

Case Study of a Child with Autism: Implementation of the P.L.A.Y Project

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Note: This document describes a capstone dissemination project reflecting an individually planned experience conducted under faculty and site mentorship. The goal of the capstone experience is to provide the occupational therapy doctoral student with a unique experience whereby he/she can demonstrate leadership and autonomous decision-making in preparation for enhanced future practice as an occupational therapist.

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Abstract

The incidence of Autism Spectrum Disorders is on the rise, with one in every 500 children born in the United States today being diagnosed with autism (Bruey, 2004). As the incidence of children being identified with autism increases, so does the need for effective interventions that target social skills development (Scattone, 2007). Although certain characteristics of autism can vary from child to child, three main characteristics are present in all children who have been diagnosed with autism: a) a lack of social engagement, b) impaired communications skills, and c) the presence of repetitive behaviors that impair a child's ability to make friends, bond with family members, and express wants and needs. The P.L.A.Y. Project Model of practice was developed by Solomon to address these characteristics in children with autism. This model of practice uses play as the primary method of intervention, helping the child to gain skills in self-regulation and purposeful two-way communication. With these new skills, the child can begin to socialize with others in a meaningful manner. This case study focuses on a three-year-old boy diagnosed with autism, including severe language impairment. To date, the occupational therapy student has seen him nine times in the home and in a pediatric clinic over a 2-month period. Goals were set for one year, and this interim report documents mild improvements in P.L.A.Y.-oriented skills as evidenced by observation, parent report, the Sensory Profile, the Childhood Autism Rating Scale, and The Functional Emotional Assessment Scale. The next phase of intervention will increase emphasis on parent training, with occupational therapy intervention scheduled monthly.

Introduction

Autism is a disorder characterized by a lack of social engagement, impaired communications skills, and the presence of repetitive behaviors that can impair a child's ability to make friends, bond with family members, and express wants and needs (Bruey, 2004; Solomon, 2006). According to Scattone, there is evidence for the need for advanced social skill intervention to address these characteristics (2007).

The child is a 37-month-old male who was referred for the P.L.A.Y. Project by Dr. Michael Walker. The child was diagnosed with autism and severe language impairment at age two. Although his mother had no problems during pregnancy the child was born at 36 weeks and weighed approximately five pounds. He had difficulty breathing at first and spent a week in the neonatal intensive care unit. He also had difficulty nursing initially due to problems breathing and needed a nasogastric tube. This was removed before he went home, and he was able to nurse from a bottle. The child began to develop normally for the first few months of his life. When he was approximately 18 months old, he began to be a picky eater, stopped making eye contact, avoided playing with other children or adults, and stopped responding to his name and simple directions, according to maternal report.

The child was enrolled in early intervention services and a pre-school at Westside Montessori. Private occupational and speech therapy services were begun in December of 2006, and the child has made improvements in terms of his overall attention and focus, as well as in gross motor coordination, fine motor coordination, and language skills.

The model of practice that was used during therapeutic intervention was the P.L.A.Y. Project model of practice. The acronym P.L.A.Y. is used to denote the title

“Play and language for autistic youngsters.” This is a relationship-focused model and was developed in 1999 by Dr. Richard Solomon, medical director for The Ann Arbor Center for Developmental and Behavioral Pediatrics. Dr. Solomon created this program based on the DIR/Floortime model by Stanley Greenspan and Serena Wieder to train parents and professionals how to implement intensive developmental interventions for young children with autism, with a focus on the child’s primary occupation of play (Solomon, 2000).

Solomon, Necheles, Ferch, and Bruckman (2006) described the results of the first year of the P.L.A.Y. The authors used a pretest-posttest design also testing for interrater reliability. They noted a statistically significant improvement in developmentally appropriate abilities for the 74 children who participated in the program.

