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Clinical Focus

Collaboration Between Child Play Therapy and Speech-Language Pathology: Case Reports of a Novel Language and Behavior Intervention

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Purpose: It has been well documented that a significant number of children with developmental language disorders (DLDs) also exhibit challenging behaviors. In this study, a new intervention (Play and Language [PAL]) was developed through a research collaboration between a speech-language pathologist and a play therapist. The purpose of this clinical focus article is to describe child play therapy techniques and how these, along with early language intervention techniques, may positively impact preschool children's general communication and behavior.
Method: Students in a communication sciences and disorders program were trained to use a combination of child therapy techniques and language facilitation procedures in the PAL approach. Five preschool children, who displayed DLD and challenging behaviors, participated in a 2-week daily intensive intervention. Pre- and postintervention data for general communication and behavior skills were collected through parent report and language sample data. Student clinician and parent surveys were collected to assess the feasibility of conducting the new intervention and the parent-observed outcomes and satisfaction.
Results: A majority of the children who participated in the study increased their intelligibility and number of different words. Fewer than half increased their sentence length. These same children decreased their challenging behaviors, with 11 of 14 behaviors being reduced to normal levels. All parents reported satisfaction with their child's results. In addition, students trained to provide the intervention reported high levels of satisfaction with the training to implement PAL and that they were confident in providing the intervention techniques.
Conclusion: Together, our exploratory data provide preliminary and limited evidence that combining play therapy and language facilitation techniques may improve general communication skills and decrease challenging behaviors within the same intervention.
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Several studies indicate that a significant number of children with developmental language disorder (DLD) also exhibit co-occurring emotional/behavioral problems (Beitchman et al., 1986; Carpenter & Drabick, 2011; Curtis et al., 2018; Gallagher, 1999; Hyter et al., 2001). Children with DLD have a wide range of difficulty with language, which include difficulties with grammar, semantics, phonology, intelligibility, verbal memory, discourse, pragmatics, and word finding. These children may have other neurodevelopmental difficulties such as attention problems, reading difficulties, motor impairments, social impairment, and problem behaviors (Bishop et al., 2016). In this study, we were particularly interested in those children with DLD whose parents identified them as also having challenging behaviors.

Challenging behaviors have been defined as "a pattern of behavior that interferes with a child's cognitive, social, or emotional development; is harmful to the child, other children or adults, and/or puts a child at high risk for later social problems or school failure" (B. Kaiser & Rasminsky, 2017, p. 7). There are two groups of social, behavioral, and emotional problems that may be perceived as challenging behaviors: externalizing and internalizing. These two groupings were first used in 1966 (Achenbach, 1966) and have been endorsed for use in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*; American Psychiatric Association, 2013). Externalizing behaviors are directed

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outward and are usually observable by other individuals. Externalizing behaviors include aggression, disruption, acting out, and destruction of property. Internalizing behaviors are more difficult to observe and include depression, anxiety, social withdrawal, substance abuse, feeling of loneliness or guilt, feelings of sadness, nervousness and irritability, fearfulness, sleeping problems, difficulty concentrating, and negative self-talk.

According to Hollo et al. (2014), 81% of children with behavior disorders have language difficulties that are unidentified. Many of these children struggle with the ability to communicate effectively with their peers, resulting in loneliness, low self-esteem, and increased aggression (Chow & Wehby, 2019; Leung, 2015; Nelson et al., 2005). It has been hypothesized that children with DLD often do not experience successful social interactions, and as a result, their self-esteem and peer status are negatively impacted (Rice et al., 1991). More recently, it has been learned that, in some preschool children, there is a bidirectional relationship between internalizing behavior problems, such as being withdrawn, anxiety, and depression, and expressive language skills as well as a unilateral relationship between internalizing behaviors and receptive language (Bichay-Awadalla et al., 2019). Their data support claims that children with poor expressive language skills have difficulty with social interactions and, as a result, may develop a higher number of internalizing behaviors. Also, a high number of internalizing behaviors may result in reduced social interaction and thus decrease language skills. The unidirectional finding for receptive language suggests that early receptive language impacts later internalizing behaviors. Furthermore, behavior regulation has been found to be a significant predictor of vocabulary gain in children with DLD (Schmitt et al., 2014). Because DLD and behavior difficulties often occur in the same child, it may be more efficient in terms of time and cost to combine methods of the play therapist and the speech-language pathologist (SLP).

Researchers recommend a collaborative model of intervention that combines play therapy components and speech-language interventions in order to ensure maximal outcomes for these children (Armstrong, 2011; Balch & Ray, 2015). Play therapists are trained in how to develop healthy relationships between parent and child, teacher and child, and peer to peer. Play therapists have specialized skills in the symbolic function of play, counseling techniques that encourage safe exploration of feelings through play, selection of play therapy materials, and basic nonverbal and verbal skills (e.g., leaning forward, being interested in what the child is saying and doing, having a tone similar to child's affect, verbally tracking the child's behavior, reflecting the child's feeling and behavior, providing esteem-building comments, and facilitating creativity and decision making through play and building a positive relationship with the child; Landreth, 2012; Ray, 2004). In contrast, SLPs are trained in verbal and nonverbal techniques to increase communication abilities. The first two authors of this study, an SLP and a play therapist, developed an intervention, hereafter called "Play and Language" (PAL) therapy. PAL combines play therapy techniques based on child-centered play therapy (CCPT) along with language facilitation techniques of expansions, recasting, and following the child's lead. The rationale for developing this intervention was that families of children with DLD and behavioral difficulties might receive more efficient services, in terms of time and cost, if a new intervention targeted both general communication skills and addressed challenging behaviors. Furthermore, providing speech and language services to a young child who also displays challenging behaviors can be difficult without talking tools to address the behavior. Studying the impacts of such a therapy will hopefully lead to a better understanding of how to serve these children.

Tenets of Play Therapy

Play is the work of a child. It allows a child to explore his or her world and thoughts in a safe manner and environment. Gray (2013) lists five important characteristics of play: (a) It is self-chosen and self-directed; (b) it is intrinsically motivated; (c) it is guided by mental rules; (d) it is imaginative; and (e) it is conducted in an active, alert, but relatively nonstressed frame of mind. Play therapy is more than having fun with toys. It is a recognized, well-studied, theoretically based psychological intervention. The nature of the relationship between the child and the play therapist leads to decreased challenging behaviors. The goal of play therapy is to reduce problematic behaviors and help with coping.

From a historical perspective, psychologist Carl Rogers (1951) developed one of the first nondirective types of play therapy. In Rogers' relationship therapy, the relationship between the therapist and the child was the therapeutic element of the intervention. This therapy later became known as client-centered therapy or person-centered therapy. Rogers' student, Virginia Mae Axline (1969), extended Rogers' work to become what is known as CCPT. In CCPT, the play therapist's relationship with the child is built upon the following eight tenets:

1. Let the child lead.
2. Be with the child.
3. Show genuine interest in the child.
4. Be sensitive to the child.
5. Respect the child's ability to problem solve.
6. Trust the child's inner direction.
7. Believe in the child to act responsibly.
8. Accept the child as he or she is.

