent questionnaire and through the debriefing session, indicate there were some positive changes in their child's behaviors. Their perception of the current study enable this investigator to hypothesize that future research could be conducted to aid in the determination of a significant change in behavioral repetitive/stereotypies using the DIR program over a longer period of time and with more investigator control of intervening variables.

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APPENDICES

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APPENDIX A:

BEHAVIORAL OBSERVATION INSTRUMENT

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Researcher:

Observable Interactions Non-Verbal COMMUNICATION	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Hand over Hand							
2. Declarative Pointing							
3. Pulling or taking person to meet their needs							
4. Instrumental Reaching							

Observable Interactions Non-Verbal COMMUNICATION	7:00	8:00	9:00	10:00
1. Hand over Hand				X
2. Declarative Pointing				X
3. Pulling or taking person to meet their needs				X
4. Instrumental Reaching				X

Observable Interactions Non-Verbal COMMUNICATION	Subtest Totals	Non-Verbal Communicaiton Grand Total
1. Hand over Hand	0	
2. Declarative Pointing	0	
3. Pulling or taking person to meet their needs	0	
4. Instrumental Reaching	0	0

Notes:

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Researcher:

SOCIAL INTERACTION	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Eye gaze (2 seconds or more)							
2. Responding to name*							
3. Joint attention							
4. Positive Display of Emotions							
SOCIAL INTERACTION	7:00	8:00	9:00	10:00			
1. Eye gaze (2 seconds or more)				X			
2. Responding to name*				X			
3. Joint attention				X			
4. Positive Display of Emotions				X			
SOCIAL INTERACTION	Subtest Totals			Social Interaction Total			
1. Eye gaze (2 seconds or more)	0						
2. Responding to name*	0						
3. Joint attention	0						
4. Positive Display of Emotions	0						0

Name Called:	0:00	1:00	2:00	3:00	4:00	5:00	6:00
	7:00	8:00	9:00	10:00			
				X			
	Total						
	0						

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Researcher:

SOCIAL INTERACTION Negative	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Display of negative emotion							
SOCIAL INTERACTION Negative	**7:00**	**8:00**	**9:00**	**10:00**			
1. Display of negative emotion				X			
SOCIAL INTERACTION	**Subtest Totals**		**Social Interaction Total**				
1. Display of negative emotion	0						= 0

Notes:

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Researcher:

Verbal Positive	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Verbally Responds to questions or commands							
2. One word utterances							
3. Multiple word utterances							
4. Appropriate verbal behavior (prelinguistic babble)							

Verbal Positive	7:00	8:00	9:00	10:00
1. Verbally Responds to questions or commands				X
2. One word utterances				X
3. Multiple word utterances				X
4. Appropriate verbal behavior (prelinguistic babble)				X

Verbal Positive	Subtest Totals	Verbal Positive Total
1. Verbally Responds to questions or commands	0	
2. One word utterances	0	
3. Multiple word utterances	0	
4. Appropriate verbal behavior (prelinguistic babble)	0	0

Notes:

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Researcher:

Verbal Negative	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Immediate Echolalia							
2. Delayed Echolalia							
Verbal Negative	**7:00**	**8:00**	**9:00**	**10:00**			
1. Immediate Echolalia				X			
2. Delayed Echolalia				X			
Verbal Negative	**Subtest Totals**			**Verbal NegativeTotal**			
1. Immediate Echolalia			0				
2. Delayed Echolalia			0				0

Notes:

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Researcher:

BEHAVIORAL REPETITIVE/STEREOTYPIES	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Rocking or other repetitive whole body movements							
2. Hand-flapping							
3. Ritualism							
4. Finger/ light stimulation							
5. Aggressive Behavior to self							
6. Aggressive Behavior to others							

BEHAVIORAL REPETITIVE/STEREOTYPIES	7:00	8:00	9:00	10:00
1. Rocking or other repetitive whole body movements				X
2. Hand-flapping				X
3. Ritualism				X
4. Finger/ light stimulation				X
5. Aggressive Behavior to self				X
6. Aggressive Behavior to others				X

BEHAVIORAL REPETITIVE/STEREOTYPIES	Subtest Totals	Behavioral Repetitive/Sterotypies
1. Rocking or other repetitive whole body movements	0	
2. Hand-flapping	0	
3. Ritualism	0	
4. Finger/ light stimulation	0	
5. Aggressive Behavior to self	0	
6. Aggressive Behavior to others	0	0

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Researcher:

PLAY Positive	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Symbolic play							
2. Imaginary play							
3. Appropriate play with toys							
PLAY Positive	7:00	8:00	9:00	10:00			
1. Symbolic play				X			
2. Imaginary play				X			
3. Appropriate play with toys				X			
PLAY Positive	Subtest Totals			Play Positive Totals			
5. Symbolic play Positive	0						
6. Imaginary play Positive	0						
7. Appropriate play with toys Positive	0			0			

Notes:

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Researcher:

PLAY Negative	0:00	1:00	2:00	3:00	4:00	5:00	6:00
1. Nonfunctional play							
2. Inappropriate play with toys							
3. Perseveration Negative							
4. Inappropriate play with objects							
PLAY Negative	7:00	8:00	9:00	10:00			
1. Nonfunctional play				X			
2. Inappropriate play with toys				X			
3. Perseveration				X			
4. Inappropriate play with objects				X			

PLAY Negative	Subtest Totals	Play Negative Totals
1. Nonfunctional play	0	
2. Inappropriate play with toys	0	
3. Perseveration	0	
4. Inappropriate play with objects	0	0

Notes:

APPENDIX B:

OPERATIONAL DEFINITIONS

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OPERATIONAL DEFINITIONS

Autism. Autism is defined by the Diagnostic and Statistical Manual of Mental Disorders-IV-TR as impairments in social interaction as manifested by a marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction; failure to develop peer relationships appropriate to developmental level; a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people; and lack of social or emotional reciprocity (American Psychiatric Association, 2000).

Applied behavioral analysis (ABA). ABA is a program structured around the behavioral theory of learning in that a child will repeat behaviors that are positively rewarded and is less likely to repeat behaviors that are negatively rewarded.

Behavior repetitive/stereotypies. Behavior repetitive/stereotypies are defined as any atypical movements exhibited in a repetitious manner. The following list is an example of behavior repetitive/stereotypies that will be observed using the behavioral observation instrument.

HF Hand flapping-rapid waving of the hand generally done around eyes or face.

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R Ritualism - applying order to routines or objects, such as lining up objects or entering and exiting through only one entrance in a room.

SS Self-Stimulation-an atypical preservation use of objects, such as fanning pages of a book

FF Finger/Light Filtering-Repetitious use of fingers which covers the eyelids.

ABS Aggressive behavior to self-any behavior which seems as if it causes pain to the individual that is initiated by the individual such as self biting.