Although this model is fairly new, the concept of relationship-focused play-based intervention had been used by others to encourage normal growth and development of children with various developmental challenges. Research has focused on the use of relationship-focused play-based interventions with children with autism or other kinds of pervasive developmental disorders. Bristol (1985) reported data concerning the importance of using a family systems approach. Dawson (1990) discussed the effectiveness of imitative play by a child’s mother to facilitate social responsiveness and affect. In 1997, Greenspan and Wieder discussed the use of an integrated approach in order to increase a child’s ability to relate to others and communicate effectively using the DIR/Floortime model (www.icdl.com).

In 2005, Koegel, Werner, Vismara, and Kern Koegel studied the use of motivational strategies to better support children with autism when playing with peers. Mahoney and Perales (2005) reported that teaching parents how to implement

relationship-focused interventions with children with PDD resulted in improvements in cognitive and communicative functioning.

Description of the P.L.A.Y. Project Model

This model was used in order to assist the child in learning a variety of play skills including social and motor play and to encourage language skills. Interaction between a child and his or her peers or family is an important part of development. By enhancing a child's ability to engage in relationships other developmental aspects will be enhanced such as language skills, coordination skills, and social and emotional growth. Children learn and develop through play. A child who has difficulty attending to and engaging with others during play may have a harder time developing.

The P.L.A.Y. Project calls for a comprehensive evaluation including parent report, clinical observation, home observation, analysis of sensory processing, the Childhood Autism Rating Scale (CARS), and the Functional Emotional Assessment Scale (FEAS). The P.L.A.Y. Project model uses six developmental levels for judging how well the child can interact and function in his or her environment. Regulation, which is the child's ability to control his or her sensory systems, is the first level. Without the ability to regulate the sensory system, the child may not be able to tolerate the presence of others or may be too distracted to notice others. Self-regulation allows the child to take interest in the world around him or her (Solomon, 2000). The second level is engagement, which is the ability of the child to form relationships and share pleasure with another person. This skill allows us to begin to have empathy for others (Solomon, 2000). Both the first and second functional developmental levels are often achieved through sensorimotor play. This type of play is well supported throughout the P.L.A.Y.

Project model of practice and when using DIR/Floortime strategies. The sensory integration model of practice, developed by Jean Ayres (1972), focuses on the sensory systems and how each of these systems helps a child to develop and gain skills. The vestibular, tactile and proprioceptive systems are considered to be the basis on which more complex skills are developed (Huebner, 2001). Occupational therapists who work with children will often use sensory integration strategies to encourage development.

The next level is intentional two-way communication. This includes the concept of opening and closing circles of communication. Solomon describes the opening of a circle as a child's initiation of a behavior or some show of interest that is followed by adult reaction. The circle is then closed when the child shows another reaction. An example of this could be the opening of a circle by a child's gaze at a specific toy or request for a specific toy, to be followed by the adult giving the child the toy. The circle is closed when the child reaches for the toy or shows some other form of interest in the toy (Solomon, 2000). The goal is to increase the number and complexity of these circles as the child moves through the developmental process.

The fourth level is complex two-way communication. The child begins to make plans at this level. For example if a child wants to get a cookie, he might need to go to mother in the other room and pull her to the cookie jar that is outside of his reach (Solomon, 2000). The fifth level involves shared meanings and symbolic play. This can include problem solving real or play problems and pretend play using longer story lines; this will enhance the child's ability to understand the emotions of others (Solomon, 2000). The final level is logical/emotional thinking. This skill allows a child to connect ideas and is the foundation for most forms of higher level thinking (Solomon, 2000).

Emotional thinking allows for the child to further develop problem solving skills and to begin understanding how other people are affected by the world. A child with autism does not typically understand that other people think and feel differently than he or she does, and this can be a hindrance to social growth (Solomon, 2000).

