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# THE EFFECTS OF PARENTAL TRAINING ON EARLY INTERVENTION IN SPEECH-LANGUAGE PATHOLOGY

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Parental training, as evidenced by past research, is an effective and efficient addition to the process of early speech and language intervention. This approach to treatment utilizes caregivers throughout the therapeutic process, as parents are provided with the tools and knowledge necessary to increase targeted communication behaviors. Parental training also reflects the field's current, evidence-based approach to therapy, which concentrates on functional treatment throughout intervention.

Increasing targeted behaviors through parental training has also been shown to improve the child's ability to generalize the behavior across various speaking situations. Furthermore, parents may be used throughout treatment in order to elicit early non-verbal language behaviors, such as turn-taking and imitation. By targeting both receptive and expressive language while utilizing parents in a natural environment, therapy becomes very functional. This functionality of intervention is significant to speech language pathologists because it allows the desired behavior to be elicited and mastered in the appropriate context. Children will therefore be able to interact and communicate in a beneficial way that pertains to their natural environment.

This is a review of literature pertaining to how parental training may be used in the natural environment in order to enhance language development in children. More specifically, parents act as facilitators in order to enhance generalization of a specific language skill (Wulz, Hall, & Klein, 1983). For example, the Hanen Early Language program successfully incorporates the caregivers into therapy, yielding ample results in terms of generalization

(Rossetti, 2001). Furthermore, there is evidence that parents may also effectively manipulate the environment in order that the environment is more appropriate for learning and stimulation (Kaiser & Trent, 2007). Once the environment is appropriate for learning, children will be able to increase their ability to effectively communicate (Kaiser & Trent, 2007).

**Parents as Facilitators of Generalization**

The addition of parental training in the early intervention process will result in a higher level of generalization (Wulz et al, 1983). Furthermore, the addition of parental training throughout treatment will allow children to utilize targeted behaviors within a variety of natural speaking situations and environments. Working within the natural environment has been historically shown to be both effective and efficient in speech and language intervention (Wulz et al., 1983). Historically, the literature supports the utilization of parental training throughout treatment. First, training in the situations where the child actually needs the responses has been evidenced to develop the spontaneous use of the behavior in the past (Wulz et al., 1983). For example, training children throughout daily routines will allow the parent to elicit functional communication from the child.

The use of teaching strategies by parents has also historically been linked to a wide range of child outcomes. This includes an increased frequency of verbalizations and spontaneous speech, increased use of target utterances, increased percentage of intervals of engagement and responsivity in target tasks, and decreased disruptive and noncompliant behaviors (Wulz et al., 1983). This historical article suggests the effectiveness of parental training while working in

natural environments, illustrating a positive correlation between the use of parental training and the generalization of treatment targets. Furthermore, this indicates that parental training was used in the past to increase the children's ability to demonstrate a communicative behavior throughout a variety of contexts and speaking situations.

More recent speech-language research has also illuminated the significance of parent-training on language development. In an article by Tempel, Wagner, and McNeil (2008), the role of parent training on language development is discussed in depth. This article focuses on the Parent-Child Interaction Therapy (PCIT) technique, which is a behavioral parent training program that is empirically supported for the treatment in at-risk children three to six years of age (Tempel et al., 2008). PCIT's emphasis on direct parent-child practice allows clinicians to coach as parents act as their child's own therapist. The first stage of PCIT is Child-Directed Interaction (CDI), which resembles facilitative play and implements parenting techniques aimed at enhancing the quality of communication within parent-child interactions (Tempel et al., 2008). Facilitated play is an approach described within recent speech and language literature in which clinician-arranged activities provide the child with opportunities to demonstrate target behaviors during natural play with parents (Paul, 2001).