ABO Aggressive behavior to others-any behavior which seems as if it causes pain to another individual.

Developmental, Individual-Difference, Relationship Based (DIR) program – DIR, in this study, is used as an early intervention program to address and facilitate an improvement in the communication, thinking ability, and relating ability of a child diagnosed with an autism spectrum disorder.

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APPENDIX C:

PARENT RATING FROM (ENGLISH)

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Parent Rating Form

Please answer the following statements regarding your experience with the treatment improvement with regard to this study. In this scale 0 represents completely disagree, graduating to 4 which represent the completely agree. Please add any additional comments you feel necessary.

1. My child has made progress in the eight week period of this study.

   0 1 2 3 4

2. My child's inappropriate behaviors have decreased.

   0 1 2 3 4

3. My child's appropriate behaviors have increased.

   0 1 2 3 4

4. My child's repetitive behaviors have decreased.

   0 1 2 3 4

5. My child's use of meaningful gestures have increased

   0 1 2 3 4

6. My child initiates more communication.

   0 1 2 3 4

7. My child's vocabulary has increased.

   0 1 2 3 4

8. My child is more social toward family members.

   0 1 2 3 4

9. My child uses more eye contact.

   0 1 2 3 4

10. My child exhibits more appropriate play.

    0 1 2 3 4

Comments: _____

_____

_____

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APPENDIX D:

PARENT RATING FORM (SPANISH)

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Cuestionario para Padres

Favor de contestar las siguientes preguntas. En esta escala 0 representa no estoy de acuerdo totalmente y 4 representa estoy de acuerdo totalmente. Favor de agregar cualquier comentario que sea necesario.

1. Mi niño ha hecho progreso en estas 8 semanas del estudio.

   0 1 2 3 4

2. Los comportamientos impropios de mi niño han disminuido.

   0 1 2 3 4

3. Los comportamientos apropiados de me niño aumentaron.

   0 1 2 3 4

4. Los comportamientos repetitivos de su niño han disminuido.

   0 1 2 3 4

5. El uso de ademanes o gestos significativos ha aumentado.

   0 1 2 3 4

6. Mi niño inicia más comunicación.

   0 1 2 3 4

7. El vocabulario de mi niño ha aumentado.

   0 1 2 3 4

8. Mi niño es más sociable con los miembros de la familia.

   0 1 2 3 4

9. Mi niño usa más contacto visual.

   0 1 2 3 4

10. Mi niño demuestra más juego apropiado.

    0 1 2 3 4

Comentarios: _____

_____

_____

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APPENDIX E:

IRB FORM A

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Federal Assurance Number # FWA00000805 Reviewed by: _____ UTPA IRB#: _____

FORM A (Full or Expedited Review)
Summary Cover Sheet
The University of Texas – Pan American Institutional Review Board

Are you requesting a ☒ Full Review ☐ Expedited Review

Project Title: 8 Week Autism Study

Principal Investigator (PI) Name: See Attached PI Email address: See Attached

PI Classification Graduate Student

If student, provide name of Faculty Advisor: Dr. Terry Overton

If "Other" please describe: N/A

PI Mailing address: See Attached

PI College/Department: College of Education Faculty Advisor College/Department: Educational Psychology

PI Campus Mail: N/A Faculty Advisor Campus Mail: Enter HERE if applicable

PI Telephone #: See Attached Faculty Advisor Telephone #: 956-381-3468

PI Fax #: 0

Sub-Investigators/Key study personnel: N/A

Sub-Investigators/Key study personnel Role: N/A Sub-Investigators/Key study personnel Tel # 0

Type of study: Experimental

If prospective, Estimated Project start date: 01/28/06 Estimated Project end date: 04/29/06

If retrospective, Data extraction beginning date:N/A Data extraction ending date:N/A

Subjective Estimate of Risk to Participants None

Sex of participants Male and Female Age(s): 18 months-5 years Total # participants 90

Vulnerable populations: Children

Source of Participants (check all that apply)
- ☐ Psychology Subject Pool
- ☐ Other UTPA Students
- ☒ Community
- ☐ Prisons
- ☒ Schools
- ☒ Other, please specify: Describe HERE

Subject Recruitment (check all that apply)
- ☐ Class Announcements
- ☒ Direct Person to Person Contact
- ☐ Telephone Solicitation
- ☒ Posted Notices (please attach)
- ☐ Newspaper Ad (please attach)
- ☐ Letter (please attach)

Will deception be used? ☐ Yes ☒ No If "Yes", please attach a debriefing form
Will compensation be provided? ☐ Yes ☒ No If "Yes", please attach conditions, schedule of payment

Location of Experiment: University Texas Pan American College of Education Clinic

Invasive or Sensitive Procedures (check all that apply)
- ☐ Blood Samples
- ☐ Urine Samples
- ☐ Stress Exercise
- ☐ Physical Measurements (e.g. electrodes)
- ☐ Psychological Inventory
- ☐ rDNA
- ☐ Review of Medical Records
- ☐ Other, please specify: Describe HERE

Sensitive Subject Matter (check all that apply)
- ☐ Alcohol, Drugs, Sex
- ☐ Depression/Suicide
- ☐ Learning Disability
- ☒ Other, please specify: Autism

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Federal Assurance Number # FWA00000805 Reviewed by: _____ UTPA IRB#: _____

FORM A (Full or Expedited Review)
Summary Cover Sheet
The University of Texas – Pan American Institutional Review Board

Use of Video and/or Audio Tapes (select from list): N/A
☐Check here if video/audio will be retained
If box above is checked, retained for how long? Enter HERE
☐Check here if video/audio will be destroyed
☒Check here if video/audio use is specified in Informed Consent

Provisions for Confidentiality/Anonymity (check all that apply)
☐Replies Coded
☒Secure Storage
☐Anonymous Response
☒Confidential Response

Will you be advertising for research subjects? Click here to select
If yes, indicate the type of advertising:

☒Posted Circulars ☐Newspaper or Magazines ☐Television or Radio ☐Internet ☐Other

Type of Informed Consent: Type of informed consent
If you're requesting a waiver from informed consent, please explain your rationale: Enter N/A if not applicable

Informed Consent forms must be kept on file for at least 3 years after the completion of the project. Please specify the exact location where signed Informed Consent forms will be filed: College of Education Clinic Rm. 1.272A

Please indicate what type of IRB training you have completed:
☒ORHP *Web-based* training, completed on (MM/DD/YY)
☐UTPA IRB Workshop, completed on N/A

Will there be unique identifiers between the data and the research subject (i.e. SSN#, names) ☐Yes ☒No

Will the research data be accessible to anyone other than the P.I., P.I. support personnel, the IRB and the sponsor? ☐Yes ☒No

If yes, who: Enter if applicable

Could any part of this activity result in identifying criminal activities? ☐Yes ☒No

Could this activity expose communicable diseases (HIV, TB)? ☐Yes ☒No

Could this research result in identifying possible domestic abuse (child or adult)? ☐Yes ☒No

Have you requested a Certificate of confidentiality? ☒Yes ☐No

Please read below:

Incomplete forms will be returned without processing. This means all items in read must be addressed, please type N/A when not applicable. When complete please deliver a copy of this form along with other required documents to the Office of Research and Sponsored Projects, Room 2.316 of the Math and General Classroom (MAGC) building. For off campus mailing address to:
The Office of Research and Sponsored Projects, MAGC Building, The University of Texas Pan American, 1201 University Drive, Edinburg Texas, 78541-2999. For further assistance call 956-384-5004, or email at sponpro@panam.edu

It is recommended that you save a copy of this form on a diskette or on your hard drive before filling out the form so you will have a copy of the template. When you have completed the form, rename the file with suitable name related to your project title, the PI name or the focus group.

