Effectiveness of Parent and Therapist Collaboration Program (PTCP) for Teaching Self-Care and Domestic Skills to Individuals with Autism

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Abstract: The purpose of this study was to develop and determine the effectiveness of a Parent and Therapist Collaboration Program for teaching self care and domestic skills to individuals with autism with varying educational needs, age, and severity of disability. Three individuals with autism, one habilitation provider, and three parents participated in the study. A multiple probe design with probe conditions across skills was used in order to examine the effectiveness of independent variables on the dependent variable. The independent variable of the study was Parent and Therapist Collaboration Program (PTCP) for teaching self care and domestic skills for individuals with autism. Training is completed when the parents and therapists determine that they are proficient in the tasks explained during the meetings and home visits, including how to complete various recording forms for target skills and how to apply teaching methods. Result show that the PTCP was effective for teaching self-care and domestic skills to children with autism.

According to The Revised Fourth Edition of Diagnostic and Statistical Manual, (DSM-IV-TR), autism is characterized as having: Qualitative impairments in social interactions and communication skills, and repetitive and stereotyped patterns of behavior (American Psychiatric Association, 2000). In addition, people with autism often acquire self-care and daily living skills, but require additional supports in the form of supervision and prompting to ensure independent performance (Hibbert, Kostinas, & Luiselli, 2002). Many individuals with autism have deficits in their ability to function independently and need multiple forms of instruction to master daily living skills (Carothers & Taylor, 2004). An individual who has essential self-care skills such as dressing, eating, and toileting skills is considered as one who has taken important steps toward gaining an independent life. As a main aspect of American Association on Intellectual and Developmental Disabilities (AAIDD—formerly AAMR—American Association on Mental Retardation) definition, helping an individual with a developmental disability gain practical skills including self-care skills are important for increasing his independence and participation in society (AAMR, 2002).

Matthews and Hudson (2001) pointed out that the parent training methods by which parents are taught parenting strategies should follow sound instructional principles based on established theories of learning. There is a great deal of evidence that applied behavioral analysis (ABA) is a highly effective form of intervention for children with autism (Dillenburger, Keenan, Gallagher, & McElhinney, 2004).
Cooper, Heron, and Heward, (2007) stated that “ABA is the science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables for behavior change.” (p. 20). This method utilizes behavioral principles such as positive reinforcement to teach individuals with special needs skills in a planned, systematic manner, and offers repeated opportunities across the day, settings, people, and materials to practice their new skills.

As in many parts of the world, the United States provides educational supports for people with developmental disabilities in two forms: educational assistance within public and private schools, and home and center based therapy services. Educational assistance within public and private schools is funded through the Department of Education and consists of special education and inclusive regular education classrooms with special education support that includes but is not limited to: speech, occupational, and physical therapies; counseling services and; Individualized Education Plan (IDEA, 2004). These supports are offered from the time a student enters preschool until they have graduated high school if the team finds the need to be ongoing, and can be provided in a public school setting or within private settings that specialize in their specific disability. Home and center-based therapy services are funded through the Department of Economic Security and provide one on one treatment that may include: speech, occupational, physical, and music therapy; behavioral interventions; respite care; attendant care; habilitation therapies (Arizona Department of Economic Security, 1996). These services are provided from the time a child is diagnosed with a developmental disability until such time as the services are not necessary or they show enough progression that they no longer meet the criteria for the diagnosis.

The use of paraprofessionals in public schools has become one of the primary mechanisms by which students with disabilities are being supported in general education classes (Giangreco, Edelman, Broer, & Doyle, 2001; Giangreco, Smith, & Pinckney, 2006). Paraprofessionals can be used to support the education of student with, or without, disabilities. According to Giangreco, et al. paraprofessionals need orientation and support. Just as educators in the school settings rely on the assistance of these paraprofessionals to work one on one with the child with a disability, so do settings that provide home and center-based behavioral therapies. Some states have a specific system in place that provides state and federally funded therapy and other forms of assistance to children and adults with developmental disabilities. Many of these services provide assistance by trained personnel that work one on one in the client’s home, or at therapy centers that cater to each person’s individual needs. These personnel, called “habilitation therapists” in the state of Arizona, carry out behavioral interventions that a team of professionals have designated in order for the client to meet their specific goals. As defined by the Arizona Department of Economic Security habilitation services: “provide a variety of interventions such as applied behavior analysis, social skill training, sensory integration therapy and are designed to maximize the functioning of the person with developmental disabilities” (Arizona Department of Economic Security, 1996).