The relationship between the child and the play therapist is such that the child is free to explore and express himself or herself completely. Specific techniques used by the play therapist using CCPT consist of reflecting, tracking, attending, proximity, questions, and limit setting (Bratton et al., 2006; Landreth, 2012; Landreth & Bratton, 2020). In addition, the session is led by the child. The play therapist provides encouragement rather than praise. These latter

techniques are used to reinforce the eight CCPT tenets. A key belief in CCPT is that the child has the ability to self-heal, and an objective of CCPT is to be able to communicate his or her feelings and resolve them through play.

A meta-analysis of 52 studies of CCPT across young children and school-age children of diverse backgrounds indicated that it was an effective intervention and overall led to a half–standard-deviation improvement in the areas of decreasing challenging behaviors and improving self-efficacy compared to children not receiving CCPT (Lin & Bratton, 2015). Self-efficacy is one's belief in their ability to accomplish his or her goals. Furthermore, there are a handful of studies indicating that CCPT with preschoolers is an effective method of decreasing internalizing and externalizing behaviors (Bratton et al., 2013; Ceballos & Bratton, 2010; Smith & Landreth, 2004). Together, these latter studies indicate the effectiveness of CCPT with young children and with children from diverse backgrounds (Davis & Pereira, 2014).

Some studies of the effectiveness of CCPT have evaluated not only behavioral outcomes but also academic outcomes, such as spoken language, writing, and reading scores (Blanco et al., 2012). A few studies have examined play therapy and its impact on behavior in young children with communication disorders (Balch & Ray, 2015; Danger & Landreth, 2005; Stagnitti et al., 2012). These studies have found gains in the areas of receptive and expressive language, social interactions, self-regulation/responsibility, and empathy as well as decreases in social disconnection.

Play in the Discipline of Speech-Language Pathology

The concept of using play as part of the therapeutic process in communication development is not a new one. Bruner (1975) proposed that play is the natural context where communication is developed. Historically, SLPs have integrated play with toys as tools used in intervention or have targeted play skills to improve communication skills.

In the first context, SLPs working with children often rely on toys as a medium for facilitating a child's general communication skills. Toys are the props to support a meaningful context. In these types of sessions, the SLP typically has goals or targets in mind regarding vocabulary, morphology, syntax, phonology, and/or pragmatics. The child-led nature of CCPT is very similar to the concept of child-oriented therapy as defined by Fey (1986). One aspect of child-oriented intervention is facilitative play, which allows the child to select the play materials and how she or he wants to play with them. The latter is also true in play therapy. Fey provides specific strategies that are used in facilitative play, such as following the lead of the child, attending to the child's behavior, and responding to the child in a manner to foster language skills. Following the child's lead and interpreting the child's behavior are also used in play therapy, but responding to the child in a manner to foster communication skills is not used in play therapy. During facilitative play, Fey recommends the use of language stimulation strategies such as following the child's lead, self-talk and parallel-talk, expansions, expatiations (e.g., adding new and relevant information), recasting sentences, simplifying the sentences that are directed toward the child, and build-ups and breakdowns. The technique of using conversational recast in language intervention has been found to be an effective way to facilitate grammar (Cleave et al., 2015). With the exception of following the child's lead, language stimulation techniques are not common in play therapy.

An SLP will use toys and play to elicit meaningful communication in order to recast, expand, or model a new communication behavior. A play therapist, in contrast, will use toys to elicit and reflect feelings, to work out problems, and to develop a relationship with the child. These are two very different end goals and a fundamental difference between facilitative play in speech-language pathology and play therapy from the field of counseling (Loeb & Davis, 2019).

It is important to note that three recent intervention studies have yielded results of improved communication and improved behavior in children who were provided communication intervention (Brinton & Fujiki, 2019; Curtis et al., 2017; Rose et al., 2020). Although it is not clear from these studies if the children and parents were receiving counseling, the young children with DLD who received intervention using either the enhanced milieu teaching approach (A. P. Kaiser & Hampton, 2017), the Hanen "It Takes Two to Talk" program (Weitzman et al., 2017), or the bibliotherapeutic approach (Brinton & Fujiki, 2019) displayed gains in both communication and behavior after intervention. All of the latter therapy approaches utilized some child-oriented language strategies, such following the child's lead, wait time, expansions, and simplifying sentences, and have been found to be effective in helping children develop language. On the basis of the available data, it appears that communication therapy by SLPs may impact behavior too and that play therapy by counselors may impact communication as well. It is likely that there are common change agents being used in both therapies; however, it is unclear which are the most impactful for changing both communication and behavior.

Another way that play is integrated into speech-language therapy is to target new levels of play behavior and/or to increase social communication skills (Short et al., 2020). As an example, preschoolers with language delays, who received modeling of play behaviors, made greater gains in their play skills when compared to preschoolers who did not receive the play facilitation (Sualy et al., 2011). In the latter study, play behavior increased from exploratory to pretend play. During play, the interventionist encouraged pretend play behaviors and modeled these play behaviors (e.g., rocking a baby doll back and forth, singing a song, and putting the baby doll in bed with a blanket). In play therapy, new play behaviors are not targeted.

SLPs report that they often experience challenging behavior from their clients when providing services and that they did not receive much training on behavior management during their graduate and undergraduate coursework (Chow & Wallace, 2019). Using the basic tenets from play therapy, the goal of the SLP is to develop an empathetic, trusting

relationship with the child. Part of that relationship is to interpret challenging behavior(s) as communication. Challenging behaviors might be signaling the message that the child's needs are not being met or that they do not understand what is being asked of them (Garth & Carcamo, 2020). For example, if a child begins crying, an SLP using play therapy techniques would use reflection and say, "You are feeling sad." If a child throws a toy in anger to the floor, an SLP using play therapy tenets would say, "You seem angry." Instead of asking "How do I stop this behavior," we would ask "What is this behavior communicating?" Importantly, play therapy allows for an opportunity to develop a relationship with the child and conduct intervention sessions in such a way that honors the child for who he or she is and to be with the child, accepting of who he or she is (DiLuzio, 2015). It also requires a willingness from the SLP to let the child lead the session and not require specific responses.

The first two authors developed and implemented a combined play therapy and general communication intervention for preschool children, which combined basic tenets of CCPT with child-oriented, facilitative play. We called this intervention PAL. The approach was child oriented, and goals were broad, namely, to improve communication and to decrease challenging behaviors. The purpose of this research was to conduct an exploratory, pilot study of the PAL intervention with preschool children who displayed both DLD and behavioral issues. Our research questions were the following:

1. Do children improve their general communication skills and decrease their challenging behaviors following PAL therapy?
2. Are parents satisfied with the outcomes of the PAL therapy?
3. Are student clinicians satisfied with the PAL training and their implementation of the PAL therapy?

Method

Participants

This research was approved by the institutional review board at Baylor University. Flyers were sent by the clinic manager to families of preschoolers attending the Baylor Speech, Language, and Hearing Clinic and those on the Clinic's waitlist to invite them to participate in a short-term intervention between the fall and spring semesters. We asked parents who thought their child had both challenging behaviors and DLD or delays to participate.