Thanks,

Office of Research and Sponsored Projects

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APPENDIX F:

IRB FORM C

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FORM C
PROTOCOL FOR HUMAN SUBJECTS
IN RESEARCH

PART I.

Project Title: 8 Week Autism Study

Co-Investigator 1 Jessica Gonzalez	E-mail: Jesssoto22@yahoo.com	Department: Campus Address:
Co-Investigator 2 Joy Cain	E-mail: Joycain@direcway.com	Department: Campus Address:
Co-Investigator 3 Melissa Ann Perez	E-mail: Starchild46659@aol.com	Department: Campus Address:
Co-Investigator 4 Yvette Cantu	E-mail: Tobicant123@hotmail.com	Department: Campus Address:
Graduate Advisor Terry Overton	E-mail: Overtont@panam.edu	Department: Ed. PSY Campus Address: EDUC 1.226
Department Head Hector Ochoa	E-mail: Shochoa@panam.edu :	Department: Ed. PSY Campus Address: EDUC 1.226

PART II.

I have read The Public Health Service Act as Amended by The National Institutes of Health Revitalization Act of 1993 Public Law 103-43, June 10, 1993—The Code of Federal Regulations Title 45 CFR Part 46. Furthermore, I have read the Belmont Report, "Ethical Principles and Guidelines for the protection of Human Subjects of Research" and subscribe to the principals it contains. I understand that I must keep a copy of Title 45 CFR Part 46 and the Belmont report in my files along with this proposal. Included in this proposal where applicable are specific citations that relate to specific elements of 45 CFR Part 46. I have completed the Human Subjects Assurance Training at http://cme.nci.nih.gov/ In view of this declaration; I present for the Board's consideration of the following information that will be explained to the subject about the proposed research.

PART III.

EXPERIMENTAL PROCEDURE:

The purpose of this study is to examine the differences between three different treatment methods in which parents will be trained by researchers using the Applied Behavioral Analysis (ABA) approach, or the Developmental, Individual-Difference Relationship-Based (DIR/Floortime) approach, or The Picture Exchange

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Communication System (PECS) which are strategies designed to help children diagnosed with Autism Spectrum Disorder (ASD). Participants will be selectively assigned to treatment groups. The examiners will observe twenty minutes of interaction between the parent and the child on video tapes. The results of the study will determine which group shows the most significant gains in social behaviors, communication skills, play, and behavioral-repetitive/stereotypies as a result of the parent or non-parent monitoring. The study will also examine the differences between all treatment groups using parent monitoring and treatment groups using non-parent monitoring to determine if the type of treatment offered to the parent and child may have an impact on social behaviors, communication skills, play, and behavioral-repetitive/stereotypies.

PART IV

RISK AND BENEFITS TO SUBJECTS:

There is no health risk associated with this investigation. Every effort will be made to maintain confidentiality and all observation forms as well as the pretests and posttests will be in a locked cabinet in the University of Texas Pan-American Educational Psychology Clinic in the Educational Psychology Department. The purpose of this study is to investigate the differences between parent monitoring and non-parent monitoring in ABA, DIR, and PECS programs designed for children diagnosed with ASD. There are no direct benefits associated with this investigation for each subject; however, the parent will be offered the opportunity to receive information on the monitoring process. Once the investigation is completed, parents, the control group, parents who did not receive parent training, will be offered training through the University of Texas Pan-American Autism Educational Psychology Clinic.

PART V

SOURCE OF SUBJECTS:

Approximately 90 parents with children between the ages of 18 months and 5 years old and diagnosed with ASD will be asked to volunteer for the investigation. Subjects will consist of parents with children diagnosed with

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ASD in the Region One Area. The children will be solicited from Rio Grande Valley school districts or private practices.

Instrument

Data will be collected through the use of an examiner constructed instrument. The data collection instrument is provided in the appendix section of the pre-proposal. This instrument will be used at one interval during the study, and as a pretest and posttest measure. The instrument is designed to address the current adaptive functioning of the child. Adaptive functioning is defined as behavioral characteristics, communication skills, and developmental abilities that the child possesses at the time of the test. The operational definitions used for this study are provided in the appendix section of the pre-proposal. The examiner will use the instrument to calculate how many times an interaction occurs between the parent and the child during a twenty minute video taped session. In addition to this instrument, a parent rating scale will be used to evaluate the effectiveness of the study. This scale is provided in an appendix section of the pre-proposal.

Procedure

Following IRB approval, the examiner will obtain consent from the parent so that they and their child can participate in the study. The form will also allow the examiner to view and analyze videotaped sessions of parent-child interactions.

The data will be collected over a two month period; and at three times during the study, the examiner will measure the progress of the parent training through the use of the examiner constructed instrument. Parents will be asked to attend one to six Saturday meetings, depending on the group they are assigned to, so that they may receive training in one of the programs and receive a program parent training guidelines. During the course of the study, parents in the experimental groups will receive feedback about their progress with their children. At the end of the study, all parents will complete a parent rating scale. This rating scale will measure the effectiveness of the study, based on the parents' view and their participation. All parents, including those who are in the control group, will have the opportunity to receive training from the examiner in the program of their choice at the end of the study.

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PART VI

REQUIRED SIGNATURES FOR CURRENT INVESTIGATION:

Co-Investigator 1 _____ Date _____
Jessica Gonzalez

Co-Investigator 2 _____ Date _____
Joy Cain

Co-Investigator 3 _____ Date _____
Melissa Ann Perez

Co-Investigator 4 _____ Date _____
Yvette Cantu

Graduate Advisor _____ Date _____
Terry Overton, Ed. D

Department Head _____ Date _____
Hector Ochoa, Ph. D.

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APPENDIX G:

DIR MONITORED CONSENT FORM (ENGLISH)

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UTPA IRB
JN 24 07
Expires

The University of Texas - Pan American

Informed Consent Form

Study Title: 8 Week Autism Study

Investigators: Jessica S. Gonzalez
Joy Cain
Melissa Ann Perez
Yvette Cantu
Terry Overton, Ed. D.