The second stage of PCIT, Parent-Directed Interaction (PDI), focused on discipline and limit-setting (Tempel et al., 2008). Throughout both stages of intervention, parents are coached through dyadic play situations as they work to reach and maintain a level of mastery for a specific language skill. Tempel and

colleagues (2008) reported substantial changes in parenting behaviors as well as an increase in childhood language skills. Tempel et al. (2008) concluded that children had enhanced language skills equivalent to those of typical developing peers serving within the control group. These findings suggest that parent training may be an effective prevention or intervention program for children or at-risk for delayed language development, enhancing generalization and language success. This article also suggests that parents may be trained to target behaviors through facilitative play.

Kashinath, Woods, and Goldstein (2006) also supports the use of parental training, stating that it positively increases children's ability to generalize a certain behavior. This specific study was designed to examine the effects of facilitating generalized use of teaching strategies by parents of children with autism, focusing on communication that is utilized throughout daily routines (Kashinath et al., 2006). Five children with autism participated in the intervention process with their parents within daily routines. Parents were taught two teaching strategies in target routines, designed to address their children's specific communication objectives. All parents showed immediate increases in their frequency of use of target strategies after the first training session (Kashinath et al, 2006). This illustrates that parents were able to successfully utilize training methods as advised by the SLP. For analysis purposes, generalization data was collected by measuring the use of each training target within untrained routines. Once a strategy was observed in an untrained routine for three consecutive sessions, the targeted behavior was considered to be generalized. The intervention had

positive effects on each child's communication outcomes. More specifically, increases in communication outcomes were noted across all five children despite differences in linguistic complexity of individual child outcomes (Kashinath et al, 2006). On average, children were observed to increase their ability and accuracy in targeted behaviors (i.e. turn taking, imitation, and gesturing) once parental intervention was incorporated into their regular therapeutic process (Kashinath et al., 2006). This study portrays the effectiveness of parent-training for generalization, as parents were able to elicit targeted behaviors and generalization.

Parental involvement within the natural environment, when compared to the clinical setting, has been shown to enhance generalization in past research. This is because the use of familiar conversation partners (i.e. parents/caregivers), as research suggests, often presents speaking situations in which the target behavior is appropriate in contextual and pragmatic terms (Wulz et al., 1983). The homes were shown to provide the opportunity for children to learn the useful functions of language (Halle, 1989). For example, children were to name and request, describe, relate, influence, and initiate the use of language in order to communicate with caregivers (Halle, 1989). These aspects of language are utilized by children in their natural form and context, which is specific to their home, daily routines, and interactions with the caregiver. Halle supported this idea in past research, stating that what defines "correctness" is not the response itself, but rather the response in its context (Halle, 1989, p. 500). This idea of "correctness" may become a problem while clinicians work with

clients outside of the natural setting. When the contextual stimuli change, a different response may be “correct” (Halle, 1989, p. 501). The problem with most training, as Wulz stated, is that it has been terminated when the student acquired the response, rather than when the student learned to use the response in the appropriate situations (Wulz et al, 1983). Therefore, the use of parents throughout treatment allows children to master target behaviors in appropriate contexts. The idea of correctness is therefore functional for children and their families, incorporating natural speaking partners and natural speaking situations. This allows children to achieve a generalized, mastery level of a specific behavior in a way that is useful and functional for their communication needs.

The basic premise of early intervention is the involvement of the family and caregivers in the teaching and learning processes of their children. Involvement of families allows the SLP to elicit the desired response in a natural way, one that will allow children to communication needs, wants, or request within their home environment. Furthermore, the SLP is provided with concrete opportunities to assess children in daily activities as they occur within the home. SLPs may then demonstrate how to embed intervention into these daily activities, increasing the accuracy and frequency of communication opportunities for children and caregivers. This also allows the family to become a part of the therapeutic process, allowing the family to be conscientious of attempts of language or opportunities that may elicit a specific response. Parents/caregivers may then be taught how to respond in ways that will ultimately enhance and increase more conversational language responses on by children (Rossetti,

2001).