The use of this model makes this case study innovative. There are no published case studies focusing on implementation of the P.L.A.Y. Project, and the only research study depends on a pretest-posttest-no-control group design at risk for Type I error. This case study employs an innovative model utilizing parent interaction to encourage development with the parent implementing engaging play methods up to two hours a day. In contrast to applied behavioral analysis, which is often used with children with PDD, the P.L.A.Y. Project teaches children spontaneous play, not rote responses to stimuli. This case is committed to a definition of play as “internally motivated, flexible, spontaneous, and voluntary” (Lucket, Bundy and Roberts, 2007, p. 367). In contrast, behavioral approaches do not focus on intrinsic purpose.

Evaluation

During the initial evaluation the child’s mother and I reviewed his past medical and developmental history that had been obtained at the time of his clinical occupational therapy evaluation in December. I also made observations about the child’s sensorimotor development, as well as his ability to play and engage with his mother and other adults. Both structured play such as the train set and unstructured play such as going down a slide was observed in the clinic and then at his home. This information was videotaped for later review. Observations were also made about what types of toys the child had at home and how the parents played with him. During the evaluation the child’s mother and

I discussed her primary concerns and what she hoped to accomplish with her son. His father and I also discussed this further when he was present at the home evaluation.

The child lives with his mother, father and 17-month-old typically developing sister in a two-story home in a quiet neighborhood. The child's parents came to this country four years ago from their native Thailand. Three days a week the child attends preschool at Westside Montessori Center, where he is in a classroom with children with and without developmental delays. The child's mother and father provide him and his sister with a wide variety of sensory and motor play options with a lot of space to run, jump, and explore.

The child was also assessed using the Childhood Autism Rating Scale (CARS), the Functional Emotional Assessment Scale (FEAS), and the Sensory Profile. In addition, through observation the developmental level of the child is established according to the criteria developed by Dr. Solomon (2000). At the time of evaluation he was functioning mostly at levels 1 to 2, with some skills at a level 3. He would stop and attend to musical games and would visually reference whoever was playing an instrument, but he had difficulty regulating his level of activity to be able to focus on a person or a toy. He would also run to his mother for a hug spontaneously, which shows his ability to engage in two-way communication with his mother.

The Childhood Autism Rating Scale (CARS) was designed by Eric Schopler, Ph.D., Robert J. Reichler, M.D., and Barbara Rothen Renner, Ph.D (1988). On the CARS the child scored 38/60, which lies just above the cut-off for moderately autistic. This rating system looks at fifteen different criteria and provides a number corresponding with a description, on a four point scale. The criteria include motor skills such as object and

body use, emotional skills such as relating to others and adaptation to change, sensory skills such as tactile and auditory response, and both verbal and nonverbal communications skills. The lower the score is on the CARS, the less likely it is that the child has autism.

The Functional Emotional Assessment Scale (FEAS) was developed by Stanley Greenspan, MD, Georgia De Dangi, Ph.D, OTR, and Serena Wieder, Ph.D (2001). This tool assesses play capabilities during sensory and symbolic play over a fifteen minute period. The observer then answers a series of questions regarding specific abilities and rates each ability's presence on a scale of never, rarely, sometimes, frequently, or always. He has strong abilities in the area of simple two-way communication when expressing wants and needs. The child has some abilities in the areas of self-regulation, interest in the world, relationships, attachment, and engagement. He has relative difficulty with complex communication, emotional ideas, and emotional thinking.

The Sensory Profile was developed by Winnie Dunn (1999). This scale is used to rate how the child responds to sensory input. This is a questionnaire that was given to the parents and then scored by the play consultant. He shows hyporesponsiveness in the areas of auditory processing, visual processing, and tactile processing abilities. He does not turn his head to loud noises, does not consistently respond to his name, and infrequently looks toward other people near him. He really does not enjoy games like playing with foam or finger painting. Also, the child is hyporesponsive to proprioceptive input and does not enjoy swinging or rolling down a ramp on a scooter board.