This research study is being conducted as partial fulfillment of a Master's Degree at the University of Texas Pan-American by the above referenced investigators, supervised by Terry Overton, Ed.D.

Background: We are conducting a research study to compare the effectiveness of three different eight-week training programs for children (18 months to 5 years old) diagnosed with Autism Spectrum Disorder (ASD). These training programs are known as Applied Behavioral Analysis (ABA), Developmental Individual-Difference Relationship-Based (DIR), and The Picture Exchange Communication System (PECS). We are also interested in whether the effectiveness of the training programs is influenced by whether or not parents are monitored and given regular feedback during the program. In order to study these factors, we will be assigning participants to one of seven different groups. There will be two groups (one "monitored", one "not monitored") for each of the three different training programs (ABA, DIR, and PECS), plus an extra group of no treatment (control) participants.

In keeping with accepted research practices, participants cannot self-select the specific training group. Instead, we must assign you to one of the research groups by random drawing. You have been assigned to the group described below under "Procedure". At the end of the study there will be a debriefing session and you will have the opportunity to receive free training in your choice of any one of the alternative methods. As with any other questions that might arise, feel free to ask the researcher to explain this in more detail before you agree to participate.

Procedure: You have been assigned to the Developmental, Individual-Difference Relationship-Based/Floortime Monitored Parent (DIR/Floortime Monitored) group. The Developmental, Individual-Difference Relationship-Based/Floortime (DIR) method is a developmental method that is targeted to the child's developmental stages of life. This method involves learning how to utilize the child's developmental cues to increase social interactions which are initiated by the child. Because DIR is reliant on the child's developmental stage, the researcher will discuss treatment procedures with the parents during the second of the five sessions. You will be asked to attend 5 Saturday meetings lasting a maximum of two-hours each, at the University of Texas Pan-American clinic, located in the Educational Psychology Department. In between meetings, you will also be expected to apply the training program at home with your child following specific guidelines. A summary of the 8 week schedule is provided below.

Session 1: February 11, 2006, DIR group meeting. Introduction to UTPA 8 Week Autism Study. Sign up for one-on-one appointments for Sessions 2, and 3. Only parents are to attend session 1, 4, and 5.

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Session 2: By individual appointment. Parents are to bring a home video taken recently (no more than six months old) that depicts the child interacting in a normal family setting. This video is to be left at the UTPA clinic. The parents and the child are to attend session 2, but the interaction will be between the parent and child with the researcher providing corrective feedback to the parent. The researcher will teach the parents DIR/Floortime objectives to use with the child in the home setting based on the child's developmental needs.

Home training 1 consists of 4 – 5 focused training sessions per week that total from 45 minutes to 1 hour per day, and which are broken into 3 – 4 fifteen minute segments. Focused training sessions consist of using the techniques learned during the private meeting between the parent and the researcher. Sometime in this period, the parents are to record approximately 20 – 30 minutes of training time using a video cassette recorder. The video tape is to be brought to the next meeting with the researcher.

Session 3: March 4, 2006, one-on-one appointment. Parents are to bring the home training 1 video showing the parents working with the child using the DIR method, as previously mentioned. Parents and child are to attend session 3, but the interaction will be between the parent and child with the researcher providing corrective feedback to the parent. In this training session, the parents will meet with the researcher, and discuss the progress of the training. Together they will view random selections of video 1 so that the researcher may offer the parents corrective feedback. Video 1 will be returned to the parents after the one-on-one session.

Home training 2 consists of 4 – 5 focused training sessions per week that total from 45 minutes to 1 hour per day, which are broken into 3 – 4 fifteen minute segments. Focused training sessions consist of using the techniques learned during the private meeting between the parents and the researcher. Sometime in this period, the parents are to record approximately 20 – 30 minutes of the child interacting in a non-staged, normal family setting, such as a birthday party or family outing, using a video cassette recorder. The family video tape is to be brought to the next meeting with the researcher.

Session 4: April 8, 2006, DIR group meeting. Parents are to bring the family video tape with them. The family video tape is to be taken at any time between sessions 3 and 4, and is to be left with the researcher. In session 4, parents will be given the opportunity to provide anonymous input to the researcher via a questionnaire. Only parents are to attend this meeting

Debriefing Session 5: April 22, 2006, DIR group meeting. No materials will be needed for this session. Preliminary results from the data collection will be discussed. Only parents are to attend this meeting.

At home training will involve applying the principles learned during the training sessions to interaction with your child. You will be expected to work a minimum of 3 hours per week using the techniques, but no more than 5 hours per week.

In addition to the training sessions, we will need you to provide two to three home video tapes (15 to 30 minutes in length) of you and your child interacting in a natural family environment. We will be using these tapes to evaluate changes in your child's behavior over the eight-week

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program. Your tapes will be stored in a locked cabinet located at the UTPA clinic, identifiable only by a number. These tapes will be returned to you at the end of the study on or before April 30, 2006.

Risks or Possible Discomforts Associated with the Study: There are no anticipated risks associated with your participation in this study.

Benefits of Participation: There are no direct benefits associated with this study.

Voluntary Participation: Your participation in this study is voluntary; you may discontinue your participation at any time without penalty. If for any reason you decide that you would like to discontinue your participation, simply tell the researcher that you wish to stop. The researcher retains the right to discontinue the session and reschedule the session should the need arise. The researcher also retains the right to discontinue the research process.

Anonymity and/or Confidentiality: Every effort will be made to maintain confidentiality and all data will be stored in a locked cabinet at the University of Texas Pan-American clinic in the Educational Psychology Department. Results from the investigation will be reported in aggregate form, no names will be used that could identify any respondent(s). If the provided video-tapes reveal any illegal behavior, it will be reported to the necessary authorities as required by state law, and termination of your participation in this study will be required.

Who to Contact for Research Related Questions: For questions about the research itself, or to report any adverse effects during or following participation, contact the graduate student's advisor Terry Overton, Ed. D. at 956-381-3468 (overtont@panam.edu)

Who to Contact Regarding Your Rights as a Participant: If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, contact the Institutional Review Board for Human Subjects Protection at 956-384-5004.

Signatures: By signing below, you indicate that you are voluntarily agreeing to participate in this study and are also providing parental consent for your child to participate. You are also indicating that the procedures involved have been described to your satisfaction. The researcher will provide you with a copy of this form for your own reference.

_____ ____/____/_____

Parent/Legal Guardian's Signature Date

_____ _____

Parent' Name/s (Please Print) Child's Name (Please Print)

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APPENDIX H:

DIR MONITORED CONSENT FORM (SPANISH)

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Approved by UTPA IRB

JAN 24 '07

Expires

The University of Texas - Pan American

Forma De Consentimiento

Título Del Estudio: Estudio De Autismo De 8 Semanas

Investigadores: Jessica S. Gonzalez
Joy Cain
Melissa Ann Perez
Yvette Cantu
Terry Overton, Ed. D.

