THE EFFECTS OF PARENT TRAINING ON PARENTS’ USE OF APPROPRIATE
PRAISE AND CHILD’S QUANTITY OF SPOKEN WORDS

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ABSTRACT

The purpose of this study was to examine the effects of a parent-training package on parents’ use of general and behavior-specific praise statements. The parent-training package consisted of training, feedback, and praise. In addition, as a secondary focus, the current study sought to discover a relation between parents’ use of behavior-specific praise and the number of spoken words used by a child with autism. A multiple baseline design was used to compare the effects of the parent-training package across two participants, the parents of the child with autism. Results demonstrated that the parent-training package was effective in increasing the parents’ use of praise.
Dedicated to C.S.B.
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CHAPTER 1
INTRODUCTION

Within the last decade, thousands of new cases of autism spectrum disorder (ASD) have been identified. The Centers for Disease Control and Prevention released data in 2007 indicating that about 1 in 150 8-year-old children in multiple areas of the United States had an autism spectrum disorder. According to the National Institute of Mental Health (NIMH; 2008), autism spectrum disorders (ASD) are a group of developmental disabilities defined by difficulties with social interactions, leisure activities, and life and communication skills.

The abilities of individuals with ASD vary significantly, from highly gifted to severely challenged. The signs of ASD can be detected in an individual as early as 18 months of age. Research shows that early intensive intervention greatly improves a child’s development (CDC, 2007). Applied behavior analysis (ABA) is an empirically validated approach to interventions and can improve the outcomes for children with ASD. ABA consists of creating a structured environment where conditions are optimal for acquisition, maintenance, and generalization of skills. Because they are so effective,
techniques based on ABA should not only be used within educational settings, but should be implemented at home as well.

To function efficiently and effectively in society, individuals need to possess effective communication skills. Because many individuals with ASD have a difficult time learning how to communicate, interventionists need to create different effective and time-efficient ways to promote communication for these individuals. Consequently, researchers have attempted to identify efficient strategies by focusing on interventions within the school and home settings (Codding, Feinberg, Dunn, & Pace, 2005).

Although interventionists use many strategies (e.g. functional communication skills training, PECS, sign language) to promote the use of communication skills for children with ASD, parents may not always fully understand the interventions and thus are not able to implement them at home. However, parents can and do play a vital role in the success of interventions in the home environment. For instance, parents are usually the first to recognize that there is something “different” about their child by noticing the sudden changes in their child’s behavior (NIMH, 2004). But, often times, parents themselves need extra support and training in order to implement the strategies properly to promote communication skills within the home.

Educators and interventionists have found that parents often lack the adequate skills and knowledge needed in order to implement an intervention within the natural home setting. Therefore, training parents appears to be an important strategy used to
ensure quality implementation of specifically designed interventions created to meet the needs of children with ASD.

**Parent Training**

Parents can play a pivotal role in the coordination and implementation of services for children with disabilities (Allen & Hudd, 1987); therefore, on behalf of their children, parents must be educated and informed in order to organize the implementation of professional services (Kohr, Parrish, Neef, Driessen, & Hallinan, 1988). Given that the role of parents as teachers is increasing (Neef, 1995), an important part of a child’s social and educational environment is the interactions provided by parents in the home. Parent training may provide parents with many positive strategies to decrease a variety of inappropriate behaviors and increase desired behaviors.

Parent training decreases inappropriate and maladaptive childhood behaviors by assisting parents in the development of skills and knowledge focused on increasing positive parent-child interactions (Patterson, 1982). Parent training promotes positive and appropriate interactions between children and parents and may help to reduce future risks of behavioral problems (Phaneuf & McIntyre, 2007). Parents trained as interventionists can provide prevention and early intervention to their children with developmental disabilities. Although training parents can be effective, there are many challenges associated with training parents as interventionists within the home.

Professionals face a great challenge when implementing behavior change procedures within the natural home setting. Parent adherence to professional recommendations is of concern when implementing intervention procedures because
the success of an intervention is dependent upon precise and consistent implementation (Allen & Warzak, 2000). Therefore, parent training may be more effective when a feedback component is included (i.e., parents are provided feedback on their adherence to intervention procedures in order to improve implementation).