Seven children participated; however, only five of those children are reported in this article. To be included in this study, children had to display borderline or clinical ranges of behavioral problems based on the Child Behavior Checklist for Ages 1½–5 (CBCL/1½–5; Achenbach & Rescorla, 2000) and were referred for or receiving services for a speech-language disorder or delay. Two of the seven children were not included in the dissemination of this study because they did not score in the borderline or clinical ranges of the CBCL/1½–5. As a result, five children (four boys and one girl) between the ages of 3;1 and 4;2 (years; months) participated. The mean age of the participant sample was 3;7 (43.6 months), with an *SD* of 5.63 months. The children's race/ethnicity differed, with three children who were White and not Hispanic, one child who was Latino, and one child who was biracial (White and Asian). Two of the mothers had a graduate degree, two mothers had some college but no degree, and one mother had a high school education.

Pre- and Posttesting Procedure

This study was an exploratory, pilot, quasi-experimental, pre- and posttest design. Pre- and postmeasures were obtained to ascertain the children's behavior and general communication skills the day before and the day after the eight intervention sessions. At pretesting, each child was individually administered the Preschool Language Scale–Fifth Edition (PLS-5; Zimmerman et al., 2011), and a language sample was conducted. The same graduate research assistant performed the PLS-5 testing and the language sampling for all children during the pretesting and posttesting. The graduate student was a second-semester graduate student in speech-language pathology and had received coursework in test administering and practice in giving the PLS-5 and collecting language samples. This graduate student was the only one who interacted with the child during the pre- and posttesting. The PLS-5 measures receptive and expressive language in children. Test–retest, interrater, and split-half reliabilities of the PLS-5 for the ages assessed in this study were .90 or above. Concurrent validity of the PLS-5 with the Clinical Evaluation of Language Fundamentals–Preschool 2 (Wiig et al., 2004) yielded adjusted correlations that were moderate to high at .70–.82. The sensitivity of the PLS-5 is .83, and the specificity is .80.

In addition, a 20-min language sample was collected during play. The same toys (i.e., barn, animals, people, a wordless book, and a set of picture sequence cards) were used across all children. The guidelines of language sample collection as recommended by Miller (1981) were followed. For example, the graduate student collecting the language sample was encouraged to follow the child's lead, comment on what the child did, engage in play with the child, and refrain from asking closed-ended questions. The graduate student was told to play with the toys for 10 min, then move to the wordless book, *Carl's Afternoon in the Park*, by Alexander Day, and then retell a story using picture sequence cards. For example, one set had a story about a child pouring milk, spilling it, and then cleaning it up. She gave an example of a story using the picture cards, turned them over again, and asked the child to retell the story by saying, "Now you tell me a story." As noted earlier, the same graduate student who collected the language samples also administered the PLS-5 testing. Another graduate student was in the room to monitor the video equipment and to transcribe online. All sessions were audio- and video-recorded using an Apple iPad Air and a Sony ICD BX140 4GB

Digital Voice Recorder with an ESTIQ Professional Lavalier Lapel Microphone.

Parents were asked to complete a developmental questionnaire designed by the first author and the CBCL/1½–5 (Achenbach & Rescorla, 2000) during the first session. The CBCL/1½–5 was developed by Achenbach and Rescorla (2000) to assess the emotional and behavioral problems of young children. The CBCL/1½–5 is completed by parents/caregivers and gathers information related to demographics, occupation, and so forth. The tool includes 99 items ranked from 0 (*not true*) to 1 (*somewhat true*) to 2 (*often true*) as well as open-ended descriptive questions. The CBCL/1½–5 includes seven empirically based scales (Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawal, Attention Problems, Aggressive Behaviors, and Sleep Problems), which can be grouped into internalizing or externalizing behaviors. The CBCL/1½–5 also includes five *DSM* subscales related to Depressive Problems, Anxiety Problems, Autism Spectrum Disorder Problems, Attention Deficit Problems, and Oppositional Defiant Problems. On the basis of the parent's report of the child's behavior and its comparison to normative data, a scaled standard score is determined. The higher the score, the greater the challenging behavior(s). A rating of "normal," "borderline clinical," or "clinical" is assigned to each scale and subscale. A rating of "normal" is given if the child scores below the 93rd percentile. A score between the 93rd and 97th percentiles is "borderline clinical," and a score above the 97th percentile is in the "clinical" range.

The CBCL/1½–5 has shown consistent reliability and validity as a developmentally sensitive measure that does not require professional administration, can be scored quickly, and provides information on a large range of emotional and behavioral problems across diverse groups of children (Gross et al., 2006). In addition to the CBCL/1½–5, parents also were asked to report their current concerns regarding their child's behavior and general communication on a written questionnaire that was designed by the authors (see Supplemental Material S1). Tables 1 and 2 describe child participants and pretest data.

All of the children displayed some form of expressive communication delay and one or more clinical or borderline clinical challenging behaviors. As shown in Tables 1 and 2, Anna, Alex, Nate, and Craig all displayed language sample data at pretest that indicated below–age-level expectations for mean length of utterance in morphemes (MLUm), number of different words (NDW), and percent intelligibility. Tommy displayed an expressive language disorder based on the results from the language sampling and the PLS-5.

At posttesting, another language sample was collected for 20 min using the same objects during play that were used in the pretesting. All sessions were audio- and video-recorded. The same graduate research assistant who elicited the pre-intervention language sample also elicited the postintervention language sample.

The parents were asked to complete two postintervention surveys designed by the authors and the CBCL/1½–5 to assess parent satisfaction and parent perception of their child's communication and behavior outcomes (see Supplemental Materials S2 and S3). Student research assistants in communication sciences and disorders (CSD) not trained in the PAL intervention entered the data from the parent questionnaires into a de-identified coded spreadsheet. An independent graduate student in CSD checked all data entries for accuracy.

Table 1. Child participant characteristics at pretesting.

Variables	Child				
	Anna	Alex	Nate	Craig	Tommy
CA	4;1	3;5	3;5	3;1	4;2
Race/ethnicity	W	B	W	W	L
Sex	F	M	M	M	M
PLS-5 Receptive	CNT	94	CNT	106	90
PLS-5 Expressive	CNT	90	CNT	88	77
PLS-5 Total	CNT	91	CNT	97	82
NDW	57	45	7	89	108
MLUm	2.41	2.09	1.50	2.44	2.15
% Intelligibility	43	27	62	55	80

Note. Percent (%) intelligibility was determined by transcribers and Systematic Analysis of Language Transcripts computation. CA = chronological age in years;months; W = White, not Latino; B = biracial; L = Latino; F = female; M = male; PLS-5 = Preschool Language Scale–Fifth Edition (PLS-5 scores are standard scores); CNT = could not test; NDW = number of different words; MLUm = mean length of utterance in morphemes.