Este estudio de investigación está siendo conducido como cumplimiento parcial de un masters en la Universidad de Texas – Pan American por los investigadores arriba referidos, supervisada por Terry Overton, Ed.D.

Antecedentes: Estamos conduciendo un estudio de la investigación para comparar la eficacia de tres diversos programas de entrenamiento en ocho semanas para los niños (18 meses a 5 años) diagnosticados con el desorden del espectro de Autismo (ASD). Estos programas de entrenamiento se conocen como el análisis del comportamiento aplicado (ABA), la Individual-Diferencia de desarrollo Relacion-Basada (DIR), y el sistema de comunicación del intercambio del cuadro (PECS). También estamos interesados adentro si la eficacia de los programas de entrenamiento está influenciada cerca si o no supervisan a los padres y regeneración regular dada durante el programa. Para estudiar estos factores, asignaremos a participantes a uno de siete diversos grupos. Habrá dos grupos (uno "supervisado", uno "no supervisado") para cada uno de los tres diversos programas de entrenamiento (ABA, DIR, y PECS), más un grupo adicional de ningunos participantes del tratamiento (control).

En armonía con prácticas aceptadas de la investigación, los participantes no pueden uno mismo-seleccionan a grupo específico del entrenamiento. En lugar, debemos asignarle a uno de los grupos de investigación por el dibujo al azar. Le han asignado al grupo descrito abajo "procedimiento". En el final del estudio habrá una sesión de interrogatorio y usted tendrá la oportunidad de recibir el entrenamiento libre en su opción de los métodos alternativos. Como con cualquieres otras preguntas que pudieran presentarse, sensación libremente para pedir que el investigador explique esto más detalladamente antes de que usted acuerde participar.

Procedimiento: Le han asignado al de desarrollo, grupo supervisado Relationship-Based/Floortime del padre de la Individual-Diferencia (DIR/Floortime supervisado). El de desarrollo, método de la Individual-Diferencia Relationship-Based/Floortime (DIR) es un método de desarrollo que se apunta a las etapas de desarrollo del niño de la vida. Este método implica el aprender de cómo utilizar las señales de desarrollo del niño para aumentar las interacciones sociales que son iniciadas por el niño. Porque DIR es confiado en la etapa de desarrollo del niño, el investigador discutirá procedimientos del tratamiento con los padres durante el segundo de las cinco sesiones. Le pedirán asistir a 5 reuniones de sábado que duran un máximo de dos horas cada uno, en la clínica de la Universidad de Texas – Pan American, situada en el departamento psicología educativa.

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Entre reuniones, usted también se esperará que aplique el programa de entrenamiento en la casa con su niño que sigue pautas específicas. Un resumen de las 8 semanas se proporciona abajo.

Sesión 1: El 11 de Febrero 2006, reunión del grupo DIR supervisado. Introducción al UTPA estudio de Autismo de 8 semanas. Padres firmen para citas de uno-a-uno para las sesiones 2, y 3. Solamente los padres asistiran en sesiones 1, 4, y 5.

Sesión 2: De cita de uno-a-uno. Los padres deben de traer unas cintas vídeo tomado recientemente (no más de seis meses de viejo) que represente a niño que obra recíprocamente en un ajuste normal de la familia. Este cinta vídeo debe quedarse en la clínica de UTPA. Los padres y el niño atended la sesión 2, pero la interacción estará entre el padre y el niño con el investigador proporcionando la regeneración correctiva al padre. El investigador enseñará a los padres objetivos de DIR/Floortime para utilizar con el niño en la casa del hogar basado en las necesidades de desarrollo del niño.

El entrenamiento en la casa 1 consiste de 4 a 5 sesiones de entrenamiento enfocadas por semana que suman a 45 minutos a 1 hora por día cada una, que están quebrados en 3 a 4 segmentos de quince minutos. Las sesiones de entrenamiento enfocadas consisten en las técnicas aprendidas durante la reunión privada entre los padres y el investigador y deben ser utilizados en el comportamiento apuntado. Alguna vez en este período, los padres deben de grabar aproximadamente 20 a 30 minutos de tiempo de entrenamiento usando un aparato de vídeo. La cinta video debe ser traída con el investigador a la reunión siguiente.

Sesión 3: El 4 de Marzo 2006, la cita de uno-a-uno. . Los padres deben de traer al entrenamiento 1 cinta vídeo que demuestra a los padres entrenando al niño en el método de DIR, según lo mencionado previamente. Los padres y el niño deben de atender la sesión 3, pero la interacción estará entre el padre y el niño con el investigador proporcionando la regeneración correctiva al padre. En esta sesión del entrenamiento, los padres satisfarán con el investigador, y discuten el progreso del entrenamiento, y miran unas selecciones de la cinta de vídeo 1 para ofrecer a los padres la regeneración correctiva. La cinta vídeo 1 serán vueltas a los padres después del sesión.

El entrenamiento en la casa 2 consiste de 4 a 5 sesiones de entrenamiento enfocadas por semana que suman a 45 minutos a 1 hora por día cada una, y que están quebrados en 3 a 4 segmentos de quince minutos. Las sesiones de entrenamiento enfocadas consisten en las técnicas aprendidas durante la reunión privada entre los padres y el investigador, y deben ser utilizadas en el comportamiento apuntado. Alguna vez en este período, los padres deben de grabar aproximadamente 20 a 30 minutos de tiempo del niño recíprocamente en un ajuste no-efectuado, normal de la familia, tal como una fiesta o cumpleaños, usando un aparato de vídeo. La cinta video de la familia debe ser traída con el investigador a la reunión siguiente.

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Sesión 4: El 8 de Abril 2006, reunión de grupo de DIR. Los padres deben de traer la cinta video 2 con ellos. La cinta video 2 debe ser tomada en cualquier momento entre las sesiones 3 y 4, y dado al investigador. En la sesión 4, los padres tienen la oportunidad de proporcionar una entrada anónima al investigador vía un cuestionario. Solamente los padres asistiran en esta reunión.

Interrogatorio De la Sesión 5: El 22 de Abril 2006, reunión de grupo de DIR. No hay materiales necesarios para esta sesión. Los resultados del preliminar de la colección de datos serán discutidos en esta sesión. Solamente los padres asistiran en esta reunión.

El entrenamiento en la casa implicará a aplicar los principios aprendidos durante los sesiones del entrenamiento a la interacción con su niño. Usted se esperará que trabaje un mínimo de 3 horas por semana usando las técnicas, pero no más de 5 horas por semana.