Due to the amount of services that are needed to care for a person with developmental disabilities, often states can only provide low hourly wages for personnel working one on one. This does not afford highly educated professionals to carry out the individual’s service plan on a daily basis. Therefore it is crucial to train highly motivated personnel that work under the supervision of the team of professionals in order to carry out the behavioral intervention plan. Although the well-trained personnel are a very important addition to the education of an individual with autism, parents and families are the most vital part of the team. Symon (2001) pointed out a large body of research which shows the importance of parent and family participation in the education of children with autism. Brookman-Frazee, Vismara, Drahota, Stahmer, and Openden (in press) also highlight multiple parent training models and the efficacy of delivering intervention through the primary caregiver. Parent education is found to be effective on reducing problem behaviors and also teaching various skills to these children. It
is well known that when parents learn the principles of ABA regarding skill instruction, they implement the system successfully (Batu, 2008; Cavkaytar, 2007; Weiss & Rutgers, 2006). Although there are some research studies showing the effectiveness of parent implementing ABA, there is still a need to see the effects of parent-therapist collaborations and partnership (Hanna & Rodger, 2002). Some of the research showed that home-based parent training programs, based on ABA were effective for teaching independent life skills. For example, Batu examined the effectiveness of caregiver delivered home-based instruction on teaching chained home skills. Results of the study showed that the care givers were successful at providing the training to their children and the children acquired, maintained and generalized the target behaviors. When the literature was reviewed some studies showing effectiveness of parent-therapist collaboration or parent-teacher partnership were found. For example Hanna and Roger suggest that parent-therapist partnership helped to acquire better therapy outcomes for the children and their families. The authors also concluded that the partnership had assisted children and families to reach meaningful, functional goals in their daily lives. Also Ruble and Dalrymple (2002) mentioned that children with autism would benefit more if they attend more to the instructional context. Therefore it is said that having parents participate in the educational process and deliver therapeutic methods in the home environment is crucial in the lives of children with autism.

The present study was designed in accordance with past research findings regarding the importance of parent involvement in therapy implementation. It is the hypothesis of this study that individuals with autism would maintain and generalize mastered skills, if parents and habilitation therapists teaching techniques based on ABA work in collaboration with one another, rather than therapists teaching the skills alone. In order to examine the hypothesis, Cavkaytar’s (1999) parent training program about teaching self-care and domestic skills (PTP-TSEDOS) was chosen. The program was shown to be effective with mothers on teaching self-care and domestic skills to their children in Turkey (Cavkaytar, 1999, 2007). Parents with various educational backgrounds took part in the program. In both studies, the mothers who completed the program have managed to teach the targeted self-care and domestic skills to their children at home. At the end of the program, children acquired the skills that were taught by their mothers. The program was replicated for teaching self-care and domestic skills by teacher aides. Teacher aides who were working in a private rehabilitation center participated in the study. At the end of the program the implementations of the teacher aides were found to be effective as well (Sabanova & Cavkaytar, 2007). Also, the program was applied in order to teach toilet skills to children with autism and mental retardation and was found to be effective for mothers in teaching these skills to their children (Ozcan & Cavkaytar, 2009). At the end of the study, the program was seen as effective and mothers who participated in the study managed to teach toilet skills to their children. Therefore; this study intends to expand evidence-based practices on specifically teaching practical adaptive skills (e.g., self care and domestic skills). The purpose of the current study was to determine the effectiveness of a Parent and Therapist Collaboration Program (PTCP) for teaching self care and domestic skills to individuals with autism. The researchers were also interested to see if the program was most effective when taught by a parent alone, a therapist alone, or a parent and therapist team. The following research questions were addressed for each individual child participating to investigate the effectiveness of the PTCP: (1) Was child Aa able to perform targeted skills that were “sweep under the table”, “tooth brushing”, and “using remote control” taught by her mother A who was working as a therapist in center? (2) Was child Bb able to perform targeted skills that were “washing hands”, “putting shoes on”, and “tooth brushing” taught by both mother B and his therapist BT? (3) Was child Cc able to perform targeted skills that were “tooth brushing”, “put toys away”, and “talking on the phone” taught by his mother? (4) What were the mothers’ opinions about PTCP?
Method