Parents can be trained to facilitate desired changes in their child’s behavior (Herbert & Baer, 1972) by using a number of behavioral strategies such as written and verbal instruction (Sanders & Glynn, 1981), modeling (Sanders & Glynn, 1981; Coddington et al., 2005), scripts, role play, videotape (Kohr et al., 1988; Phaneuf & McIntyre, 2007), feedback (Roscoe, Fisher, Glover, & Volkert, 2006, Reinke, Lewis-Palmer, & Martin, 2007; Phaneuf, & McIntyre, 2007), and self-monitoring (Harris, 1986; Dunlap & Dunlap, 1989; Maag, Reid, & DiGangi, 1993; Petscher & Bailey, 2006). Professionals often use more than one strategy to form a training package when working with parents. Training programs that are made up of a combination of strategies have the potential to demonstrate effective results when compared to the use of a single strategy (Kazdin & Moyer, 1976).

Self-Monitoring

Given that it is difficult for parents to be precise and consistent in their delivery of an intervention within the home setting, there are strategies that are often used to help parents monitor their own progress. Self-monitoring is related to research on self-control strategies and has been used with many populations to increase accuracy (Dunlap & Dunlap, 1989), improve staff behavior (Petscher & Bailey, 2006), and improve students’ academic achievement and on-task behavior (Maag et al., 1993). Self-monitoring occurs
in a variety of different forms and usually refers to an individual identifying the occurrence of a target behavior and then recording the occurrence of that behavior. Changes in behavior with a variety of participants and in different settings can be attributed to effective self-monitoring (Kalis, Vannest, & Parker, 2007).

Self-monitoring provides individuals with continuous instructional cues that produce self-initiated responding (Dunlap & Dunlap, 1989). An intervention such as self-monitoring can be an acceptable alternative to other more intrusive procedures and decreases the need for direct intervention (Maag et al., 1993). Even though self-monitoring has demonstrated its effectiveness related to drug abuse, drop out rates, weight loss, motivation, disruptive and on-task behavior, and Tourette’s syndrome, there is far less information related to its use by teachers and parents because it occurs in the natural home or classroom environment (Kalis et al., 2007).

As an example of using self-monitoring to train teachers, a study conducted by Kalis et al. (2007) examined the effects of a self-monitoring intervention to increase rates of teacher praise statements. Pre-baseline data were collected and consisted of basic observations of the classroom, students, and rates of teacher praise. During the baseline phase, a scripted Direct Instruction lesson was taught to provide consistency across all phases. Data were collected on the frequency of the teacher’s use of general and behavior-specific praise. The intervention consisted of a verbal prompted goal as well as two behavior-specific praise examples, given to the teacher, prior to each daily lesson. The teacher taught the daily lesson and monitored his/her rates of praise. At the end of a 10-minute interval, the teacher recorded the number of praise statements made during
that time and then continued with the lesson. Results demonstrated that self-monitoring was a powerful intervention used to increase the rates of praise and behavior-specific praise statements of classroom teachers.

Maag et al. (1993) suggest that the effectiveness of self-monitoring procedures may vary across individuals of different ages. Given that individuals mature as they develop the efficacy of self-monitoring and self-observation changes as maturity increases. As individuals further develop, the emphasis on social conformity, obedience, praise, and work completion shifts to more of an emphasis on quality of work and social comparison (Maag et al., 1993). Given that the efficacy of self-monitoring increases as individuals mature, this intervention would be suitable to use with parents and teachers.

There are a number of different devices or procedures that have been used by children, teachers, and parents to assist with self-monitoring including using a wrist counter (Herbert & Baer, 1972), videotape (Dunlap, Dunlap, Clark, Childs, White, & Stewart, 1992), a cueing device such as a vibrating pager (Petscher & Bailey, 2006), or feedback (Codding et al., 2005; Gajar, Schloss, Schloss, & Thompson, 1984; Roscoe et al., 2006).

*Wrist counter.* Sometimes keeping a record of what an individual does will change what they do. Herbert and Baer (1972) described how sometimes counting the number of cigarettes an individual smokes each day, will often reduce the actual number. When using a wrist counter, the individual is asked to count the number of times the target behavior occurs within a given amount of time. At the end of the predetermined amount of time, the individual will record on a graph or data sheet, the number of
recorded instances of the target behavior. For recordings to be accurate, it is important that the individual using the self-monitoring procedure identify the target behavior and record its occurrence immediately (Kalis et al., 2007).