The child was observed in the free-standing private pediatric outpatient clinic where he receives outpatient occupational therapy and speech therapy services once

weekly. He was fairly familiar with this environment and showed no discomfort upon entering the clinic. The child was able to engage somewhat with the therapists present in the room as evidenced by eye contact and smiling and demonstrated an increased ability to engage with mother for affection. Initially he seemed interested in playing with the shaving cream but would not touch it with his finger. The child used the tip of the shaving cream can to wipe along the mirror but immediately wiped off any shaving cream that may have touched his finger. There was a train set in the room and he attempted to get the lid off the box. The child had difficulty doing this and began to show frustration instead of asking for help. He then took out parts of the set and began to put the train tracks together. The child has a train set at home and was familiar with this toy. Initially all he wanted to do was to line up the tracks in a particular order and really did not want anyone to join him to add the trains to the track and would not let anyone move the track he had already put on the floor. He tended to ignore any attempt that was made to play next to him or to join with him. Only after repeated visual and verbal prompts did he allow anyone to join him and to accept adding some of the trains. Gradually he was more accepting of some of the changes and even began to imitate train noises which were modeled for him. When he stepped on a musical hopscotch mat he did not seem to notice the sound that it made. Nor did he seem aware that he was causing the sound to come out of the mat. This could be due to self-absorption which impacted his ability to process the auditory input at that time. Throughout the clinic observation, the child made it clear that he had some ideas for pretend play and that he was able to express those ideas. The child named his block house "Maureen's house," and also tried to "rescue" the train on the track that was stuck.

In the home environment the child was willing to join in with some play occupations but did not seem consistently to be aware of those around him. The child was able to be guided to watch a marching band game with his family but would only walk around the table one time. He frequently sat on the side and would look toward his parents and sister as each of them played a musical instrument and called out to him to join in. Three or four times the child became fixated on the video camera. When the child had the opportunity to pretend to make a movie he was able to point the camera at his mother, but did not get excited or smile as he looked into the camera at his mother. He did not seem to show much excitement or pleasure even when he was having a snack with his sister as evidenced by the lack of affect in his voice and in his facial gestures. The child did show frustration when I was putting his toys on the couch when he wanted to lie down on the couch. He took the toys off the couch clearly showing anger by throwing some of them to the floor and making angry noises, and telling me “sleep”.

During a later home observation the child was observed moving from one thing to the next, not focusing on one thing for more than a minute. He tolerated his mother and sister in his space but never really sought them out to play or played interactively with them. Two or three times he pushed his sister away when he did not want her to do something like jump on the trampoline and tell her “no jump”.

After reviewing the information from the observations and assessments completed, the child’s strengths and weaknesses were identified. He does enjoy playing and is tolerant of other people in his play space. He does interact and engage with adults and peers but is selective about when he chooses to do so. During movement and sensorimotor play such as when playing with the musical instruments and marching with

his family he showed genuine enjoyment and appeared motivated to remain engaged with them. During free play he also demonstrated some imaginative play as he named the blocks a house or castle and attempted to 'rescue' someone. He has also learned that through others he can get what he wants and frequently took his parents to get what he wanted rather than using verbalizations. Overall he appeared to be able to regulate his behaviors and did not get overly upset by changes in things although this can be an issue according to his mother. The child is able to show engagement when he wanted something specific from mother such as a snack, and he has an ability to show affection when given a hug. He can be motivated to pay attention to others with types of play such as musical play or when reading with father. The child will make eye contact but not frequently.

The weaknesses noted interfere with the child's ability to engage with others. These weaknesses include low visual and auditory responsiveness. If he is not able to notice when mother or father call his name or when others are present, he will not engage with these people. He also demonstrates a lack of eye contact, which affects his ability to focus on a person. Because he has low proprioceptive responsiveness, he tends to need to move around instead of being able to focus on any one game, toy, or person for any length of time. On the other hand, when he does attend to a toy or other object, he tends to persevere. He also shows aversion to messy play and food textures such as crunchy or very soft foods.