Participants

Participants included three children with autism, their mothers, and one habilitation therapist that worked with children with autism. All participant children were receiving state funded therapy services through the Division of Developmental Disabilities in Arizona. In order to receive these services they must have a documented diagnosis of autism given by a child psychologist or developmental pediatrician. No records of their individual IQ scores were available. Children were attending the G.R.E.A.T. Kids center (Guthrie Recreation Education and Therapy), a private center for children with developmental disabilities in Chandler, Arizona. The first mother A was 33 years old and attained an associate degree. She was married and had two children, one of which was diagnosed with autism. She was a working mother who was a former habilitation therapist that was promoted to a supervisory role. She conducted the intervention both at the center and at home with her daughter in parallel sessions. Mother A was placed as “parent as therapist” in this study. Her daughter Aa was five years old and could follow two-step instructions, and was learning to read and write at that time.

The second mother B was 41 years old and has a Master’s degree. She was married and had three children, two with developmental disabilities, one of which was diagnosed with autism. Her four year old son Bb was mostly nonverbal with a few single words, and had difficulty in following more than one-step directions. His therapist BT was a high school graduate. The therapist BT worked with him for three-hour sessions per week for several months. The intervention with Bb would be conducted by the mother B and the therapist BT at the same time both at home and at the center. The third mother C was working, married, and had two children, one of which was diagnosed with autism. Her seven year old son Cc was able to follow all single-step and some two-step directions, had limited verbal language, and could recognize letters, numbers and read single words. This mother worked alone. She did not have a therapist working in the study with her. The participation criteria for parents were as follows in the study: (a) they should read and write; (b) they should voluntarily attend training sessions and be capable of carrying out training procedures at home. The following criteria was also considered for children to be participants: (a) they should be between ages of 3 to 7, (b) diagnosed with autism, and (c) could follow simple one-step directions such as “come, go, sit down, stand up, open, and close.” The following criteria for the habilitation therapists were taken into account for be the participating in the study: (a) to have at least two months of experience on teaching skills to people with developmental disabilities, (b) to have completed 10 hours of training given by the State of Arizona’s Division of Developmental Disabilities, that outlines how to effectively teach skills to people with developmental disabilities using methods of Applied Behavioral Analysis, and (c) to voluntarily attend training sessions and be capable of carrying out training procedures at the therapy centers and provide training to parents in their home.

Settings and Materials

Three different settings were used in this study: Meeting room for parent and therapist instructional meetings at the center, therapy room for therapist working on skills, and children’s home for home supervision. The parent training sessions were conducted in the meeting room at the center. The other setting was the children’s own home. All the house settings were as designed by the parents. No additional accommodation was planned. All teaching sessions and the home visits were conducted in the natural environment of children’s daily lives. There were no selected specific materials such as toys, daily furniture or items on data collection and teaching periods. All materials were natural materials used in daily routines.

Design

As one of the methods of single subject designs, a multiple probe research design across behaviors was used in order to find out the effects of independent variables on the dependent variables. The independent variable of the study was Parent and Therapist Collabora-
tion Program (PTCP) for teaching self care and domestic skills for individuals with autism. The dependent variable was performance level of children with autism on self care and domestic skills taught by their mothers and therapist.

Data Collection

In the study, according to the multiple probe design across behaviors, the children’s baseline phase, training phase, probe phase and follow up phase data concerning performance level of acquisition of children on the target skills were collected. Baseline, probes and follow up phase data were collected by the researchers in accordance with the research model. The single opportunity method was used in data collection procedures. According to that method, firstly the materials to be used were prepared and the setting was organized. Secondly, the recording procedures were initiated by giving the child or adult discriminative stimuli. The skill steps carried out correctly were marked as correct (+). When the child had no response within 10 skill steps, application would be stopped and the rest of the items would be marked as wrong (−). When the child had a correct response for one item and an incorrect response for the next item, the correct ones were marked as (+), the incorrect or skipped ones were marked as (−). The training phase data for each skill were collected by the participant parent and therapist using the Data Recording Form for Training Procedure (DRFTP) provided by the program. During the initial training program, how to fill in the forms was explained in detail. Social validity data were collected from mothers by “PTCP Exiting Questionnaire.” The questionnaire included nine questions about satisfaction of the mothers regarding the study. The questionnaire was sent to the mothers by e-mail when the study was completed, and the mothers were asked to send the answers of the questionnaire through e-mail as well.