PAL Intervention Student Clinician Training

Student Clinician Participants

Eleven students in the CSD program at Baylor University were trained as student clinicians and received a stipend for their participation. The first author recruited student participants by sending an e-mail to all students, asking if they were interested in an opportunity to take part in a study about play therapy and communication intervention with preschoolers. Students who were interested in participating contacted the first author. The first author reviewed the undergraduate and graduate students for their self-reported experience working with children with and without DLD. Five of the 11 students were selected to participate in the intervention administration. Three of the five were graduate students with at least one semester of clinical practicum. However, two undergraduate students with experience working with children with DLD also were selected to provide the PAL intervention. Students providing the PAL intervention consisted of four who were White and female and one who was female and Latino. Six of the 11 students trained in the PAL intervention did not provide the PAL intervention and instead transcribed language samples, coded language samples, and reviewed procedural fidelity for the intervention sessions.

PAL Training

The training to learn how to conduct the PAL intervention took place over a 2.5-day period prior to the start

Table 2. Pre-intervention behavior report by parent.

CBCL/1½–5 behavior	Child					Total
	Anna	Alex	Nate	Craig	Tommy	
Emotionally reactive	**B**	N	N	N	N	1
Anxious/depressed	**B**	N	N	N	N	1
Sleep problems	**B**	N	N	N	N	1
ASD Problems	**B**	N	N	N	**B**	2
ADHD Problems	N	N	**B**	N	N	1
ODD Problems	**C**	**C**	**C**	**C**	N	4
Attention problems	N	N	**B**	N	**C**	2
Aggressive behaviors	N	N	**C**	**C**	N	2
Depressive behaviors	N	N	**C**	N	N	1
Somatic complaints	N	N	N	N	**B**	1
Total	5	1	5	2	3	16

Note. Bolded letters indicate behaviors that are borderline clinical scores (B) and clinical range scores (C). CBCL/1½–5 = Child Behavioral Checklist for Ages 1½–5; B = borderline; N = normal; ASD = autism spectrum disorder; ADHD = attention-deficit/hyperactivity disorder; ODD = oppositional defiant disorder; C = clinical.

of testing and intervention. All authors assisted with the training. The first 2 days focused on learning about play therapy techniques from the second author, who is a certified school-based registered play therapist and counselor educator, and the third author, who was a graduate student studying to be a school counselor. One of the most important aspects of CCPT is that it is a program to strengthen the relationship between the interventionist and the child by using play. Building an accepting relationship in which the child feels safe to express oneself through play is key. In addition, a half-day session was provided by the first author, who is an SLP, that was dedicated to sharing information about language and behavior in children with DLD, reviewing language intervention techniques, and conducting an assessment. Language intervention techniques that were explained and practiced are described in the Appendix. Students had opportunities to practice these techniques through role play and to receive feedback from the instructors.

Language Sample Transcription and Coding

Students in the CSD program, who had participated in the PAL student training, transcribed each child's language sample from iPad video-recordings while using headphones. Each language sample was transcribed by an initial transcriber, and a second student reviewed the transcript for errors while watching the videotape. The second transcriber made any corrections to the initial transcriber's work. The first author then reviewed each sample to check for transcript accuracy. Discrepancies were counted as disagreements as part of the transcription reliability. The second independent reviewer's transcription was accepted as the final version to be analyzed. Intertranscriber reliability was 96% for the pretest and 96% for the posttest samples. The transcribing conventions of the Systematic Analysis of Language Transcripts (SALT) 2018 Research Version were used (Miller & Iglesias, 2018). The conventions included the transcriber placing an "XXX" for each unintelligible utterance or unintelligible word in an utterance.

An initial student, who had been trained in the PAL student training, coded the samples using the procedures for SALT. A second student, also trained in the PAL student training, coded the samples checking for errors. An independent student, blind to the purpose of the study and not involved in the PAL student training, then reviewed all audio transcription and coding. This independent student reviewer was a second-semester graduate student with experience in transcribing and coding language sample transcripts using SALT. As a final check, the first author reviewed each sample to check for coding accuracy. Discrepancies were counted as disagreements as part of the coding reliability. The second independent reviewer's coding was accepted as the final version to be analyzed. Intercoder reliability was 95% for the pretest coding and 98% for the posttest coding.

Description of the PAL Intervention Sessions

All of the children participated in eight daily intervention sessions, for 50 min per day, over 2 weeks (i.e., four sessions per week). A short-term 2-week intervention was provided based on findings that play therapy could be effective with this dosage level (Leung, 2015; Siu, 2014) and because this was a bridge time from the children's regular semester therapy schedule. Each child had a student clinician randomly assigned to him or her. This student clinician worked with the same child in the same quiet therapy room for all of the eight sessions. Toys were the same for all children across all days. Toys were determined by the second author as a play therapist and included (a) realistic toys (i.e., baby dolls, nursing bottles, toy phones, dollhouse, doctor's kit, doll family, play money, animals, vehicles, and puppets), (b) aggressive toys (i.e., aggressive animal and toy soldier), and (c) creative toys (i.e., playdough, crayons, markers, paper, sand tray and magic wand). The rooms were arranged in specific ways, which were the same for each session. For example, the dollhouse was in one corner, a bean bag chair was in another corner, and toys were set up in the same location on a preschool-sized bookcase. As they

entered the room, the student clinician said, "This is our special playtime together and you can play with the toys in most of the ways you want to. If there is something you cannot do, I will let you know. Are you ready?" Once the student and children were in the room, the student clinician was instructed to follow the basic principles of PAL, which included the following: (a) The child is free to determine the use of time, (b) the child leads and the student clinician follows, (c) see and experience the child's play through the child's eyes, (d) communicate understanding with the child, and (e) have a "be with" attitude (i.e., I am here, I hear/see you, I understand, I care). They were told to follow the child's lead during play, reflect verbally on the child's feelings, encourage the child's play, set limits (i.e., do not allow harm to the child or student clinician), reduce questions, and use of language techniques, which included recasts and expansions. All intervention sessions were video-recorded, and PAL techniques were tallied each day to ensure that the student was conducting the intervention accurately. Daily debriefing sessions with the student clinician and the first author took place to discuss any questions or concerns. The first author asked the student if they had (a) any questions about the session, (b) any concerns about the children's behavior or general communication skills, and (c) any questions about how to work with the child. The debriefing sessions lasted as long as needed to discuss all student questions but generally lasted 15 min. Some student clinician concerns and questions included how much they should allow a child to do—for example, one child routinely poured all the sand from the sand tray onto the floor. This concerned the student clinician, and she wanted to know if she could put restrictions on the pouring of the sand. She was advised not to stop the child's behavior. This was advised because, in a child-oriented approach, the child leads the session. As long as the behavior did not harm the child or the student clinician, it was allowed. In another case, a student clinician was concerned about the child opening the door and running away from her. The student clinician was advised to sit in front of the door if possible and to verbally track and reflect his behavior. For example, the student clinician could say, "You're trying to open the door. You are upset because the door won't open."

Following the intervention phase of the study, students who were clinicians to the children were asked to complete a survey developed by the authors. The purpose of the survey was to gather information anonymously from the student clinician's point of view regarding their training preparation, their views of the intervention, and how the intervention could be made better. The postintervention student survey is in Supplemental Material S4.