**Hanen Early Language Parent Program**

One of the most widely used and successful models for effectively training parents to act as language facilitators is the Hanen Early Language Parent Program (Rossetti, 2001). The overall goal of the Hanen approach is to equip parents and primary caregivers to become better communicative partners (Rossetti, 2001). Within this approach, parents are taught how to respond effectively to their children. For example, parents are shown how to add information to their children's topic that is at their level of understanding (Rossetti, 2001). This may be helpful in expanding children's knowledge in a specific area. In addition to responding, parents are also provided with strategies in which they may keep the conversation going, engaging their children in joint attention for longer periods of time (Rossetti, 2001). This increase in time will allow the conversation to increase in number of exchanges that occur between the parent and children. These examples of therapeutic strategies illustrate various ways in which parents may be incorporated within therapy to improve generalization. The increase in exchanges, when added to strengthened parental responses, allows the targeted behaviors to be elicited and mastered.

Baxendale and Hesketh (2003) compared the effectiveness of the Hanen Parent Program versus traditional clinical therapy. Thirty-seven children aged two years, six months to three years, six months with a diagnosis of language impairment and their parents took part in the study. Nineteen children and their families took part in one of the five Hanen groups that ran successfully over 16

months. Furthermore, the remaining 18 eighteen children and their families received clinic-based intervention. The children's language was assessed by using the Preschool Language-3 (PLS-3) and from an analysis of audio-taped parent-child interactions (Baxendale & Hesketh, 2003). This examination yielded a standard score for expression, comprehension, and total language. In twelve months, the Hanen Parent Program produced better language scores in children with receptive/expressive language difficulties than did clinic therapy (Baxendale & Hesketh, 2003). This illustrates that parents may be effectively equipped by the Hanen program in order for mastery to occur. This also shows that with professional guidance, parents may be used to improve their children's overall communication.

As a primary language facilitator using the Hanen model, the parents will be responsible for manipulating the environment to ensure language growth. This program is designed to equip parents and primary caregivers to become better communicative partners, stimulating their children properly (Rossetti, 2001). For children with a communication delay, dialogue skills are limited. Therefore, the linguistic environments of children are not able to optimally stimulate and enhance language development and performance (Rossetti, 2001). A study conducted by Pennington, Thomson, James, Martin, and McNally (2009) measured the effectiveness of the Hanen program for parents of preschool children with cerebral palsy. Eleven children aged 19-36 months who had nonprogressive motor disorders that affected their communication, and their mothers, were observed four months and one month before mothers attended

the Hanen training program. Mothers were also observed at one month and four months after the completion of the training (Pennington et al., 2009). As a part of this training, mothers were taught to follow the lead of their children. Parents were provided with strategies that enabled them to respond to their child's communicative initiations. Parents were also trained, amongst other strategies, to preplan play activities that incorporated desired behaviors. Interaction patterns between mothers and their children were stable prior to training. After training, mothers were observed to initiate less and produced more responses and fewer requests (Pennington et al., 2009). Children produced more initiations, as well as more requests and provisions of information, after training (Pennington et al., 2009). These findings imply that parents may effectively use the Hanen program in order to stimulate language growth in their children. Its effectiveness may be used in order to stimulate language growth with children in the future.

**Manipulating the environment to facilitate language**

Manipulating the environment enables parents to increase the likelihood a desired behavior will be produced by the child. For example, a caregiver might place a highly desired object within view but out of reach in order to encourage the child to request the object. Various guidelines are provided that describe the concept of manipulating the natural environment to ensure that various forms of communication may be elicited or observed. First, parents must arrange conditions so that there is a reason to use language within the environment's natural context (Kaiser & Trent, 2007). Next, caregivers must also learn to delay

reinforcement and provide verbal cues when context or gestures that portray the appropriate verbal response. This time delay may be defined as strategically placed pauses when anticipating a specific behavior (Rossetti, 2001). The SLP must teach the caregiver to be responsive to attempts of communication. Finally, if the natural environment provides few opportunities for a given language response to occur, the parents must construct an environment which creates additional opportunities for communication (Kaiser & Trent, 2007). These guidelines ensure that the targeted behaviors may be elicited and generalized throughout the process of intervention. When these guidelines are used by the parents, the child may be more likely to initiate communication verbally or nonlinguistically.