Independent Variable

Parent and Therapist Collaboration Program (PTCP) for teaching self-care and domestic skills. The purpose of the PTCP was to enable parents and therapists of individuals with autism to teach self-care and domestic skills to their children/student. PTCP has been adapted from the parent training program for teaching self-care and domestic skills to children with mental retardation developed by Cavkaytar (1999, 2007).

PTCP consisted of group and individual (one-to-one) teaching activities with parents and habilitation therapists. During the application of these procedures, the “Teaching Self-Care and Domestic Skills Manual” (TSCDSM), which was replicated by Cavkaytar (1999) in accordance with the program objectives, was used. The purpose of the TSCDSM was to make the parents and habilitation therapists knowledgeable and skillful about the program’s objectives and content. TSCDSM had three parts: introduction, preparing before skill instruction, and skill instruction. An appendices section was also included in the manual. The manual consisted of lists and forms for parents to prepare during the study.

As part of the program, group and individual meetings with parents and habilitation therapists were planned and conducted. First, as group training part of the program, group meetings were conducted. The purpose was to give training to parents about the topics in TSCDSM. Second, the individual (one-to-one) training part of the program, home visits with parents, and center visits with habilitation therapists were planned and conducted with parents and habilitation therapists. The purpose of the training, one-to-one teaching aspect of the program, was three-fold; (1) to enable the parents and habilitation therapists transform the knowledge they gained in group meetings into practice, (2) to see the parents, habilitation therapists and the child in a one-to-one practice under the supervision of an expert and, (3) to give training to the parent and habilitation therapists while applying the program.

Procedure

Intervention started with the first group meeting. Three group meetings, each of which lasted 1.5 hours, and a home visit to the parents’ home of each parent lasted 1.5 hours were conducted. Also visits to the center of therapist BT lasting 1.5 hours were con-
ducted. Group meetings were held in a meeting room in the school of participant students. Each group meeting and each home and center visit lasted until the mothers were competent in terms of the objectives identified. In the first parent meeting, extensive information was provided to participants regarding (a) how the program works, (b) how to use the introduction section of the TSCDSM, and (c) how to identify the child’s performance and the rewards as indicated in the second part of the manual. Second, participants were asked to identify the skills, which their children/student were or were not able to perform. They were also asked to put the skills identified in order of priority and to identify rewards they would like to use in their home activities. In the second meeting, the following activities took place. First, extra activities given to the mother and habilitation therapist in the first meeting were examined. Second, some explanation was made about planning instructional activities as indicated in the second part of the manual. Finally, the first skill in the list prepared by the participants during home/center activities was chosen as the sample skill and DRFTP was prepared. All mothers chose cutting nails as the sample skill. In the third meeting, some explanation was provided about important points that the participants should be careful before starting, and during applying the skill training activities as indicated in the third part of the manual. In addition some cues concerning the skill training were provided to participants. Participants were trained on creating visual aids for each skill by way of photo books. For each skill a photo of someone performing each step was taken, and a typed label with step number was adhered to the specific step. The photos were placed in the book from front to back, in the order that each step was performed. The books were to be used in training as another form of prompt when a child was stuck on a particular skill step. Participants also used the photo book to discuss the skill with the child outside of training sessions, by turning the pages and labeling the steps together.

After completing three group meetings, one visit to each mother’s home was made by the researchers. During the home/center visit, the participants, under the supervision of the researcher, carried out the instructional activity of the sample skill. At the end of the visit, three independent skills, which each participant would like to work with her own child/student, were identified together with the participants. All these steps were carried out by the participants themselves under the supervision of the researcher. Following the visit, participants continued instruction of the sample skill they started with the researcher during home visit until there was consistency in the data after three consecutive sessions. At the same time, they prepared DRFTP for each of the three skills identified. When there was consistency in the data, participants called the researchers. The researcher visited each parent in order to get follow up data of the sample skill and the probe and baseline data of the other skills. In the first part of the visit, the researchers carefully examined the DRFTP prepared by the participants for three skills. Then, they obtained the probe data once for these three skills.