Además de las sesiones del entrenamiento, le necesitaremos proporcionar dos a tres cintas video (15 a 30 minutos en longitud) de usted y de su niño recíprocamente en un ambiente natural de la familia. Utilizaremos estas cintas video para evaluar cambios en el comportamiento de su niño sobre el programa de ocho semanas. Sus cintas video serán alzadas en un gabinete trancado y situado en la clínica de UTPA, identificable solamente por un número. Estas cintas video serán vueltas en el final del estudio o antes de abril del 30 de 2006.

Los riesgos o los malestares posibles asociado con el estudio: No hay riesgos anticipados asociados con su participación en este estudio.

Ventajas de la participación: No hay ventajas directas asociadas con este estudio.

Participación Voluntaria: Su participación en este estudio es voluntaria; usted puede discontinuar su participación en cualquier momento sin pena. Si por cualquier razón usted decide que usted quisiera discontinuar su participación, simplemente diga el investigador que usted desee parar. El investigador conserva la derecha de discontinuar la sesión y de cambiar la hora de la sesión si se presenta la necesidad. El investigador también conserva la derecha de discontinuar el proceso de la investigación.

Anonimato y/o secreto: Cada esfuerzo será hecho de mantener secreto y todos los datos serán alzados en un gabinete trancado en la clínica de UTPA en el departamento psicología educativo. Los resultados de la investigación serán divulgados en forma agregada. Ningunos nombres serán utilizados que podrían identificar cualquier respóndete(s). Si las cintas video proporcionadas revelan algún comportamiento ilegal, será divulgado a las autoridades necesarias según los requisitos de ley del estado, y la terminación de su participación en este estudio será requerida.

Quién a entrar en contacto con para preguntas sobre la investigación: Para preguntas sobre la investigación sí mismo, o divulgar cualquier efecto nocivo durante o después de

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la participación, entre en contacto con Terry Overton, Ed. D. supervisor del estudiante graduado a 956-381-3468 (overtont@panam.edu)

Quién a entrar en contacto con respecto a sus derechas como participante: Si usted tiene cualequier pregunta sobre sus derechas como participante, o si usted se siente que sus derechas como participante no fueron resueltas adecuadamente por el investigador, entre en contacto con el comité examinador institucional para la protección de los temas humanos a 956-384-5004.

Firmas: Firmando abajo, usted indica que usted está acordando voluntariamente de participar en este estudio y también está proporcionando el consentimiento parental para que participe su niño. Usted también está indicando que los procedimientos implicados se han descrito a su satisfacción. El investigador proveerá de usted una copia de esta forma para su propia referencia.

_____ ____/____/_____

Firma Del Padre o Guarda Legal Fecha

_____ _____

Nombre/s del Padre (Por favor Impresión) Nombre Del Niño (Por favor Impresión)

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APPENDIX I:

CONTROL GROUP CONSENT FORM (ENGLISH)

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UTPA IRB
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Informed Consent Form

Study Title: 8 Week Autism Study

Investigators: Jessica S. Gonzalez
Joy Cain
Melissa Ann Perez
Yvette Cantu
Terry Overton, Ed. D.

This research study is being conducted as partial fulfillment of a Master's Degree at the University of Texas Pan-American by the above referenced investigators, supervised by Terry Overton, Ed.D.

Background: We are conducting a research study to compare the effectiveness of three different eight-week training programs for children (18 months to 5 years old) diagnosed with Autism Spectrum Disorder (ASD). These training programs are known as Applied Behavioral Analysis (ABA), Developmental Individual-Difference Relationship-Based (DIR), and The Picture Exchange Communication System (PECS). We are also interested in whether the effectiveness of the training programs is influenced by whether or not parents are monitored and given regular feedback during the program. In order to study these factors, we will be assigning participants to one of seven different groups. There will be two groups (one "monitored", one "not monitored") for each of the three different training programs (ABA, DIR, and PECS), plus an extra group of no treatment (control) participants.

In keeping with accepted research practices, participants cannot self-select the specific training group. Instead, we must assign you to one of the research groups by random drawing. You have been assigned to the group described below under "Procedure". At the end of the study there will be a debriefing session and you will have the opportunity to receive free training in your choice of any one of the alternative methods. As with any other questions that might arise, feel free to ask the researcher to explain this in more detail before you agree to participate.

Procedure: You have been assigned to the control group. You will be asked to attend 3 Saturday meetings lasting a maximum of two-hours each, at the University of Texas Pan-American clinic, located in the Educational Psychology Department. In between meetings, you will also be expected to apply the training program at home with your child following specific guidelines. A summary of the 8 week schedule is provided below.

Session 1: February 11, 2006. Bring in a home video taken recently, not more than six months ago, to be left at the UTPA clinic.

At home training: None from the UTPA Autism Study program.

Session 2: April 8, 2006. The parent should bring in a video of the child interacting in a non-staged, normal family setting, such as a birthday party or family outing, that is taken as close to this date as possible.

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Debriefing Session 3: April 22, 2006. No materials will be needed for this session. Preliminary results from the data collection will be discussed. At the end of the debriefing session, you will be asked to choose which treatment (ABA, DIR, PECS) you would like to receive. You will receive instruction for a period of 6 weeks, which is the same amount of time the other non-control groups received. Based on the instruction method that you choose, the researchers will also provide specific guidelines for the treatment type, and corrective feedback. The corrective feedback is given by the researcher in two scheduled one-on-one meetings. At this time you will also receive guidelines that will explain how long the training sessions should occur per day, as well as how many times per week to work with your child, and what is expected for each of the scheduled one-on-one meetings. Available dates that are compatible for you and the researcher will be discussed at this meeting, and a mutual consensus will be reached.

We will need you to provide two to three home video tapes (15 to 30 minutes in length) of you and your child interacting in a natural family environment. We will be using these tapes to evaluate changes in your child's behavior over the eight-week program. Your tapes will be stored in a locked cabinet located at the UTPA clinic, identifiable only by a number. These tapes will be returned to you at the end of the study on or before April 30, 2006.

Risks or Possible Discomforts Associated with the Study: There are no anticipated risks associated with your participation in this study.

Benefits of Participation: There are no direct benefits associated with this study.

Voluntary Participation: Your participation in this study is voluntary; you may discontinue your participation at any time without penalty. If for any reason you decide that you would like to discontinue your participation, simply tell the researcher that you wish to stop. The researcher retains the right to discontinue the session and reschedule the session should the need arise. The researcher also retains the right to discontinue the research process.

Anonymity and/or Confidentiality: Every effort will be made to maintain confidentiality and all data will be stored in a locked cabinet at the University of Texas Pan-American clinic in the Educational Psychology Department. Results from the investigation will be reported in aggregate form, no names will be used that could identify any respondent(s). If the provided video-tapes reveal any illegal behavior, it will be reported to the necessary authorities as required by state law, and termination of your participation in this study will be required.