He has difficulties engaging with another person unless he wants something specific and prefers to play by himself over half the time he plays. He does not initiate a conversation or ask questions that many children ask, and does not seem interested in

what is going on around him. He is lacking language skills to express not only his needs and wants, but also his feelings. Because he does not pay attention to others, he lacks the ability to show empathy towards others. Lastly, he has some difficulty transitioning from certain tasks and environments when his schedule is changed or when he does not want to do what is asked of him, and shows frustration by throwing toys or screaming.

Goals

The following goals have been established by gathering evaluation information and by discussion of what is meaningful to child and his parents. For this specific model of practice the child is typically seen one to two times per month with each session lasting anywhere from one and a half to two hours. Goals are often written to include family members because this model of practice is relationship-focused. Goals are directly related to Dr. Solomon's developmental levels.

Long-term goals:

1. The child will gain skills in the areas of self-regulation and interest in the world around him as evidenced by the ability to attend to purposeful, non-perseverative shared play for up to 30 minutes within one year.
2. The child will gain skills in the areas of engagement and attachment as evidenced by an increase in circles of communication with at least two adults within one year.
3. The child will gain skills in the areas of communication as evidenced by clear and consistent verbal expression of simple needs and desires within six months as evidenced by appropriate communication methods versus ignoring others or screaming at others.

4. The child will gain skills in the areas of logical thinking as evidenced by the ability to create connections between feelings, thoughts, and actions during simple pretend play within one year.
5. The parents will show the ability to implement the P.L.A.Y. project model of practice as evidenced by demonstration within one year.

Short Term Goals:

Area: Shared Attention and Social Relatedness

1. The child will stay engaged with familiar adult or child for up to twenty circles of communication as evidenced by parent report and play consultant observation, within six months.
2. The child will spontaneously seek adult or child as 'play partner' when not attempting to engage him at least 3 x per session for two of three monthly sessions, within three months.
3. The child will demonstrate awareness of others by imitating behavior, joining task, or seeking proximity at least 3 x per occupation for two of three monthly sessions, within three months.
4. The child will tolerate playful obstruction during pleasurable play occupations without losing interest for three repetitions in two of three monthly sessions within three months.

Area: Two-way purposeful communication

1. The child will initiate interaction in desired play following adult's responses up to 10 times for three of six monthly sessions within six months.

2. The child will increase the number of purposeful interactions using words or gestures (e.g., reaching, pulling, tugging, pointing) up to 10 times per play occupation for two of six monthly sessions within six months.

Area: Imitation

1. The child will imitate with an object such as a musical instrument after demonstration up to three times per play occupation, two of three monthly sessions within three months.

Area: Self-regulation

1. The child will transition from movement play occupations to more sedentary tasks without difficulty following intense proprioceptive and vestibular input between each play occupation for two of six monthly sessions within six months.
2. The child will communicate frustration with words or gestures rather than a tantrum at least 50% of the time within three months as evidenced by parent report and occupational therapist's observation.
3. The child will participate in sensorimotor play that provides intense vestibular and proprioceptive input with moderate adult support without being distracted by other people or activities at least 25% of the time within three months.
4. The child will sustain mutual engagement with adult or child for the duration of sensorimotor play occupations lasting five minutes showing emotional engagement by facial expression and pleasure three of six monthly sessions within six months.

Area: Sensory

1. The child will tolerate the introduction of one new food each week as evidenced

- by parent report three of six trials within six months.
2. The child will tolerate messy play using a variety of textures for at least three minutes per play session one of three sessions within three months.

Area: Parent interaction

1. The parents will be able to verbalize understanding of the functional developmental levels as defined in the P.L.A.Y. Project family training manual within two monthly treatment sessions.
2. The parents will be able to recognize the opening and closing of a circle as evidenced by verbalization within two monthly treatment sessions.
3. The parents will show the ability to follow the child's lead as evidenced by not prompting 50% of the time within three monthly treatment sessions.
4. The parents will effectively engage the child in a seated play occupation using play of the child's choosing for three minutes in one of three monthly treatment sessions.