**Reliability**

In order to provide reliability across observers, habilitation therapists of participant children at the private center were chosen as the independent observers. They were first trained for "recording procedure". Following this, reliability across observers was determined for each skill using the "agreement/agreement + disagreement × 100" formula (Tawney & Gast, 1984) for at least 20% of the data. Reliability was 100% for the first participant child, 75% for the second and the third participant child. Across all skills for all participant children, overall inter-rater reliability was found as 94%.

**Social Validation**

Social validity data were gathered via a nine items questionnaire from participant mothers. Seven of the items were Likert type scale; two of the questions were open ended. The questionnaire had five rating scales: strongly disagree, disagree, neutral, agree, and strongly agree. The questions were as follow: (a) Prior to beginning this study, I felt comfortable with teaching self care skills to my child with autism, (b) Prior to this study, I understood the basic principles of Applied Behavioral Analysis...
(reinforcers, prompt levels, breaking skills into steps, etc.) and how to implement them in teaching my child with autism. (c) I felt that the photo books I made were helpful when teaching the skills to my child. (d) I felt that the trainings given prior to the study were easy to understand, even for someone who has little experience with teaching skills to children with autism. (e) I would recommend the trainings to other parents of children with autism. (f) Upon completion of this study, I feel comfortable with teaching self care skills to my child. (g) Upon completion of this study, I understand the basic principles of Applied Behavioral Analysis (reinforcers, prompt levels, breaking skills into steps, etc.) and how to implement them in teaching my child with autism. The open ended questions were: (h) What I liked most about this training program and, (i) What I liked least about this training program. The questionnaire was e-mailed to the parents. The data from the questionnaires were analyzed by the first author by gathering similar answers from the participants.

Results

Results for “Aa”

Data obtained from the study were analyzed graphically. Figure 1 illustrates mother A’s training activities with her child Aa about “sweep under table”, then “tooth brushing”, and lastly “using remote control” at home and also at the center.

Aa was able to perform very few of the skill steps at baseline for all skills, as illustrated by the first data points on each graph. Probe data obtained from all skills seems to be consistent with the baseline data. A noticeable and sometimes fluctuating process can be seen for each of the three skills throughout the training process. All skills were performed above 80% at completion. Moreover, follow up data were consistent with those of teaching phase. According to these results, the PTCP provided to the mother A in addition to her training as a therapist was considered as effective.

Results for “Bb”

Figure 2 illustrates skills taught to Bb, by his therapist BT at center and also mother at home. The skills are shown in the order they were taught, beginning with “washing hands”, then “putting shoes on”, and lastly “tooth brushing.”

Participant Bb was unable to perform any of the skill steps at baseline for the skills “washing hands”, “putting shoes on” and “tooth brushing”, as illustrated by the first data point on each graph. Probe data obtained from all skills seems to be consistent with the baseline data. Child Bb’s noticeable process can be seen for first and second skills throughout the training process. First and second skills were performed above 94-100% respectively. His mother stated that she did not take much data on the third skill however did work on the teaching methods with him. She mentioned that she was able to take data for two trials to show his progress, and he was at 80% independence. This data is consistent with the final probe data taken. According to these results, parent training provided to mother in conjunction with her therapist BT can be considered effective for “washing hands” and “putting shoes on”. The skill of “tooth brushing” was taught successfully using the teaching methods, although the data to support this claim is limited. Figure 3 illustrates habilitation therapist BT’s data for same skills as “washing hands”, then “putting shoes on”, and lastly “tooth brushing.”

According to habilitation therapist BT’s data, child Bb was unable to perform any of the skill steps at baseline for the skills “washing hands”, “putting shoes on” and “tooth brushing”. Probe data obtained from all skills seems to be consistent with the baseline data. An acceptable process can be seen for first and second skills throughout the training process. First and second skills were performed above 80%. During the third skill child Bb experienced a change in his habilitation therapist BT three times, and the teaching methods and data collection did not remain consistent. There was a small amount of data taken in the beginning of the sessions with the therapist BT. According to these results, parent training provided to mother in conjunction with the therapist BT can be considered as effective in “washing hands” and “putting shoes on”. Child Bb also completed third skill, “tooth brushing” as shown on Figure 3.
Results Regarding Targeted Child “Cc”
Figure 4 illustrates skills taught to Participant Cc, by his mother C at home. The skills are shown in the order they were taught, beginning with “tooth brushing”, “put toys away”, and, “talking on the phone”.