*Self-recording while viewing a videotape.* Dunlap et al. (1992) suggest a videotape may be used as a permanent product to help record instances of a target behavior. The videotape records for a predetermined amount of time and subsequently the individual can view the videotape and record on a graph or data sheet the number of instances of the target behavior. A videotape is helpful when recording high frequency target behaviors. A videotape can also be helpful when used within a setting in which the individual may not be able to record instances of the target behavior as they occur (e.g., a classroom where the teacher is responsible for 20-30 students).

*Cueing devices.* A cueing device such as the MotivAider™ can be used to prompt individuals to perform a target behavior or to prompt the individual to self-record instances of the target behavior. The MotivAider™ is a pager-like device worn by an individual that can be programmed to vibrate at fixed or variable intervals. An intercom or bell can be used as a more low-tech form of a cueing device. According to Flaute, Peterson, Van Norman, Riffle, and Eakins (2005), a clinical psychologist, who wanted to help his clients control their behavior more effectively, designed the MotivAider™. The MotivAider™ can be used for a number of purposes such as: keeping individuals on task, reducing inappropriate behaviors, and eliminating the need for constant reminders from others.
Feedback

Feedback is defined as, “information a person receives about a particular aspect of his or her behavior following its completion” (Cooper, Heron, & Heward, 2007, p. 262). According to Roscoe et al. (2006), feedback is made up of two components: the delivery of a reinforcer and the delivery of information about an individual’s correct or incorrect performance. Feedback has been used in regular and special education classrooms to improve the implementation of interventions.

Feedback (i.e., information about how well a target behavior is performed) may be used as a strategy to help interventionists increase the effectiveness and consistency of intervention implementation. Feedback may consist of providing a reminder to the individual, frequent updates related to progress, or a final report of total progress. Feedback is one of the most common methods used to train teachers in the use of praise (Van Houten & Sullivan, 1975).

The use of feedback has been effective in facilitating the acquisition and maintenance of a wide variety of behaviors such as customer service, academics, health-related services, staff training, treatment integrity, and functional analysis and has demonstrated its effectiveness in reducing problem behaviors, children’s activity levels, and safety hazards (Roscoe et al., 2006). Feedback has shown its effectiveness within teacher training programs as well as within trainings for other organizations (Prue & Fairbank, 1981).
As an example, Sutherland, Wehby, and Copeland (2000) investigated the effects of an observation-feedback intervention on the rate of a teacher’s behavior-specific praise of students with EBD. During the baseline phase, no changes were made to the teacher’s instruction while data were collected on the teacher’s use of praise (i.e., specificity and frequency). The intervention consisted of verbal feedback provided to the teacher regarding the frequency and specificity of praise. During this phase, the teacher was praised for using behavior-specific praise. Results demonstrated that providing feedback to the teacher was successful in increasing the frequency and the quality of praise statements. At the conclusion of this study, however, the researchers found that the effects of the observation-feedback intervention were not maintained over time.

Studies (e.g., Codding, Feinberg, Dunn, & Pace, 2005) have also examined the effects of the frequency of feedback. The immediacy and schedule of feedback greatly influence its effectiveness. Although providing weekly feedback may be more practical for supervisors, clinicians, and consultants when compared to daily feedback (Codding et al.), immediate feedback is more effective when compared to delayed feedback (Price, Martell, Marchand-Martella, & Cleanthous, 2002). The use of feedback has resulted in consistent performance and when feedback is combined with other consequences, increased effectiveness is demonstrated as well (Roscoe et al., 2006).

Praise

“Praise is a form of feedback that conveys information about the correctness or appropriateness of answers and other behaviors” (Emmer, 1987/1988, p.32). Praise is used to express social approval or admiration of an individual or a specific behavior
demonstrated by that individual. Praise is a complex form of social communication, not simply a one-way transmission between individuals (Henderlong & Lepper, 2002). Praise is different from simple acknowledgement and simple feedback.