Procedural Fidelity

After each session, the student clinician watched the intervention session video and rated their use of nine PAL techniques. The use of expansions, recasts, reflecting, tracking, following the child's lead, attending behaviors/proximity, waiting time/silence, providing encouragement, setting limits, and asking questions were rated on a 1–7 scale. The scale progressed from 1 (*almost never*) to 3 (*sometimes*), 5 (*frequently*), and 7 (*consistently*). Student clinicians were encouraged to frequently and consistently use the PAL procedures, with the exception of "ask questions," which were asked to be kept to a minimum. However, the number of expansions and recasts would be dependent on the number of child verbalizations because a child who did not say anything during a session would not provide a sentence to be expanded or recasted. In contrast, a child who was very verbal would provide more sentences for the student clinician to expand or recast. An independent observer also rated each session. The results of the procedural fidelity of each session indicated that the student clinicians frequently and consistently provided the techniques of the PAL intervention, with the exception of asking questions. As requested, few questions were asked during the sessions. No instances of setting limits were observed. The independent rater displayed high agreement in their rating of the intervention techniques (see Table 3).

Child Outcome Variables of Interest

In a child-centered intervention, broad goals such as improvement in general expressive communication skills are selected rather than specific goals that might require more direction from the clinician. In this exploratory study, we embraced the broad outcome goal of increased general communication intervention, which included both language and speech components. Pretesting data from the language sampling and from parent concerns led to our decision to consider language sampling data to assess outcome variables. These language sample variables included percent intelligibility, NDW, and MLUm.

Results

Three research questions were examined. Because of the small sample size, descriptive statistics were used to evaluate all the questions.

Research Question 1: Child General Communication and Child Behavior Outcomes

The first question concerned the child outcomes regarding communication and challenging behaviors following the PAL short-term intervention. Comparison of pre- and postintervention language samples, the CBCL/1½–5, and parent postintervention feedback provided the data for this question. Table 4 displays the data associated with the posttest language sample, and Table 5 provides the data for the CBCL/1½–5.

Pretest Data for Anna

Anna was the only girl in our sample. She had not previously attended a speech-language intervention and was on the waitlist for a diagnostics at the speech, language, and hearing clinic. However, her mother reported that the child had a diagnosis of a speech and language delay. Anna was not willing to respond to the clinician prompts of the

Table 3. Procedural fidelity: student clinician and independent observer mean ratings for each child across the intervention period.

Intervention techniques	Child					Average
	Anna	Alex	Nate	Craig	Tommy	
Reflecting	4.6 (4.3)	5.9 (5.5)	5.9 (5.7)	5.3 (4.3)	4.5 (5.6)	5.2
Tracking	6.3 (6.3)	6.0 (6.6)	6.0 (6.2)	6.0 (6.0)	6.5 (7.0)	6.3
Follow child's lead	6.7 (6.5)	6.9 (6.5)	6.3 (6.0)	6.4 (6.7)	6.7 (6.7)	6.6
Expansions	2.7 (3.3)	5.1 (4.5)	3.7 (4.7)	5.0 (4.7)	5.5 (6.2)	4.5
Recasts	4.0 (3.7)	6.1 (6.0)	4.6 (4.9)	6.6 (6.6)	5.9 (6.7)	5.5
Attending/proximity	3.7 (5.0)	7.0 (6.2)	6.2 (6.4)	6.7 (6.3)	6.4 (6.8)	6.5
Wait time/silence	3.7 (6.0)	3.7 (2.7)	4.7 (4.6)	5.4 (4.3)	3.1 (3.8)	4.2
Encouragement	2.2 (2.2)	5.2 (5.0)	5.4 (5.7)	5.4 (4.1)	4.6 (5.4)	4.5
Asking questions	2.7 (2.2)	2.7 (2.6)	2.5 (4.2)	2.7 (4.6)	5.0 (5.4)	3.4

Note. The rating scale was from 1 (*almost never*) to 3 (*sometimes*) to 5 (*frequently*) to 7 (*consistently*). The parentheses indicate the independent observer mean scores.

PLS-5, and as a result, the test could not be used to measure her language skills. Her mother reported concerns with Anna's understanding of language, expression of language, and how well she could be understood. Analysis of her language sample at pretest indicated an MLUm, NDW, and the percentage of intelligible utterances were 2 *SD*s below the mean compared to age-matched comparisons. During pretesting, Anna was observed to frequently yell "no" and hide her face to the floor. Her mother reported that she was very shy and displayed expressive anger/aggression and frequent crying. According to the CBCL/1½–5, Anna exhibited four borderline behaviors (i.e., emotionally reactive, anxious/depressed, sleep problems, and autism spectrum disorder [ASD]) and one clinical-level behavior (i.e., oppositional defiant disorder [ODD]).

Outcome Data for Anna

During the intervention sessions, this child would frequently hide her face and often cried during some of the sessions. She was absent one day. Because Anna did not verbalize much during the remaining sessions, the clinician would typically use the techniques of reflection and tracking. Anna displayed improvements at posttesting on her language sample in the areas of NDW, percent intelligibility, and number of complete and intelligible utterances. Her mother reported that she saw improvements in her daughter's sentence length, sentence complexity, and intelligibility. Regarding challenging behaviors, Anna moved from borderline to normal for four behaviors and from clinical to normal for one behavior (i.e., ODD). On the posttest questionnaire, the mother reported the following regarding Anna's communication: "She's been able to tell me when she's feeling mad or sad. She asks for things when she wants them." Furthermore, her mother reported the following regarding Anna's behavior after intervention: "She hasn't thrown as many fits because she's able to communicate that she's upset." Her mother also reported that this was the first time her daughter had told her how she feels.

Pretest Data for Alex

Alex had a previous diagnosis of a speech-language delay and previously attended a speech-language intervention. The mother also reported that he had the Cbl-C defect, an inborn error of metabolism, which is characterized by developmental delay. Standardized language test scores from the PLS-5 were within the normal range; however, all of his language sample measures were 3–4 *SD*s below the mean compared to his age-comparison peers. His mother

Table 4. Language outcomes at pre- and posttest intervention.

Variables	Child				
	Anna	Alex	Nate	Craig	Tommy
CA	4;1	3;5	3;5	3;1	4;2
MLUm-pre	2.4	2.09	1.50	2.44	2.15
MLUm-post	1.99	2.03	1.10	2.76	2.98
NDW-pre	53	7	7	89	108
NDW-post	66	62	15	85	133
% Intelligibility-pre	43	27	62	55	80
% Intelligibility-post	71	59	80	72	85
Complete and intelligible utt.-pre	73	4	16	90	134
Complete and intelligible utt.-post	105	70	40	84	181

Note. Percent (%) intelligibility was determined by transcribers and Systematic Analysis of Language Transcripts computation. CA = chronological age in years;months; MLUm = mean length of utterance in morphemes; NDW = number of different words; utt. = utterance.