Who to Contact for Research Related Questions: For questions about the research itself, or to report any adverse effects during or following participation, contact the graduate student's advisor Terry Overton, Ed. D. at 956-381-3468 (overtont@panam.edu)

Who to Contact Regarding Your Rights as a Participant: If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, contact the Institutional Review Board for Human Subjects Protection at 956-384-5004.

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Informed Consent Form

Signatures: By signing below, you indicate that you are voluntarily agreeing to participate in this study and are also providing parental consent for your child to participate. You are also indicating that the procedures involved have been described to your satisfaction. The researcher will provide you with a copy of this form for your own reference.

_____ ____/____/_____

Parent/Legal Guardian's Signature Date

_____ _____

Parent' Name/s (Please Print) Child's Name (Please Print)

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APPENDIX J:

CONTROL GROUP CONSENT FORM (SPANISH)

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Approved by
UTPA IRB

JAN 24 '07

Expires

The University of Texas - Pan American

Forma De Consentimiento

Título Del Estudio: Estudio De Autismo De 8 Semanas

Investigadores: Jessica S. Gonzalez
Joy Cain
Melissa Ann Perez
Yvette Cantu
Terry Overton, Ed. D.

Este estudio de investigación está siendo conducido como cumplimiento parcial de un masters en la Universidad de Texas – Pan American por los investigadores arriba referidos, supervisado por Terry Overton, Ed.D.

Antecedentes: Estamos conduciendo un estudio de la investigación para comparar la eficacia de tres diversos programas de entrenamiento en ocho semanas para los niños (18 meses a 5 años) diagnosticados con el desorden del espectro de Autismo (ASD). Estos programas de entrenamiento se conocen como el análisis del comportamiento aplicado (ABA), la Individual-Diferencia de desarrollo Relacion-Basada (DIR), y el sistema de comunicación del intercambio del cuadro (PECS). También estamos interesados adentro si la eficacia de los programas de entrenamiento está influenciada cerca si o no supervisan a los padres y regeneración regular dada durante el programa. Para estudiar estos factores, asignaremos a participantes a uno de siete diversos grupos. Habrá dos grupos (uno "supervisado", uno "no supervisado") para cada uno de los tres diversos programas de entrenamiento (ABA, DIR, y PECS), más un grupo adicional de ningunos participantes del tratamiento (control).

En armonía con prácticas aceptadas de la investigación, los participantes no pueden uno mismo-seleccionan a grupo específico del entrenamiento. En lugar, debemos asignarle a uno de los grupos de investigación por el dibujo al azar. Le han asignado al grupo descrito abajo "procedimiento". En el final del estudio habrá una sesión de interrogatorio y usted tendrá la oportunidad de recibir el entrenamiento libre en su opción de los métodos alternativos. Como con cualquieres otras preguntas que pudieran presentarse, sensación libremente para pedir que el investigador explique esto más detalladamente antes de que usted acuerde participar.

Procedimiento: Le han asignado al grupo de control. Le pedirán asistir a 3 reuniones de sábado que duran un máximo de dos horas cada uno, en la clínica de la Universidad de Texas Pan-American, situada en el departamento psicología educativa. Entre reuniones, usted también se esperará que aplique el programa de entrenamiento en la casa con su niño que sigue pautas específicas. Un resumen de las 8 semanas se proporciona abajo.

Sesión 1: El 11 de Febrero 2006. Traiga un cintas vídeo tomado recientemente, hace no más que seis meses, que represente al niño recíprocamente en una situación normal de la familia. Este cinta vídeo debe quedarse en la clínica de UTPA.

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Forma De Consentimiento

El entrenamiento en la casa: Ningunos del programa del UTPA estudio de Autismo.

Sesión 2: El 8 de Abril 2006, padres deben traer un cintas vídeo del niño recíprocamente en un ajuste no-efectuado, normal de la familia, tal como una fiesta o cumpleaños, que se toma como cerca de esta fecha sea posible.

Interrogatorio sesión 3: El 22 de Abril 2006. No hay materiales necesarios para esta sesión. Los resultados del preliminar de la colección de datos serán discutidos en esta sesión. En el final de la sesión de interrogatorio, le pedirán elegir qué tratamiento (ABA, DIR, PECS) usted quisiera recibir. Usted recibirá la instrucción por un período de 6 semanas, que es la misma cantidad de tiempo que los otros grupos del no-control recibieron. De acuerdo con el método de la instrucción que usted elige, los investigadores también proporcionarán las pautas específicas para el tipo del tratamiento, y la regeneración correctiva. La regeneración correctiva es dada por el investigador en dos uno-a-uno reuniones. En este tiempo usted también recibirá las pautas que explicarán cuánto tiempo las sesiones del entrenamiento deben ocurrir por día, así como cuántas veces por semana de trabajar con su niño, y qué espera para cada uno de programar uno-a-uno reuniones. Las fechas disponibles que son compatibles para usted y discutirán el investigador en esta reunión, y el consenso mutuo serán alcanzados.

Le necesitaremos proporcionar dos a tres cintas video (15 a 30 minutos en longitud) de usted y de su niño recíprocamente en un ambiente natural de la familia. Utilizaremos estas cintas video para evaluar cambios en el comportamiento de su niño sobre el programa de ocho semanas. Sus cintas video serán alzadas en un gabinete trancado y situado en la clínica de UTPA, identificable solamente por un número. Estas cintas video serán vueltas en el final del estudio o antes de abril del 30 de 2006.

Los riesgos o los malestares posibles asociado con el estudio: No hay riesgos anticipados asociados con su participación en este estudio.

Ventajas de la participación: No hay ventajas directas asociadas con este estudio.

Participación Voluntaria: Su participación en este estudio es voluntaria; usted puede discontinuar su participación en cualquier momento sin pena. Si por cualquier razón usted decide que usted quisiera discontinuar su participación, simplemente diga el investigador que usted desee parar. El investigador conserva la derecha de discontinuar la sesión y de cambiar la hora de la sesión si se presenta la necesidad. El investigador también conserva la derecha de discontinuar el proceso de la investigación.

Anonimato y/o secreto: Cada esfuerzo será hecho de mantener secreto y todos los datos serán alzados en un gabinete trancado en la clínica de UTPA en el departamento psicología educativo. Los resultados de la investigación serán divulgados en forma agregada. Ningunos nombres serán utilizados que podrían identificar cualquier respóndete(s). Si las cintas video proporcionadas revelan algún comportamiento ilegal,

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será divulgado a las autoridades necesarias según los requisitos de ley del estado, y la terminación de su participación en este estudio será requerida.