Praise can be general or behavior-specific. A general praise statement can be defined as an audible statement that refers to one or more of the child’s behaviors that are admirable and acceptable, such as “Good job,” “Wow,” or “That is great!” A behavior-specific praise statement is made with reference to an observable behavior (“Nice job washing your hands!”). Within a behavior-specific praise statement, a general praise statement is paired with a behavior. General and behavior-specific praise statements include only positive words or phrases.

In order for praise to function most effectively as reinforcement, O’Leary and O’Leary (1977) suggest that praise must have three qualities including contingency, specificity, and sincerity. These three qualities are important in that praise must be contingent upon performance of a target behavior, specific about which target behavior is being reinforced, and sincere.

Praise is a powerful form of reinforcement for all people especially those with developmental disabilities (Heward, 2006). Research has demonstrated that because of differing opinions within the educational and psychological fields, praise is underutilized. Although there have been countless articles published both in support of and in opposition to the use of praise (e.g., Cameron & Pierce, 1994; 1996; Cameron, Banko, & Pierce, 2001; Strain & Joseph, 2004; Henderlong & Leper, 2002; Kohn, 1996), it has
been documented that verbal praise or positive feedback can have a positive effect on behavior (Cameron & Pierce, 1996; Heward, 2006).

While the empirical literature has demonstrated the positive effects of praise, many are still hesitant to use praise and some strongly advocate against its use. According to Kohn (1993), using behavior-specific praise undermines a child’s intrinsic motivation to perform that same task. Kohn (1993) stated that praising students impairs academic achievement, which in turn decreases the students’ motivation to succeed even though evidence to the contrary is abundant (Cameron et al., 2001; Cameron & Pierce, 1996; Cameron & Pierce, 1994). While the negative effects of praise are unfounded, these claims are important when considering why teachers and parents demonstrate such low rates of praise with their students and children. Teachers and parents do not utilize praise within the classroom or within the home setting as often as they should.

Given that teachers and parents alike are often pressed for time and resources when dealing with students and children, they prefer to use strategies that require little time and/or money to implement. Praise is a strategy that all teachers have at their disposal because it is a non-intrusive and natural intervention (Sutherland et al., 2000). Parents can also take advantage of such a simple and effective strategy when working with their children. By increasing the use of praise, parents can interact with their children in a more supportive and appropriate manner.

Rewards in the form of verbal praise and positive feedback enhance an individual’s motivation (Cameron & Pierce, 1996). Using praise is not only helpful
within a classroom setting; the use of praise can be a powerful tool that positively alters attitudes and behaviors within the home setting as well (Cameron & Pierce, 1996).

Educators are concerned with properly using rewards such as praise, in order to promote learning without effecting a child’s intrinsic motivation (Cameron & Pierce, 1996). Although there are conflicting views, it has been demonstrated that verbal rewards, such as praise, increase a person’s intrinsic motivation (Cameron & Pierce, 1994). Praise has been shown to increase a child’s desire to partake in the activity that was praised (Henderlong & Lepper, 2002).

There is often a distinction made between the words reward and reinforcement, and yet these words are often used synonymously (Cameron & Pierce, 1994). A reinforcer is an event that increases the frequency of the behavior that it follows, whereas a reward is a stimulus, which could be a positive event, but does not necessarily serve to strengthen behavior (Cameron & Pierce, 1994). Praise is considered reinforcement when an individual praises a general or specific behavior and that behavior’s future frequency is increased.

As mentioned earlier, children diagnosed with ASD often have impairments in communication, socialization, and life skills therefore, it is imperative that evidence-based strategies be used to address these deficits and improve the children’s outcomes. Parents are now faced with the challenge of using interventions within the home setting to help their children overcome these deficits.

Praise is a powerful form of reinforcement and has proven to be effective when used by teachers in classroom settings. Given that the role of parents as interventionists
within the home setting is increasing, it seems only logical that the use of praise would be a powerful strategy for parents’ use as well.

Effective and time-efficient strategies must be found in order to provide parents with the proper training when dealing with children with disabilities. A package including a combination of training strategies is often more effective than using simply one strategy.