Table 5. Pre- and posttest intervention behavior results from the Child Behavioral Checklist for Ages 1½–5.

Behavior	Child					Total
	Anna	Alex	Nate	Craig	Tommy	
Emotionally reactive	**B→N**	N	N	N	N	1/1
Anxious/depressed	**B→N**	N	N	N	N	1/1
Sleep problems	**B→N**	N	N	N	N	1/1
ASD Problems	**B→N**	N	N	N	**B→B**	1/2
ADHD Problems	N	N	**B→N**	N	N	1/1
ODD Problems	**C→N**	**C→N**	**C→B**	**C→N**	N	4/4
Attention problems	N	N	**B→N**	N	**C→C**	1/2
Aggressive behaviors	N	N	**C→B**	**C→N**	N	2/2
Depressive behaviors	N	N	**C→N**	N	N	1/1
Somatic complaints	N	N	N	N	**B→N**	1/1
Total improvements	5/5	1/1	5/5	2/2	1/3	14/16

Note. Bolded letters indicate behaviors that changed from pretest to posttest. B = borderline; N = normal; ASD = autism spectrum disorder; ADHD = attention-deficit/hyperactivity disorder; ODD = oppositional defiant disorder; C = clinical.

reported concerns with his expression of speech and how well he could be understood. His mother also reported that he often disobeyed her, had tantrums, and hit others. According to the CBCL/1½–5, Alex displayed one clinical-level behavior (i.e., ODD).

Outcome Data for Alex

Alex attended all intervention sessions. He displayed improvements on the language sample posttesting in the areas of NDW, percent intelligibility, and number of complete and intelligible utterances. His mother reported that she saw improvements in her son's sentence length and sentence complexity but no change in his intelligibility. The mother's observation regarding intelligibility was not consistent with our language sample results. With respect to challenging behaviors, Alex moved from clinical to normal for one behavior (i.e., ODD). On the posttest questionnaire, the mother reported the following regarding Alex's communication: "More details in sentences. For example, before intervention he would say 'that's ____(name)' and this week he would say 'that's my sister ____(name).'" His mother did not notice any changes in his behavior skills. This latter observation was not consistent with the CBCL/1½–5 postintervention outcome.

Pretest Data for Nate

Nate previously attended a speech-language intervention at the speech, language, and hearing clinic. He was not willing to respond to the clinician prompts of the PLS-5, and as a result, the test could not be used to measure his language skills. His mother reported concerns with his expression of speech and how well he could be understood. The language sample at pretest indicated that his MLUm, NDW, and percentage of intelligible utterances derived from the SALT analyses were 4 *SD*s below the mean compared to age-matched comparisons. During testing, Nate was observed to turn the lights on and off and to try to open the door and run out of the room. His mother reported that he often ran away from others, yelled, and threw things. According to the CBCL/1½–5, Nate had two borderline behaviors (i.e., attention-deficit/hyperactivity disorder [ADHD] problems and attention problems) and three clinical-level behaviors (i.e., ODD, aggressive behaviors, and depressive behaviors).

Outcome Data for Nate

Nate also attended all intervention sessions. However, during the intervention sessions, this child would attend for the first 20–30 min and then would begin to try to leave the room by opening the door. On those occasions when he did leave the room, he would run from the clinician. This child also at times would turn the room lights on and off. On the basis of the language sample posttesting, he displayed improvement in the areas of NDW, percent intelligibility, and number of complete and intelligible utterances. His mother reported that she saw improvements in her son's sentence length and intelligibility but no change in his sentence complexity. With respect to challenging behaviors, Nate moved from borderline to normal behavior for two behaviors (i.e., ADHD and attention problems) and from clinical level to normal for one behavior (depressive behaviors). He also improved in two clinical-level behaviors to become borderline levels (i.e., ODD problems and aggressive behaviors). On the posttest questionnaire, the mother reported the following regarding Nate's communication: "I have noticed an increase in multi-word phrases and replies to those phrases." Regarding changes in his behavior, his mother wrote, "I've noticed his separation anxiety has increased and (he) is much more attached to me than normal. Also, (he) has become reattached to his pacifier."

Pretest Data for Craig

Craig previously attended a speech-language intervention at the speech, language, and hearing clinic. He was the youngest of the children who participated in the study, at 3;1. Craig scored within normal limits on the PLS-5; however, his language sample measures were 1–2 *SD*s below the mean of age comparisons. His mother expressed concerns with his expression of speech and how well he could be understood. His mother reported that he displayed screaming and tantrums, hitting, and difficulty calming down.

According to the CBCL/1½–5, Craig had two clinical-level behaviors (i.e., ODD and aggressive behaviors).

Outcome Data for Craig

Craig was absent for one of the intervention sessions. During intervention sessions, he was observed to attend during the play sessions. On the basis of the language sample posttesting, he displayed improvement in the areas of MLUm and percent intelligibility. His mother reported that she saw improvements in her son's sentence length, sentence complexity, and intelligibility. With respect to challenging behaviors, Craig moved from clinical level to normal for two behaviors (ODD problems and aggressive behaviors). On the posttest questionnaire, the mother reported the following regarding Craig's communication: "My mother could understand him on the phone without the context of what he was saying! It was the first time!" Regarding changes in his behavior, his mother reported that she did not observe changes in his behavior. She also wrote, "My husband was out of town for the last two weeks which is a major disruption in our home. He had a hard time."

Pretest Data for Tommy

Tommy previously attended a speech-language intervention at the speech, language, and hearing clinic. His mother reported that he had a previous diagnosis of language delay and behavioral disorder. His performance on the PLS-5 yielded normal receptive and below-normal expressive language skills. The language sample at pretest indicated that his MLUm was more than 2 *SD*s below his same-age peers and his percentage of intelligible utterances were more than 4 *SD*s below his age-matched comparisons. The NDW was within 1 *SD* of his same-age peers. His mother reported concerns with how well he could be understood. His mother also reported that Tommy displayed excessive anger/aggression and hitting. According to the CBCL/1½–5, Tommy had two borderline behaviors (i.e., ASD problems and somatic complaints) and one clinical-level behavior (i.e., attention problems).

Outcome Data for Tommy

Tommy appeared to enjoy the play sessions with the clinician. On the basis of the language sample posttesting, he displayed improvement in the areas of MLUm, NDW, intelligibility, and number of complete and intelligible utterances. His mother reported that she saw improvements in her son's sentence length and intelligibility but no change in his sentence complexity. With respect to challenging behaviors, Tommy moved from borderline to normal behavior for one behavior (i.e., somatic complaints); however, no change was observed in two areas (i.e., ASD and attention problems). On the posttest questionnaire, the mother reported the following regarding Tommy's communication: "He is talking so much more than before and also has more confidence." With respect to changes in his behavior, his mother wrote, "He has been using his words more to express himself. This last week he has had 0 behavior reports at daycare."

Research Question 2: Parent Satisfaction

Our second research question centered on parent satisfaction with the intervention. All parents agreed that they were satisfied with the outcomes of the study, would like to learn the therapy techniques, and would participate again if given the opportunity. The parent of Alex recommended shorter therapy sessions and to provide tips to parents of what they could do at home to assist with progress. The parent of Nate also recommended shorter therapy sessions.