Intervention

The primary two sites used with the P.L.A.Y. Project method were the child's home and the free standing pediatric outpatient facility where I am completing this case study. The child has been seen a total of nine times. He was seen in the most natural environment, his home, seven times. His primary play space is a 30 feet long and 20 feet wide carpeted area with large windows on either end of the room to let in natural light. The room is attached to the kitchen and to the front entrance, but safety gates have been placed in the doorways to prevent him or his younger sister from getting hurt on the steps.

The primary play space is open and provides plenty of room to run. The furniture in the room consists of a standard sized couch with big cushions, a three foot high shelf for books, and a child size table and chairs. He also has a small trampoline, a three foot high swing set with a small slide on one end, a kitchen play set, a train set on a raised table, and a shelf with bins for small toys such as cars and musical instruments.

Present in the occupational form during therapeutic occupation was the child, his 17-month-old typically developing sister, his mother, and myself. The child was seen in the afternoon to accommodate his preschool schedule.

Two times the child was seen in the clinic. The clinic consists of one large well lit main play space with several rooms off to the side for group games and quiet sessions. There is a wide variety of play equipment in the clinic including scooter, swings, ramps, slides, bolster, games, and toys. There is also a rock wall and a large ball pit. Many of the items used in the play space are moved daily to provide different methods of treatment. Along with the child, his mother, and myself, there were typically several other therapists providing therapeutic occupations for other children of varying ages and needs.

The primary occupational method used with this child is play. Because play is the primary method of learning and the primary occupation of young children, play is used to achieve the goals established for him. He would engage in some sensorimotor games like jumping on the trampoline but usually preferred playing with cars or blocks. He consistently wanted to play with the train set at his home or in the clinic.

During the fourth play session, the child and his mother were present for most of the session and his father and sister joined the play session towards the end. The child was seen in his home environment. The primary goal for this particular session was to

discuss concepts of the model, such as waiting, the child's parents had wanted to discuss further, and then to have his mother and father play with him while I provided verbal input on how to use these concepts to interact with him. The parent training manual was provided to the parents in the first session and the parents were given time to look over the manual before discussion.

The child was seen during one play session for approximately one hour and fifteen minutes. He engaged in play such as train games, pouring tea, and playing his harmonica, during which time I was able to assist his mother with two concepts of the P.L.A.Y. Project. The first concept that was discussed with the parents was to prompt him less so the child uses his ideas more. He has a lot of ideas and is able to expand upon them a little, but he does not use his own ideas to play with others. I showed his parents how to just be near him as much as he could tolerate and pay attention to what he was intending on doing. This was a difficult concept for his parents to implement because he can follow verbal prompts given to him more frequently than before and they may have some difficulty seeing a difference if he comes to his parents by choice or by command. If he was playing with a toy car his mother would say "Can I have the car?" He would give her the car but it was not his idea and he did not choose to give his mother the car.

Occupational Analysis

One specific play behavior observed was that the child used a cup over his mouth to make silly noises. I joined him in this game, and he turned to me and then held his cup over my mouth to help me make more silly noises. When I did he showed his excitement by laughing. I did not need to prompt him to have a turn because he wanted to hear me make a silly noise. This eventually led to the child deciding that he wanted to play his

harmonica. He gave the other harmonica to his mother and then would tell her when it was her turn to play the harmonica. This game lasted for about four minutes, opening and closing 9 circles of communication before he needed a prompt to come back. The number of circles of communications is described as:

1. The child asking for the harmonica and mother hands him two harmonicas.
2. The child gives one harmonica to mother and she plays it.
3. The child plays the harmonica and mother claps.
4. The child plays the harmonica and mother plays hers back.
5. The child claps and mother plays the harmonica again.
6. The child plays the harmonica and mother plays her harmonica back.
7. The child laughs and claps then mother claps.
8. The child plays his harmonica and mother plays hers back.
9. The child claps and mother played her harmonica again.

Two or three times the child wandered off but he would come back either on his own or when his mother played her harmonica. The child enjoys music and playing instruments is motivating to him to pay attention to his mother or whoever might be playing music.