*Purpose of the Study*

The purpose of this study was to examine the effects of a parent-training package on parents’ use of general and behavior-specific praise statements. The parent-training package consisted of training, feedback, and praise. In addition, as a secondary focus, the current study sought to discover a relation between parents’ increased use of behavior-specific praise statements and the number of spoken words used by a child diagnosed with autism.

*Research Questions*

This study addressed five important questions:

1. Is Parent Training Effective in Increasing Parents’ Use of Behavior-specific Praise?
2. Is Parent Training Effective in Increasing Parents’ Use of General Praise?
3. Is Parent Training Effective in Increasing Parents’ Use of Praise?
4. Does the Number of Spoken Words by a Young Child with ASD Increase as the Rate of Parents’ Praise Increases?

5. Are the Goals, Procedures, and Outcomes of This Parent Training Package Socially Valid?
CHAPTER 2
METHOD

In this chapter, the methods used within this study will be presented. First, details and descriptions of the participants, setting, and materials will be presented. Next, the phases of the study as well as definitions of the dependent variables will be described. Lastly, the methods used for data collection, interobserver agreement, procedural integrity, and social validity will be presented.

Participants

An upper middle class family, which consisted of a father, mother, and boy, living in a Midwestern suburb, was selected to participate in this study. Both the father (“Dad”) and the mother (“Mom”) had received Doctor of Medicine degrees and were in their mid 30s. The father was a practicing physician while the mother stayed home to care for their child, “Caleb.”

At the time of this study Caleb was four-years-old and had been diagnosed with ASD at age two. Although Caleb showed limited verbal language skills, he was capable of using one- to four-word statements to communicate his needs and desires. He was receiving at least 20 hours of in-home behavioral intervention per week. Caleb began receiving intensive behavioral intervention not long after his diagnosis. At age two, Caleb
was non-verbal and therefore also started to receive speech therapy once per week. At age three, Caleb began using the Picture Exchange Communication System, which was gradually faded due to his increased verbal skills.

This family was chosen to participate in this study for three reasons. First, they ate dinner together at the dinner table on a regular basis throughout the week. For example, Dad returned every evening around 5:30 p.m. and had dinner with the family in the kitchen at around 6:00 p.m. Second, Caleb was already receiving private behavioral therapy from the principal investigator at the time of the study. Finally, the investigator noticed that the parents could benefit from increased use of praise statements and the child, who had a limited verbal repertoire, would benefit greatly from increasing his use of spoken words as well.

Setting

All parent training sessions were conducted in the family’s kitchen area. The kitchen area, to which the family room was connected, contained a kitchen table with four chairs. During all training sessions, the television was on in the family room and was a minimal distraction in the background. Dinnertime typically lasted approximately 15-20 minutes or until the child asked to be excused.
Ethical Provisions

Prior to the start of this study, the principal investigator submitted a research proposal and received approval from The Ohio State University’s Institutional Review Board.

The participants (Mom and Dad) were provided a copy of the general procedures of the study and were asked to sign a letter of consent (see Appendix A), acknowledging their consent to participate and their right to withdraw from the study at any time without penalty. The participants were asked to sign the consent form for their child to participate in the study (see Appendix B). In addition, the child was asked to give verbal assent to participate in the study (see Appendix C). Although participants were aware that the study involved the effects of family social interaction in relation to the child’s use of words within a sentence, they were naïve to the fact that the experimenter would be focusing on and attempting to increase their use of praise statements as the primary dependent variable in the study.

Experimenter and Observer

The researcher in this study graduated from Otterbein College in December of 2005 with a Bachelor’s Degree in Early Childhood Education. While attending Otterbein College, she was involved in a variety of teaching field experiences in general education as well as special education settings where she assisted in lesson planning and teaching across a variety of grade levels and within many different schools. The current study was conducted as part of her Master’s degree in Special Education and Applied Behavior Analysis. The researcher was CITI trained and had completed the appropriate course
work to conduct research in this field. The researcher had 3 years of field experience working with general education students, grades pre-k through third grade. She also had 4 years of experience working with children with developmental disabilities in both home and school settings.

At the time of data collection, the second observer was a Master’s student in the Special Education and Applied Behavior Analysis Program at The Ohio State University. She was a full-time teacher in a primary multiple disabilities unit in a local public elementary school. She had 7 years of experience working with children with developmental disabilities. She received her Bachelor’s degree in Special Education from Ohio Dominican University.