Quién a entrar en contacto con para preguntas sobre la investigación: Para preguntas sobre la investigación sí mismo, o divulgar cualquier efecto nocivo durante o después de la participación, entre en contacto con Terry Overton, Ed. D. supervisor del estudiante graduado a 956-381-3468 (overtont@panam.edu)

Quién a entrar en contacto con respecto a sus derechas como participante: Si usted tiene cualequier pregunta sobre sus derechas como participante, o si usted se siente que sus derechas como participante no fueron resueltas adecuadamente por el investigador, entre en contacto con el comité examinador institucional para la protección de los temas humanos a 956-384-5004.

Firmas: Firmando abajo, usted indica que usted está acordando voluntariamente de participar en este estudio y también está proporcionando el consentimiento parental para que participe su niño. Usted también está indicando que los procedimientos implicados se han descrito a su satisfacción. El investigador proveerá de usted una copia de esta forma para su propia referencia.

_____ ____/____/_____

Firma Del Padre o Guarda Legal Fecha

_____ _____

Nombre/s del Padre (Por favor Impresión) Nombre Del Niño (Por favor Impresión)

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APPENDIX K:

AUTISM RESEARCH STUDY FLYER (ENGLISH)

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PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS (ASD)

Between the ages of
18 months and 5 years
Are requested to participate in a
University of Texas Pan American
Research Study:
Please Call:
Dr. Terry Overton
956-381-3463

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APPENDIX L:

AUTISM RESEARCH STUDY FLYER (SPANISH)

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Padres de Niños Con Autismo

Entre las edades de 18 meses y 5 años.
Les pedimos que participen en un estudio de Autismo en la
Universidad de Texas Pan American
Para más información favor comunicarse con la Dra. Terry Overton.
956-381-3463

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VITA

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Vita

Jessica S. Gonzalez

Spring 2006

3501 Solera Street
Edinburg, Tx 78541
Tel: (956) 457-9773
Email:JessSoto22@yahoo.com

Education

Master of Education, Educational Psychology, University of Texas Pan-American, Edinburg, Tx. May 2006.

Bachelor of Arts, Psychology, University of Texas Pan-American, Edinburg, Tx. May 2003.

Publications

Co-authored, with Dr. Sylvia Ramirez, a chapter entitled: Cultural Barriers in the *Encyclopedia of Multicultural Psychology*

Contributed, to the *Behavior News* in the Harlingen CISD Newsletter, a submission entitled: Reasons NOT to send students to SAC or New Pathways.

Presentations

Gonzalez, J. (2006). *ARD Decision Making Process*. Presentation for teachers and administrators at an elementary and a middle school, Harlingen, Tx.

Soto-Gonzalez, J. & Verdugo, R. (October 2005). *Behavior as Communication/Comprtamiento es Communicacion.* Speaker at the M.A.S.H. Fiesta Familiar 2005 Conference, McAllen, Tx.

Additional Research Experience

Thesis: Parent implementation of the developmental, individual-difference, relationship-based (DIR) program: changes in the repetitive behaviors of children with autism.

Behavioral/Counseling Experience

Counselor for an eight-year old child with ODD and ADHD.
Counselor for a twelve-year old child with Major Depressive Disorder.

Awards and Honors

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The Chancellor's List 2005-2006
Who's Who Among Students in American Universities and Colleges '05
The Chancellor's List 2004-2005
Who's Who Among Students in American Universities and Colleges '04
All American Scholars - Collegiate Dictionary, 2002 and 2004
National Dean's List, 1999-'00, 2000-'01, 2001-'02
College of Social and Behavioral Sciences Dean's List Fall '01, Spring '02, Fall '02, and Spring '03
All American Scholar 2001-2002 and 2002-2003
Who's Who Among American High School Students 1996-97, 1997-98
United States Achievement Academy 1994 National Awards (History and Government Awards)
Five time published poet in *Daydreams, Moments,* and *Whispers* published by Iliad Press

Professional Development

Continuing Education

Walsh Anderson Audio Conference "ARD Meetings", Harlingen CISD, March 2006
SHARS Training, Harlingen CISD, November 2005
SDAA II, Harlingen CISD, November 2005
Special Education Decision-Making: Response to intervention and curriculum-based measurement, Region One, October 2005
"Section 504 & Your School" Audio Conference, Harlingen CISD, September 2005
Special Education Manager, Harlingen CISD, September 2005
Understanding Autism and Implementing the Concepts of the TEACCH Program, PSJA ISD, November, 2004
CPI Training, PSJA ISD, November, 2004.
May the Fours be with you – writing, PSJA ISD, October, 2004.
Bilingual Institute Day 2, PSJA ISD, September, 2004.
Second Grade Sharon Wells Mathematics Curriculum, PSJA ISD, 2004-2005.
Social Skills in our Classroom, PSJA ISD, March, 2004.
The 2003 Dyslexia Teacher Academy, Region One, February, 2004.
Literature Based TEKS Instruction Project, PSJA ISD, February, 2004.
Literature Based TEKS Instruction Project, PSJA ISD, January, 2004.
Literature Based TEKS Instruction Project, PSJA ISD, December, 2003.
Bilingual/ESL Institute Day 2, PSJA ISD, November, 2003.
Literature Based TEKS Instruction Projects, PSJA ISD, October, 2003.
The Writing Academy, PSJA ISD, October, 2003.
Teaching the TEKS: Activities and Strategies for Classroom Teachers, September, 2003.
Math Activities and Strategies for Teachers, PSJA ISD, September, 2003.
Campus/District Leadership Training: Legal Issues, PSJA ISD, August, 2003.
TEKS Focus Initiative, Phase II Classroom Assessment, PSJA ISD, August, 2003.

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Elementary Science TEKS/TAKS Updates, PSJA ISD, August, 2003.
Elementary Mathematical Processes/Tools, PSJA ISD, August, 2003.
TEKS Focus Initiative Phase 1, PSJA ISD, August, 2003.
PDAS, PSJA ISD, August, 2003.
Mentor Teacher-Intern Team Training, ACT RGV, Fall 2003.
Third Grade Sharon Wells Mathematics Curriculum, PSJA ISD, 2003-2004.

Affiliations

National Association of School Psychologists (NASP)
Texas Federation of Teachers

Teaching Experience

2003/2005 Gus Guerra Elementary: Special Education Resource/Content Mastery Teacher. Taught resource classes in all subject areas to students in 1st through 5th grade; provided content mastery support for students in 2nd through 5th grade; completed Admission Review and Dismissal (ARD) packets; conducted ARD meetings; and member of the leadership committee.

Other Work Experience

2005-2006 Harlingen CISD: LSSP, intern
This position requires me to write psychological reports for students suspected of having an emotional disturbance (ED) or autism (AU), and for students already identified as haven ED or AU. I also do individual counseling with elementary and middle school students. My job also requires me to complete initial evaluations and three-year re-evaluations for students with learning disabilities, mental retardation, other health impairments, and auditory impairments. I am also required to attend ARD meetings and provide behavioral management ideas to teachers.

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