When his mother played the harmonica, the child would look into her face, smile, laugh and clap.

Other Examples of Intervention

The second concept reviewed with the child's mother was the need to wait for him to respond by asking for more music or more hugs or by coming back to whatever he was playing. One example of this occurred when the child began to seek out some sensory input. He likes deep pressure and seeks out big hugs from his mother or father. If

mother or father gave the child a short but firm hug, the child asked for more hugs without needing to be prompted, with a question such as “do you want more hugs?”

The child and I also opened and closed three to four circles at a time with a few other games such as coloring on the doodle writer and playing with the trains. He is a busy boy and did not want to stay with too many games for very long. The child, his mother, and I did some parallel play where mother or I just played alongside him where he often visually referenced whoever was playing with him. The child showed his preference for certain types of stimulation and certain types of games. When he was smiling and laughing, I was aware of how meaningful this was to him and to his family.

Future Sessions

During upcoming sessions the child will once again be seen in his home environment with his mother and sister present. Some changes made to the occupational form might include removing some of the stimulus items from line of sight to reduce the amount of moving from play object to play object so quickly. Other changes might include involving mother, father, and sister for the full session because the child has the most contact with his full family, not just his mother. We will also continue to work on parent involvement to assist his parents with some of the concepts that are challenging to implement, including reducing the amount of prompts the parents give to the child. Additional resources and handouts will be provided to his parents to help his parents be more successful at implementing this type of play intervention.

Outcomes and Conclusion

The child has made progress toward most goals in each area addressed by the P.L.A.Y. Project method. In the area of shared attention and social relatedness he has

made progress toward goal 2 by spontaneously looking toward an adult in the room for a 'play' partner for at least once per session. This has been seen when he has wanted his mother to play music with him and when he asked her to perform a certain musical occupation. In the area of shared attention and social relatedness the child has met goal 3 by demonstrating awareness of others through imitation, joining in with others playing, and seeking proximity at least 3 times per session. He is able to imitate what others are doing approximately half the time and often seeks to play close to others in the room. One example of this is the child playing with his trains while choosing to sit on the lap of the adult who is sitting at the train table. The adult can then push a train and make train noises, and he will also make train noises as he pushes his train on the track. Also in this area is the goal to address the tolerance for playful obstruction. Although the child does not frequently become agitated during playful obstruction to expand upon his ideas, he does seek other things to do after one or two circles of communication have been opened and closed.

In the area of two-way purposeful communication, the child has made progress towards both goals 1 and 2 but has not yet met either goal. When he was evaluated in January, he was able to open and close up to six to seven circles of communication, and consistently opened and closed three to four circles of communication. Now he can consistently open and close four to five circles of communication and at times can open and close seven to eight circles of communication. The child is also using more verbal communication and less gestural communication as evidenced by parent report and observation. He is asking for toys he wants to play with and telling others what he wants to do instead of just running off

In the area of imitation, the child is able to imitate adults approximately half of all trials. He shows more consistency with the ability to imitate others when this goal is addressed through the use of music because the child is motivated by playing with musical instruments. He will imitate other sounds made by adults and children now because he is able to process auditory sounds more regularly. When he is playing in a group setting where other children scream, he will also scream.

Two of the four goals in the area of self-regulation were not expected to be achieved until the six month of treatment; however, the child has made some progress toward all four goals. He is able to sit for sedentary occupations for up to four minutes at a time, especially with the use of toy trains or building blocks, but also with books and kitchen toys. The child is showing longer periods of engagement during sensorimotor play but continues to have low tolerance for the sensorimotor play itself, such as spinning around in circles. He tolerates longer periods of swinging up to ten minutes and will go down the slide or the scooter ramp in the clinic once or twice, which shows an increasing tolerance for sensorimotor play. His tolerance for sensorimotor play is greater in the clinic than in his home environment, which is where most of the intervention sessions took place. He is also able to communicate frustration with words approximately half the time, which meets goal 2.