**Limitations of parents with generalization**

Parental training may also have various limitations in terms of generalization. Wulz et al. (1983) reported on limitations as being related to the function of parents to parent including to love their children, play with their children, and meet the children's basic needs. Therefore, she believes that parents can function well as teachers only to the extent that the needs are met within the family. To meet the needs of parents, training conducted in the home cannot be too time-consuming or disruptive to the ongoing activities in the home (Wulz et al., 1983). In addition, Wulz et al (1983) also suggested in past research that the voluntary involvement of parents may be essential to the success of home training (Wulz et al., 1983). However, it is the professional's responsibility to ensure that the parents are familiar with the training goals and

the client's progress towards these goals. This experience, as previously discussed, benefits both the parent and the child in terms of communication and the generalization of target behaviors.

**Learning language behaviors through interactions with parents**

Children learn language by listening to speech in the world around them. Children are born ready to produce sounds and words by hearing people in their natural environments speak words and sentences. Every time parents speak or interact with their children, they are modeling language and the rule system that makes up their language (Smenyak, 2010). Parents spending time with their children, playing and talking with their child will help to encourage and facilitate language development (Smenyak, 2010). Interaction with others is the most important way that children learn language. The Daily Parent, a publication of the National Association of Child Care Resource & Referral Agencies (NACCRRA), reports that "it's the back and forth of talking with caregivers that helps children not only talk, but learn how to use language socially," (Smenyak, 2010, page 3). Parents are encouraged to talk to their children about what they are seeing, what they are doing, and how things feel throughout daily routines and purposeful play. By talking with their children and interacting with them, parents are building language and social skills, improving future language success.

**Parent implemented interventions to improve language behaviors**

In addition to generalization, caregivers may be used in treatment to effectively elicit early language behaviors such as turn-taking and imitation. More specifically, as evidenced by research, parents are effective in eliciting early

language behaviors throughout daily routines within a functional environment (Miedel & Reynolds, 1999). Kashinath et al. (2006) found that the improvements in the skills of children whose parents were trained far exceeded the goals targeted by professionals during the intervention period. Results found that all parents demonstrated proficient use of teaching strategies and generalized their use across routines (Kashinath et al, 2006). Furthermore, all parents perceived the intervention to be beneficial and noted an increase in their children's ability to gesture, vocalize, communicate needs and wants, and initiate conversation (Kashinath et al, 2006). This research clinically implies that the parents may be useful for collaboration throughout intervention in order to elicit early language behaviors.

Girolametto, Weitzman, Wiigs, and Pearce (1999) also illustrated that parents may be used effectively throughout speech and language intervention to elicit imitation, expansion, and turn-taking. This study examined the relationship between variation in maternal language and variation in language development in a group of 12 children with expressive vocabulary delays (Girolametto et al., 1999). Mothers and their children participated in a parent-mediated style of therapy, which was followed the guidelines of the interactive model of language intervention. This intervention model arises out of social interaction, implying that maternal language input has facilitatory effects on child development (Girolametto et al., 1999).

Data was collected throughout each session and each session was videotaped for further analysis. Parents were encouraged to interact with their

children normally as they would at home. For example, activities of interaction included playing with dolls, a farm, blocks, and an assortment of toy vehicles. Parents were also taught facilitative techniques, which included being child-centered, promoting interaction, and modeling the child's language level (Girolametto et al., 1999). More specifically, mothers were taught to modify structural aspects of their input by using simple, short utterances, speaking slowly, and reducing their overall amount of talk so that they were taking turns with the children (Girolametto et al., 1999). Responsive techniques were also taught to the parents by the speech-language pathologist. Responsive techniques included interpretations of sounds and word approximations, labeling objects in which their children attending to, and imitating or expanding their children's preceding verbalizations.

Results of this study indicated robust relationships between maternal use of imitation and expansion of utterances (Girolametto et al, 1999). Furthermore, their children's overall number of utterances, attempts of communication or initiations, vocabulary (labeling), and turn-taking increased (Girolametto et al, 1999). These data provide evidence for the facilitating influence of parent-directed therapy on child language behavior. Mothers also successfully created context around their children's speech, allowing language behaviors to be modeled and learned by their children.