**Materials**

During the course of this experiment, the experimenter used the following materials/instruments: a training script, digital video camera, and a feedback worksheet. The experimenter was present at every recorded dinner session (approximately 2-3 times per week) in order to record the behavior as a rate per minute as it occurred. The experimenter also used a digital video camera with a tape in order to record the dinnertime sessions solely for interobserver agreement purposes.

A training script was used to train Mom and Dad to increase their behavior specific praise statements. The script contained definitions of praise; examples of specific and general praise statements, role-play activities, and an assessment (see Appendix D).
The experimenter used a feedback worksheet in order to provide Mom and Dad with feedback about his/her performance before a recording session and following a recording session (see Appendix E).

**Procedures and Experimental Conditions**

There were four experimental conditions in this study: baseline, parent training, feedback and praise, and maintenance.

**Baseline.** During baseline, Caleb continued to receive at least 20 hours of intensive behavioral intervention per week, which focused on increasing his communication and socialization skills as well as targeted a variety of adaptive behaviors. Caleb’s intervention used behavioral procedures based upon the principles of applied behavior analysis.

Given that one of Caleb’s main goals was to increase his spoken language, his parents had already learned about the importance of using as much language as possible when interacting with Caleb. Caleb’s parents were familiar with how to use prompting procedures to prompt Caleb to use appropriate language.

Baseline consisted of observing the family during the regular dinnertime. The experimenter recorded the number of general and behavior-specific praise statements used by Mom and Dad within the given amount of time. The experimenter also recorded the number of spoken words used by Caleb. The Mom and Dad were unaware of the experimenter recording their use of general and behavior-specific praise statements.

**Training.** Parent training consisted of a one-on-one training session with the experimenter who used a script (see Appendix D) to train Mom and Dad to use behavior-
specific praise. The script contained accurate definitions of general praise statements as well as a definition of a behavior-specific praise statement. The script provided a variety of examples of general and behavior-specific praise statements.

A guided practice activity was included within the script in which the experimenter would read a praise statement and the Mom and Dad would be asked to respond using the most appropriate response from three examples given. For instance, an example of the child’s words would be provided such as, “I want more juice,” and the Mom and Dad would be provided with three example responses including: “Good job,” “Yes, juice,” or “Great job using your words to ask for juice.” The Mom and Dad would be asked to choose the most appropriate behavior-specific response from the three examples given.

At the conclusion of the parent training, the experimenter assessed the Mom and Dad’s understanding. The experimenter provided examples of the child’s verbal behavior and the Mom and Dad were asked to respond using a behavior-specific praise statement that was most appropriate. For example, the experimenter would provide the Mom and Dad with the child’s statement such as, “I like pizza.” The experimenter would then ask for an appropriate behavior-specific praise statement in response. Subsequently, the experimenter would assess the Mom and Dad’s responses, provide feedback, and continue with the assessment until they reached a mastery criterion of 80% or higher. The Mom and Dad reached mastery criterion when they answered 4 out of 5 questions correctly. Training lasted approximately 10-15 minutes for both Mom and Dad.
Feedback and Praise. During the feedback and praise condition, the experimenter met with the Mom and Dad prior to the beginning of the session. The experimenter provided the Mom and Dad with a worksheet containing their behavior-specific praise rate from the previous session (see Appendix E). The worksheet also contained a new behavior-specific praise rate goal for them to aim for during the current session. The Mom and Dad were also praised and provided with one appropriate behavior-specific praise statement which they had used in the previous session.

As an example, the experimenter would briefly meet with the Mom or Dad prior to the session, tell them their previous praise rate (e.g. “Your last session’s rate was 8 praise statements per 15 minutes, that is good.”), provide them with a good example of a praise statement that they had previously used (e.g. “Last session, you told Caleb that he did a great job using his words to ask for more milk, that is a good behavior-specific praise statement.”), and also provide them with a new praise rate goal (e.g. “This session let’s make the goal a little higher, let’s aim for 10 praise statements in 15 minutes.”).