In the final area of sensory integration, the child has made progress towards goal 1 and is trying some new foods. However, his mother reports that the child continues to be a picky eater and will eat only certain foods some days. Also, the child has made progress towards goal 2 by tolerating messy play with textures such as shaving cream but wipes glue off his finger immediately after contact.

The goals directly relating to parent interaction have not yet been met. His mother has been present during all sessions and has been coached in the P.L.A.Y. Project method for three of six sessions. His mother continues to need multiple prompts in using the method at the basic levels such as paying attention to what the child is doing and letting him use his ideas. Mother tends to prompt him when he is playing to give him ideas. One example of this occurs when the child is playing with a car on one side of the room. He is not near the slide but she tends to prompt him to roll the car down the slide instead of just following his lead on the other side of the room as he crashes his cars together. Success of this type of intervention relies on the ability of the parents to implement the theory and techniques of the model.

One possible hindrance to the mother's ability to understand some aspects of this model may be attributed to cultural differences. Harkness et al. discussed the differences between cultures and methods of promoting development in young children (2007). The authors reported differences among parenting styles, such as different kinds of emphasis on cognitive development. Both mother and father are aware that the child has developed new cognitive skills and is capable of following simple directions. Because the child has some higher level skills, it is difficult for the parents to work on the deficits present in the lower level skills such as self-regulation and simple two-way communication. Mother and father are having difficulty playing with the child and following his lead because their orientation is to focus on cognitively oriented school-related occupations, not socially-emotionally-related play.

Reassessment

The child was reassessed after two months. On the CARS, he scored closer to

typical in two areas. The child gained a half-point in the areas of imitation and taste, smell, and touch response, which brought his CARS score from 38/60 to 37/60. This score has moved one point towards the mild-moderately autistic range.

The FEAS was not completed again because it is recommended by Greenspan to be completed every six months. Changes made during the two month intervention thus far would not be registered on the FEAS. General observations of the child shows that he is tolerating more frequent and sustained engagement and is now saying “Hello Liz” if he sees me in the clinic and if I say hello to him first. Through observation he is now more frequently functioning at a level 2 with additional skills at a level 3. Two-way communication is more frequent and purposeful. Also, the child is showing skills at level 4 with simple pretend play, and will now tell his mother that his car is “sad” when he drops it onto the floor. The child still has some problems with self-regulation as evidenced by a limited ability to focus on a play occupation, which is level 1.

The child is unable to verbalize his progress toward his goal but it can be inferred through his behavior that he is more regulated and better able to engage with others than he was two months ago. His mother reports being pleased with the progress her son has made towards gaining social play skills and is happy to have her son wanting to be near her more often. The child’s mother also reports that he is gaining language more quickly. The child’s mother expressed that all aspects of daily life are easier. He goes to bed and takes his bath with less of a tantrum, and he is becoming more careful with his sister. Also, both his occupational therapist and speech therapist report that he is paying better attention to what is being said and is able to focus on the therapist for longer periods of time.

One drawback to the child's progress is that he is now imitating other children in his play group. One little girl screams often, and he enjoys this as well. This behavior has carried over into the home environment and is disturbing his family. The therapist in charge of the play group is attempting to stop this through separating the two children when the screaming begins.

This dissemination is an interim report of an ongoing therapy which will continue once this project is completed and presented. It is recommended for this child to continue to be provided with the P.L.A.Y. Project method one to two times monthly, with a reassessment completed in the sixth month of intervention. Parental guidance should also continue to be provided with teaching methods to include verbal and written feedback, along with videotape reviews to achieve additional short-term goals and long-term goals.

Limitation

The progress shown by the child might be due to participation in the P.L.A.Y. Project or might be due to other interventions or to ongoing development. The nature of a case study such as this one is to describe the implementation of a model of practice, not to make definitive statements of cause and effect. Case studies such as this one are necessary to prepare the way for controlled trials designed to test the efficacy and effectiveness of the P.L.A.Y. Project model.

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