Fey, Warren, Brady, Finestack, Brendin-Oja, Fairchild, Sokol, and Yoder (2006) evaluated the efficacy of a six-month course of responsivity education/pre-linguistic milieu teaching (RE/PMT) for children with developmental

delay and RE/PMT's effects on parenting stress in a randomized trial. Pre-linguistic milieu teaching (PMT) is an intervention for children with language delays who have a very limited or nonexististent lexical inventory and may be having significant difficulties in their production of nonlinguistic communicative acts (Fey et al, 2006). Furthermore, PMT procedures are embedded within the ongoing social interactions that take place in the child's natural environment (Fey et al, 2006). Parents were taught by the researchers to imitate their children's vocal acts, model their children's spontaneous vocalizations in order to increase frequency of nonverbal communication attempts, create a need for communication, and increase frequency and spontaneity of gestures. Children who received individual PMT displayed greater development of intentional communication than did the children who received an alternative group intervention (Fey et al, 2006). Children who received PMT also made greater gains in both lexical diversity and on a standardized language test 12 months after completion of treatment, when compared with children who participated in the alternative treatment (Fey et al, 2006). This study provides supportive evidence for utilizing parents throughout speech and language intervention. Furthermore, it shows that with the aid of an SLP, parents may be taught to effectively interact with their children throughout daily routines in order to elicit language behaviors in a functional way.

Caregivers may be used in treatment to effectively elicit early language behaviors such as turn-taking and imitation. Furthermore, several parental-implemented approaches to therapy have been shown to enhance a wide variety

of early language behaviors. For the vast majority of children, the natural environment provides the kinds of experiences that are necessary for language development. The natural environment, however, must obtain ample conditions for this to occur. It is important to arrange conditions within the home so that there is a reason to use language in that it accomplishes progress and generalization. It is also important for parents to provide verbal responses and verbal cues when necessary, allowing for children to initiate communication. Once this occurs, the parents must be responsive in attempts of communication. Finally, if the home environment allows few opportunities for a given language response to occur, the parent must construct an environment which creates more opportunities (Spradlin & Siegel, 1982).

**Parents acting as language facilitators: Stimulation and reinforcement**.

Within his historical article, Halle suggested that a consistent finding within past literature pertaining to learners with disabilities is that they have difficulty generalizing (Halle, 1989). In this study, two children who were moderately retarded were taught to label a coin. Eight environmental stimuli were identified, as parents were taught by the SLPs to identify environmental stimuli. Once stimuli was identified, parents were taught to utilize the stimuli in order to elicit language attempts. Prior to training within the study, neither learner labeled the coins correctly. Each acquired the ability to label the coin only once training with the parents was introduced. Halle's study suggested that parents may be used within intervention to identify and provide stimuli for their children's language

behaviors. With proper education, parents are able to identify stimuli that influenced the probability of their children's response. This will make children more capable and able to function within their natural setting with natural communication partners. Parents may identify stimuli within the natural environment by observation of daily routines, attempts of language use, or even by manipulating the environment in order to achieve a desired, targeted behavior. The SLP must then use clinical judgment in helping parents to determine the most beneficial stimuli within their children's natural setting that are effective in facilitating language.

Throughout the article, the authors clinically implied that reinforcement should mimic the types of children receive in a natural setting (Halle, 1989). Research stated that natural reinforcers work best to increase communicative effectiveness and generalization (Kemper, 1980). Wulz et al. (1983) also supported natural reinforcements by recommending reinforcement that enables successful communication and social interaction (Wulz et al., 1983). However, natural reinforcers for communication are only available when there is a genuine need to communicate. Therefore, this type of reinforcement works best when the client has a purpose for initiating interaction. More specifically, if parents are attempting to manipulate their interactions through language and are successful, the success will most likely reinforce this behavior in similar situations (Wulz et al., 1983). This method of reinforcement may be incorporated with the caregivers in order to facilitate language. Daily routines may also be manipulated in order to obtain the target behavior, which may then be naturally

reinforced.