Research Question 3: Student Clinician Feedback

Our third question evaluated the feasibility of the training of the PAL therapy based on student clinician feedback. Students were asked to complete anonymously a postintervention survey regarding the PAL training and the PAL intervention sessions. The survey was developed by the authors. Given the choice of ratings "poor, average, good, or excellent," all of the five student clinicians rated the play therapy and general communication intervention components of the training sessions as excellent. Three students indicated that the intervention training could be improved by adding more practice of the techniques and/or adding videos of the techniques. One student suggested having a second training after the first day of seeing their clients. Three students suggested that training could have been slower (i.e., extended over more time). Importantly, all of the students indicated that the experience of learning about the psychological approach of play therapy helped them to understand the value of the interprofessional nature of speech-language pathology.

We further examined whether the student clinicians thought that they used the PAL strategies effectively. Student clinicians were asked to rate themselves anonymously following the intervention on a scale of *disagree*, *somewhat disagree*, *somewhat agree*, or *agree* on the questions: "I understand and can use (strategy) effectively." All student clinicians responded with "agree" for their understanding and effective use of recasts, expansions, tracking, and reflecting feelings. In addition, all student clinicians agreed with the statements, "Overall, I feel confident providing this intervention" and "I would do this intervention training and implementation again."

Discussion

In this study, based on objective client data, student clinician data, and parent feedback data, the provision of the PAL intervention appeared beneficial in addressing both behavioral and general communication concerns in the participating children. Rather than attend two separate sessions, the children's challenging behaviors and general communication skills were addressed in one session. This efficiency of service delivery provides time savings for families trying to fit many appointments into their busy schedules. Another benefit of this research collaboration was that students reported a greater understanding of the whole child

by addressing and respecting the child's feelings during the therapeutic process.

Child Outcomes

Common general communication difficulties observed across all five children were their poor intelligibility, low MLUms, and low NDWs. A majority of the children improved in their intelligibility, NDWs, and complete and intelligible utterances following the short-term PAL intervention. Our findings support previous studies of recast intervention effects on expressive language abilities and intelligibility (Camarata, 1993; Cleave et al., 2015; Yoder et al., 2005). The gains in expressive general communication skills also were consistent with the results of Danger and Landreth (2005), who reported a large practical effect size on the Clinical Evaluation of Language Fundamentals–Third Edition following a group CPPT intervention with preschoolers. Although Danger and Landreth did not find a significant outcome for the improvement of the children's speech sound disorders, their study differed from the present in that it did not assess intelligibility and include recasts and that their play therapy included child dyads. Furthermore, although speech intelligibility and speech sound accuracy are related, psychosocial variables also may impact speech intelligibility. That is, children who are less sure of their communication competence may speak softer, mumble, and, as a result, be harder to understand. Shriberg et al. (1994) indicated that a significant number of children with developmental phonological disorders in their study reported psychosocial problems, with parents reporting their children to be "overly sensitive." In addition, correlations have been found between speech intelligibility and anxiety, depression, attention problems, and withdrawal in Deaf children with cochlear implants (Freeman et al., 2017). It could be that the children in this study gained more confidence in their ability to be heard and understood, and as a result, their intelligibility increased.

Another explanation for the increase in intelligibility may be found in Camarata's (2010) pioneering work with recasts and intelligibility. He hypothesized that by providing recasts of difficult-to-understand utterances during play, it would provide the child feedback about their message. This feedback, in turn, would lead to more attempts at communication and more practice. Future studies should include pre- and postintervention measures of self-confidence and self-esteem psychological factors to determine their contributions toward improvements in intelligibility.

The children in this study made gains in decreasing challenging behaviors. Fourteen of the 16 challenging behaviors decreased, with 12 of the behaviors moving to the normal category. Four of the five children improved in all their borderline and clinical behaviors from pretesting to achieve a normal level at posttesting, regardless of whether the children displayed numerous challenging behaviors at pretest (Anna and Nate) or a few challenging behaviors at pretest (Alex and Craig). There was one exception. Tommy made the least progress in decreasing challenging behaviors. He was the only one who displayed a clinical level on the area of attention problems on the CBCL/1½–5. It may be that limited progress may be expected in children who are struggling with attention. In a study of the Theraplay program that included children with ASD, it was found that many areas of communication were improved; however, focus to task, which could be considered a measure of attention, did not improve with intervention (High et al., 2018). Children displaying general communication difficulties as well as attention and ASD characteristics may require adaptations to the PAL procedure. Developing and incorporating child-oriented techniques to enhance attention may be especially important. Perhaps adding the technique of parallel talk to PAL would be beneficial, especially to highlight the clinician's attention to the interests of the child.

Although the children in this study showed improvements in many areas of challenging behavior, there was a discrepancy between the CBCL/1½–5 postresults and the author-designed parent survey for three of the children. The mothers of Craig, Nate, and Alex reported on the author-designed survey that they did not see changes in the child's challenging behaviors when asked to respond "yes" or "no"; however, these same parents reported behavioral changes in a more detailed report (i.e., CBCL/1½–5). Because both the postquestionnaire and the post–CBCL/1½-5 were based on parent report at the same time following intervention, it calls into question the validity of the author-designed parent survey. One possible explanation is that the author-designed questionnaire was not detailed enough to detect behavior changes compared to the CBCL/1½–5, which has reliability and validity support (Gross et al., 2006).

Other reasons why a discrepancy may have been present for Craig and Nate may be related to changes in the parenting situation and the addition of a new challenging behavior. In the case of Craig, his mother noted that his father was not at home for the duration of the intervention due to work and that this had been difficult for Craig. This may have led to an overall impression of the mother that no gains were made. With respect to Nate, he improved in five areas on the CBCL/1½–5, and yet Nate's mother reported only the appearance of a new challenging behavior—that he was experiencing separation anxiety and became reattached to his pacifier. The mother could have been focused and concerned on the new behavior and, for this reason, may not have commented on the decrease in the other areas. As for why separation anxiety may have started to appear, it could be because of the intensity of the intervention (i.e., daily) or other aspects of providing a safe place for allowing the child to play and interact. Although we checked in with parents daily for concerns, we were not aware of this situation with Nate until the end of the intervention. Future studies should explore having parents work with their children to learn the PAL techniques, especially those children who have a history of protracted or a reappearance of separation anxiety.

Regarding Alex, there was a discrepancy between the intelligibility increase observed from the language sample

and his mother stating that his intelligibility did not increase on the author-designed questionnaire. Again, the language sampling measure is a more sensitive measure than the broad question of "Did you have an improved understanding of your child's general communication?" In hindsight, it may have been better to interview the parent, rather than have them complete only a written survey, in order to get more detailed information from the parent.

In summary, our findings are the first, to our knowledge, of children who display DLD and challenging behaviors to show improvement in both areas using play therapy techniques along with language facilitation techniques. Our study provides preliminary and limited evidence that suggests that an intensive dosage of 6.5 hr of general communication and play therapy intervention can decrease challenging behaviors and increase language skills. Further assessment of the efficacy of PAL is needed to verify our results.