Child Cc was unable to perform any of the skill steps at baseline. Probe data obtained from all skills seem to be consistent with the baseline data. First skill was performed above 75%, although the final probe indicated it was mastered above 80%. Mother C misplaced the last data sheet showing independence. Second skills were performed above 80%. It was determined by his mother that the third skill, “Talking on the phone” was not appropriate for him at this time. Child Cc has noted auditory sensitivities and adverse reactions to the voice coming through the phone. He refused the skill after multiple trials and reinforcement, and no data was taken. According to these results, parent training provided to mother can
be considered as effective in “Tooth brushing” and, “Putting toys away”, but not effective in determining target behaviors for this child.

Social Validity of the PTCP
According to the social validity data, all parents agreed that they were comfortable with
teaching self-care and domestic skills using the method of ABA with their children after the study was completed. They agreed that training in meetings and home visits were easy to understand. Photo book was helpful in training sessions with the children. All parents agreed that they would recommend this training to other parents of children with autism. What they liked most about this training program was that it was easy to apply with their child. First mother A said “it was easy for my child to comprehend due to the visual

Figure 3. Percentage of correct responses for Bb during baseline, teaching and follow up sessions according to the therapist BT’s data.
aids and repetitiveness." Second mother B said "what I like most about the program was the picture books showing the skill steps." The third mother C mentioned that "learning to break skills into parts, teach using correct prompt levels, and having pictures of the steps" were the parts she liked most about the program. Participants stated the parts they liked least about this program were data collection, time line and busy family’s schedule. The first mother A said "I have no timeline given for how long to teach the skill."
had difficulty taking videotape of her child, which was needed due to his refusal to complete the skills in front of the raters. The second mother B said “I felt like it was often difficult to teach skills due to my family’s busy schedule and felt that it would be easier having a habilitation therapist to help her with implementation. I was teaching the skills twice per day for some skills”. The third mother C said “It was difficult taking the data. I felt that having the habilitation therapist involved was helpful and feels confident teaching future workers how to teach skills to her child.”

In conclusion, data obtained from the study showed that the children were unable to perform the skill steps at the baseline for most of these skills and probe data were consistent with baseline data. First of all, training started a quick progress for most of the skills, fluctuating progress for some other skills throughout the training process was observed. At the end of the teaching process, all children were able to reach the criteria for all three skills, except Bb’s tooth brushing skill. Follow up data were collected at the end of the each teaching stage. But most of the children couldn’t reach the independence level. Follow up data were observed to be consistent with teaching phase. Mothers said they were happy to apply skill teaching to their children.

Discussion

The purpose of this study was to determine the effectiveness of a PTCP for teaching self care and domestic skills to individuals with autism. Results revealed that PTCP was effective in teaching self-care and domestic skills to individual with autism. Results were that the mother who was previously a therapist, and mother-therapist dyad that completed PTCP were effective in teaching self-care and domestic skills to their children and student with autism by the training activities provided by the program. These results were parallel with the results of the previous research on the program focused in this study. For example, Cavkaytar (1999, 2007) applied the program to mothers who have children with mental retardation. After the training phase, mothers taught self-care and domestic skills to their children at their home. All mothers completed the program were working alone with their children.

In another study, Sabanova and Cavkaytar (2007), worked with teacher aides who are working in a private special education center for teaching self-care and domestic skills at school. Results of the study showed that the program was effective in teaching self-care and domestic skill. Ozcan and Cavkaytar (2009) replicated the program in teaching toilet skills to children with autism and mental retardation. The program was again found to be effective in teaching toilet skills.

The first mother A was previously trained as a therapist and had received additional training in ABA prior to the study, and worked with her child at home. She felt very comfortable teaching the skills to her child and felt comfortable taking data and fading prompt levels. She did feel overwhelmed at times and stated that it was very difficult to teach the skills consistently by herself without the help of her habilitation therapist. Like most working mothers, her work, home, and family responsibilities consumed such a large portion of her time that she felt the support of an additional therapist would have been very helpful and that the skills would have progressed at a faster rate.