At the conclusion of each session, the Mom and Dad were provided feedback consisting of their praise rate during the session (e.g. “This session your rate was 8 praise statements in 15 minutes.”).

Maintenance. During the maintenance phase, the experimenter continued to record the number of general and behavior-specific praise statements used by Mom and Dad within a given amount of time. The experimenter also recorded the number of spoken words used by Caleb. During maintenance, the experimenter did not use any
strategies (e.g. training, feedback, or praise) to further promote the parents’ use of praise statements.

**Definition and Measurement of Dependent Variable**

The primary dependent variables were general praise rate and behavior-specific praise rate during the family’s dinnertime. Dinnertime ranged in length of time from 6 minutes to 22 minutes, with an average of 14 minutes. Because the length of dinnertime varied, the ratio of praise statements per 15 minutes was used. General praise rate was defined as the number of general praise statements made by the parent(s) toward their son per 15 minutes. A general praise statement was defined as an audible statement made by Mom or Dad that referred to one or more of the child’s behaviors, such as “Good job,” “Wow,” or “That is great.”

Behavior-specific praise rate was defined as the number of behavior-specific statements made by Mom or Dad per 15 minutes. A behavior-specific praise statement was defined as an audible statement made with reference to an observable behavior, such as “Nice job using 4 words to ask for a drink.” A behavior-specific praise statement could refer to how many words the child was using when communicating or asking for objects. The behavior-specific praise statements consisted of a general praise statement paired with a specific behavior. Both the general and the behavior-specific praise statements did not include any words or phrases with a negative connotation.

As a secondary measure, the number of spoken words used by the child per 15 minutes was also recorded. The experimenter simply counted the number of spoken
words used by the child during dinnertime and converted that into rate of spoken words per 15 minutes.

*Data Collection*

The behavior was measured using rate, which is the number of responses per a unit of time. The ratio consisted of the number of praise statements per unit of time. Event recording was used to record the number of times the behavior of interest (praise statements) occurred. Direct measurement was used so that the phenomenon of focus was exactly the same as what was measured. It was also important to use direct measurement because it yields more valid data than using indirect measurements. As a secondary measure, the experimenter counted the number of words used by the child per a unit of time.

During the dinnertime recording session, the experimenter set up the video camera on the counter facing the kitchen table. The experimenter sat in the family room, which was adjacent to the kitchen. The experimenter positioned herself so that she could still easily observe the family; yet, she was not in plain view of the family as they were eating dinner. A data sheet (see Appendix F) was used to record all instances of general and behavior-specific praise used by Mom and Dad. The experimenter used the same data sheet (see Appendix F) to record all words spoken by the child. When the experimenter began collecting data, the exact time was recorded and the stop time was recorded once data collection had ended. Data collection continued until the family had finished eating or until the child asked to be excused from the table. When dinner was
finished, the experimenter stopped collecting data, turned off and removed the video camera from the kitchen counter and exited the home.

Experimental Design

A multiple baseline across parents (Mom and Dad) design was selected to evaluate the efficacy of a parent-training package consisting of praise training and feedback/praise. The multiple baseline design across subjects is the most widely used of all three forms of the design often because practitioners have one or more subjects whose behavior needs to be changed or the subjects need to learn a specific skill (Cooper, Heron, & Heward, 2007).

Interobserver Agreement and Treatment Integrity

Interobserver agreement (IOA) is the most commonly used indicator that there is quality measurement of the target behavior. According to Cooper, Heron, and Heward (2007), “interobserver agreement refers to the extent to which two or more independent observers observe the same values after each measuring the same event” (p.113).

After the second observer was trained, she conducted interobserver agreement (IOA) checks on 20% of all sessions during the study. IOA was calculated by dividing the smaller number of observations recorded by one observer within a session by the larger number of observations recorded by another observer in that same session and multiplying by 100. For example, if one observer recorded 4 praise statements within one session and the other observer recorded 5 praise statements within that same session, agreement was calculated by dividing 4 by 5 and multiplying by 100 (i.e., 80%
agreement). These procedures were conducted for 20% of every phase for Mom and Dad and then the scores were averaged to obtain overall agreement.