Parent Satisfaction

The three elements of evidence-based practice include research evidence, clinical experience, and client values and preferences. In this study, we evaluated the parents' views about the intervention and asked how we could improve it. All parents who allowed their children to participate in the study indicated satisfaction with the PAL intervention. This should not be surprising given that parent satisfaction, when measured following early language intervention, has led to high parent satisfaction levels (Bradshaw et al., 2017; Soto et al., 2020). As an example, the younger that children with ASD are when they receive language intervention, the more likely that their parents will be satisfied with services (McIntyre & Zemantic, 2017). In contrast, the latter authors did not find that parent satisfaction of child services was related to maternal education, hours of service per week, or family income.

One reason why the parents in this study may have expressed satisfaction for the intervention is because all reported positive general communication and behavioral outcomes. However, it is possible and cannot be ruled out that the incentives and lack of cost of the program also could have influenced parent satisfaction positively.

One of the strongest indications of program success, we propose, is the parents' response to "Would you do this intervention again?" All parents were interested in continuing this program. Although parents appeared to be highly satisfied, some parents provided ideas on how the intervention could be better. The parents of Alex and Nate recommended that session times be shortened. It may be that the 50-min session times were too long for some of the preschool children, especially because the sessions were 4 times a week. Future studies should manipulate the length of the sessions to determine the most efficient, effective, and family-friendly dosage. In addition, one parent recommended that parent tips or training be included as part of the intervention process. Future studies should involve parents in the implementation of PAL.

Student Clinician Satisfaction

Students trained as clinicians were confident in their ability to provide recasts, expansions, tracking, and reflecting of emotions. They reported that they saw the importance of understanding and valuing the child's feelings and reflecting those feelings. Although the students indicated that the training was excellent, they made suggestions to extend the training over a longer period of time and to provide additional training after the initial sessions. This additional coaching after the onset of intervention with video feedback on the intervention sessions should be incorporated in future study and training of the PAL therapy.

The student clinicians in this study also noted their improved understanding and value of learning from other professionals, in this case, child play therapists, to better understand how to implement and interpret children's behaviors. A similar understanding of a different discipline and satisfaction of training associated with working with other disciplines has been reported by speech-language pathology students working with students training to be music therapists (Brown et al., 2018), speech-language pathology students working with occupational therapists and applied behavior analysis therapists (White et al., 2018), and special education graduate students (Weiss et al., 2020). Future studies should include students in counseling psychology working with students in speech-language pathology classroom learning and applied therapeutic settings.

Potential of PAL for Future Interprofessional Education and Practice

The American Speech-Language-Hearing Association defines interprofessional education (IPE) as "an activity that occurs when two or more professions learn about, from, and with each other to enable effective collaboration and improve outcomes for individuals and families we serve" (IPE/interprofessional practice [IPP; asha.org]). In contrast, IPP takes place when professionals from different areas of expertise provide comprehensive healthcare or educational services. Future studies of the PAL intervention could focus on students in CSD programs training alongside and learning with students in counseling programs. Similarly, collaboration of practicing SLPs and practicing play therapists using PAL may lead to more efficient outcomes for children and their families.

Limitations

There were several limitations to this exploratory, pilot study. The first was the small sample size and the lack of a control group. These limit the generalizability of our findings and warrant further study with a larger sample and a comparison or control group. However, these limitations are advantages in allowing us to evaluate the children's general communication and behavior in more depth and from a qualitative perspective. The lack of language testing for two of the participants was also a limitation. Two additional shortcomings concern sampling concerns. Participants

self-selected to participate in the study, and this could have led to a sample of highly motivated families, which in turn could have led to a high satisfaction rate from families, particularly because the intervention was at no cost to them. Also, there are inherent difficulties associated with satisfaction questionnaires that could have led to higher levels of satisfaction to please the researcher. Regarding student survey outcomes, the students earned a stipend to participate and may have responded positively to please the researcher. However, we conducted anonymous surveys for both parents and students in the hope that anonymity would minimize the parents' and students' possible tendency to please the researcher with positive responses. Another shortcoming of the study was the inclusion of only one pre-intervention and one postintervention language sample. Future studies should include a minimum of three samples in their pre- and postintervention conditions to ensure reliability and validity. A final possible limitation was the lack of blinding for the students who transcribed the language samples. Although student transcribers did not see the children for intervention, these students were not blind to the purpose of the study. We attempted to address this possible limitation by having a second independent student transcribe all samples, and this student was blind to the purpose of the study.

Conclusions

SLPs often struggle to know how to work with children who display challenging behaviors and DLD (Chow & Wallace, 2019). In this study, we presented an example of how two professions, psychology and speech-language pathology, can work together. The potential benefits of PAL for families and our students warrant further investigation of our understanding of how language, speech, and challenging behaviors influence each other in not only negative but also positive ways.

Author Contributions

Diane Loeb: Conceptualization (Equal), Formal analysis (Lead), Funding acquisition (Equal), Investigation (Equal), Methodology (Equal), Project administration (Lead), Resources (Lead), Writing – original draft (Lead), Writing – review & editing (Lead). **Eric S. Davis:** Conceptualization (Equal), Formal analysis (Supporting), Funding acquisition (Equal), Investigation (Equal), Methodology (Equal), Project administration (Supporting), Resources (Supporting), Writing – review & editing (Supporting). **Tara Lee:** Data curation (Supporting), Formal analysis (Supporting), Investigation (Supporting), Methodology (Supporting), Project administration (Supporting), Writing – review & editing (Supporting).

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Appendix

PAL Intervention Techniques

Play therapy skills	Definition	Example
Reflection	Restating the emotion demonstrated by the child.	"You seem happy when you paint that picture of your stuffed animal."
Tracking	Noting important physical movement of the child.	"I noticed you picked up that toy."
Questions	Used to clarify aspects of communication.	"You seem uncomfortable. Do you need the child's need to go to the bathroom?" (used sparingly, to avoid coercion)
Encouragement	Commenting positively on the child's behavior, not the child.	"You worked hard on that" versus praise of "Great job."
Limit setting	Provide limits needed to prevent harm.	"I am not for hitting. You can hit the pillow."
Attending	Paying unconditional attention to the child.	Being attentive to play without judging, directing, or interpreting.
Proximity	Maintaining appropriate distance to the child.	Being within arm's length of the child; be able to observe the child's face.
Language facilitation techniques		
Follow child's lead	Talking to and doing what the child is doing	Child plays with animal, and SLP plays with animal like the child.
Waiting/silence	Allowing for time between turns.	Examiner does not fill all quiet time with talking.
Expansions	Making the child's sentence longer by extending the meaning or correcting a grammatical aspect of the sentence.	Child: "He not like that." SLP: "He *does* not like that." Child: "He has a truck." SLP: "He has a *green* truck."
Recasts	Rephrasing what the child says by using a different sentence modality and adding to it.	Child: "She funny." SLP: "*Is* she funny?"