Past research on functional, early language intervention indicated that parental reinforcement in daily activities exerts significant influence on child development (Wulz et al., 1983). These early interactions amongst children and parents are known by professionals to be critical in communication development in young children. The use of teaching strategies by parents were linked to a range of pediatric outcomes such as increased frequency of verbalizations and spontaneous speech, increased use of target utterances, increase in the percentage of intervals of engagement and responsivity in target tasks, and decrease in disruptive and noncompliant behaviors. Researchers have reported that parent-implemented therapy strategies benefitted the parents, in addition to the communication skills of the children (Kashinath et al, 2006). For example, researchers noted that parental stress increases when parents were obligated to participate in intervention programs that require certain time periods to work one-on-one with their children in the past (Kashinath et al, 2006). However, parent-focused interventions that occur throughout the day in natural settings have been found to actually decrease parental stress while resulting in greater gains in child communication (Kashinath et al, 2006). Parents acting as language facilitators may be implemented by providing opportunities for communication, teaching parents how to comment, keep the conversation going, and recognize nonlinguistic cues. Parents may also increase their knowledge of how to provide positive reinforcement and stimuli when children attempts to communicate.

## Conclusion

The utilization of parents throughout speech-language intervention is important because it incorporates the growing, researched based trend of functional therapy. Research has illustrated that parents of language disordered children, with the guidance of an SLP, act effectively within treatment in many ways. First, parents have been shown to increase generalization of desired behaviors. Training with familiar speakers in the situations where the child actually needs the responses is evidenced to develop the spontaneous use of the behavior. This spontaneous use of the desired behavior may then be defined as generalization, which reflects the mastery of a specific, targeted behavior (Rossetti, 2001). Second, caregivers may be used in treatment to effectively elicit early language behaviors such as turn-taking and imitation, improving generalization and future language abilities. Third, research suggested that parents may be taught to act as general language facilitators, providing an opportunity for children to elicit communication and presenting positive reinforcement and stimuli (Tempel et al., 2008). Finally, parents may be taught to effectively manipulate their children's environment in order to elicit interaction and improve future language success. These findings may be linked to the effectiveness of parental training. The findings illustrated that children were able to communicate and learn more efficiently while working with parents, in natural environments on natural context-communication topics.

There is a broad consensus within the field, which indicates that parent-child interaction in daily activities exert significant influence on child development.

These early interactions amongst children and parent are known by professionals to be critical in communication development in young children. Research stated that parent-implemented therapy strategies benefitted the parents, in addition to the communication skills of the children (Broen, 1990). This parental involvement, as indicated by research, has shown to increase parent satisfaction in terms of treatment and everyday functioning (Broen, 1990). Therefore, parental training has been shown to enhance a parent's satisfaction with therapeutic services, as they are able to observe their children's ability to use targeted behaviors within a variety of speaking situations. It has also, as evidenced, has shown to increase the parents ability to communicate with their children on a daily basis (Broen, 1990). For example, parent-focused interventions that occur throughout the day in natural settings have been found to actually decrease parental stress while resulting in greater gains in child communication (Kashinath et al., 2006). These gains in communication may be used in order to elicit targeted behaviors, increasing the likelihood for mastery of a specific communication objective. Furthermore, this increase of communicative behaviors illustrates generalization within the children, demonstrating the effectiveness of parental training on future language success.

An emphasis on parent involvement throughout therapy can be especially important while working with the pediatric population. Additional research on parental training is required in order to measure the effectiveness of working with parents throughout speech-language intervention. Future research should investigate the effects of parental involvement as a factor in reconstructing the

traditional role of the speech-language pathologist. Further research is necessary to understand and evaluate the multitude of issues related to the efficacy of parent-implemented interventions in facilitating developmental outcomes in young children with disabilities. Continued attention to the contribution of parent-implemented therapy will strengthen the understanding of the circumstances in which children and families benefit most from parent involvement in early childhood.

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