The second mother B worked at home; her therapist worked at the center on the same skills simultaneously. The mother’s and therapist’s data indicated that they taught the targeted skills in conjunction with one another. This mother had two children at home with a disability and discussed how invaluable it was to have additional help and support implementing her child’s intervention. She also felt that having the skills taught across multiple environments was part of the success of his mastering so quickly. Although ideally children would benefit most from receiving intervention in their natural environments by their primary caregiver, it is not always an easy feat to achieve. Therefore having parents trained to the best of their ability to implement interventions at home, in conjunction with collaborating with other professionals in the child’s environment would provide continuity of care. This also allows parents’ access to a trained professional that can offer suggestions and adaptations to skill teaching when a child
is not progressing or refusing to complete skill steps.

The third mother C participated in the PTCP, but she could not complete the third skill teaching after the first and second skill. The result may be related to the absence of support from her therapist and school. She discussed her satisfaction with the program and the new empowerment that she felt after being able to successfully teach her child skills. She stated how different her son with autism was from his typical siblings, and how teaching methods were also quite different for each. She explained that if no one spent the time teaching parents how to use methods such as ABA, and visually supported instruction then they would continue reinforcing the wrong behaviors and become just as frustrated as the child. So many parents feel so helpless when they have a child with autism, because their interactions are often unsuccessful. This mother stated that giving her the power and confidence to teach her child even basic skills made her feel successful and more comfortable teaching him. Special educators and the paraprofessionals or therapists with whom they work need to establish and maintain a collaborative relationship to better serve the children assigned to them (Hauge & Babkie, 2006). Werts, Harris, Tillery, and Roark (2004) have reported that most parents in their sample reported paraeducators working with their children were doing a good job. The result of their study indicates that paraeducators are perceived by parents as professionals, highly valued service providers, and they should be treated as such. Communication and collaboration are required of paraeducators; therefore, training in these areas is vital. Eyberg and Matarazzo (1980), pointed that parents can act as their own therapist by developing mother child interaction if they train on individual parent-child interaction training programs. The first mother who was working at the education center as a therapist completed teaching for three skills during a total of 85 sessions alone with her child. The second mother completed teaching for three skills during a total of 55 sessions in collaboration with her child’s therapist. The third mother did not complete the teaching period for all three of the skills. According to these results, the first mother effectively completed the teaching period for all skills. The second mother who worked with her therapist completed the skills more efficiently than first mother working alone. These results indicate that the mother who trained and applied the PTCP program with her child’s therapist, can teach her child self-care and domestic skills most effective and efficiently. In addition the mother who also had previous training and completed the PTCP program taught her child the skills over a longer duration. This may point to the need for children to learn skills across several contexts in order to generalize and master the skills independently. The child working with his mother and therapist received training in both the therapy center and at home.

**Limitations and Suggestions**

Results of the current study should be considered with the following limitations. Data on the teaching phase of the study was gathered by participants who are mother or therapist. Although the researchers were present to take baseline and all probe data, it was not feasible to be present in the homes or at the center each time a participant took data on the skills. Therefore the study had some limitations about the correct implementation reliability. We cannot be certain that data was taken correctly and consistently, although at each visit data collection methods were reviewed with the participants. The researchers also did not anticipate that child Cc would not perform any of the skills in front of anyone but his mother. His mother was gracious enough to take video of him performing the skills, and baseline and probe data was taken from the videos. Parent who was working alone also complained about not having enough time to work on skills consistently. This illustrates further the importance of a supportive collaboration between parents and the professionals working with the child with autism so that they are constantly receiving training on these much needed skills. Social validity data showed that mothers found it easy to learn and apply the PTCP to their children with autism at home.

Some suggestions to be presented can be as follows: First of all, this program can easily apply to children with autism for teaching
self-care and domestic skills by parent as a therapist or parent-therapist collaboration. Future research is needed to verify the results of this study, including replication for children with other developmental disabilities and their family members such as peers and grandparents. A larger sample size with varying levels of severity would provide more insight into the coexisting variables that may influence the speed and efficiency of how the skills are taught and mastered. Follow up data after mastery at varying intervals would also give us information about the continuing independence on the skills taught.

References


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