The experimenter served as the primary observer and trained one additional observer to collect data for IOA purposes. The training session lasted approximately one hour and was similar to the training given to the parents. First, the second observer was given a copy of the praise training script, which was used to train the parents. The observer was provided with the definitions of general and behavior-specific praise statements and many examples of each. Next, a guided practice activity was included within the script in which the experimenter would read a praise statement and the second observer would be asked to respond using the most appropriate response from three examples given. For instance, an example of the child’s words would be provided such as, “I want more juice,” and the second observer would be provided with three example responses including: “Good job,” “Yes, juice,” or “Great job using your words to ask for juice.” The second observer would be asked to choose the most appropriate behavior-specific response from the three examples given.

At the conclusion of the training, the experimenter assessed the second observer’s understanding. The experimenter provided an example of the child’s verbal behavior and the second observer was then asked to respond using a behavior-specific praise statement that was most appropriate. For example, the experimenter would provide the second observer with the child’s statement such as, “I like pizza.” The experimenter would then ask the second observer for an appropriate behavior-specific praise statement in response. Subsequently, the experimenter would assess the second observer’s responses, provide
feedback, and continue with the assessment until the second observer reached a mastery criterion of 80% or higher. The second observer reached mastery criterion when she answered 4 out of 5 questions correctly.

A procedural integrity checklist (see Appendix G) was used to ensure integrity across each session using a videotaped segment representing training. A second independent observer watched the videotaped segment and used the checklist to score the integrity of the procedures.

**Social Validity**

A 10-item questionnaire (see Appendix H) that examined the acceptability of the parent-training package (training and feedback) was administered to each parent after the intervention was terminated. Items on the questionnaire addressed (a) the importance of the purpose of the study, (b) the participants’ satisfaction and convenience related to the parent training package, and (c) the participants’ willingness to use the strategies in everyday environments. The respondents were required to rate each item on a Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

The experimenter provided both parents with their own questionnaire during the maintenance phase of the study. Both the Mom and Dad were provided with a copy of the questionnaire and the experimenter explained the importance of being candid and honest in their responses to the questions. The experimenter left the questionnaires with the Mom and Dad and told them the questionnaires would be collected in a few days; therefore, the experimenter was not present during the time when the parents completed
the questionnaires. The Mom and Dad were told that their honest responses would be helpful in learning whether the goals and procedures used in this study would be beneficial to others in the future.
CHAPTER 3

RESULTS

In this chapter, the results of the study will be presented. First, interobserver agreement data will be presented followed by procedural integrity data. Next, the research questions will be addressed based on each dependent variable across the participants.

Interobserver Agreement

Interobserver agreement (IOA) was assessed for 20% of all phases of the study. The primary observer and the secondary observer scored each session. Agreement was calculated separately for the parent’s (Mom and Dad) use of praise and the child’s number of spoken words. IOA was calculated by dividing the smaller number of observations recorded by one observer within a session by the larger number of observations recorded by another observer in that same session and multiplying by 100. Agreement for the sessions ranged from 80% to 100% agreement with a mean of 95% agreement for Mom’s use of general praise. Agreement for the sessions ranged from 86.7% to 100% agreement with a mean of 94.2% agreement for Mom’s use of behavior-specific praise. Agreement for sessions ranged from 87.6% to 100% agreement with a mean of 97.5% agreement for Dads use of general praise. Agreement was 100% for
Dad’s use of behavior-specific praise. Agreement ranged from 67.5% to 99% agreement with a mean of 85.6% agreement for Caleb’s number of spoken words.

_Procedural Integrity_

Procedural integrity was assessed for 100% of the parent training sessions to determine the accuracy of the parent training procedures. There were five steps for the administration of the parent training. When training Mom, all five steps were followed, yielding 100% accuracy. Likewise, when training Dad, five steps were followed, also yielding 100% accuracy.

Procedural integrity was assessed for 54.5% or 6 of 11 of the feedback and praise administration sessions. Similar to the parent training, there were five steps to administering the feedback and praise procedures. The researcher followed all five steps for five sessions and four out of five steps for one session. Therefore, procedural integrity for the administration of the feedback and praise sessions ranged from 80% to 100% with a mean of 96.7%.

_Research Question 1: Is Parent Training Effective in Increasing Parents’ Use of Behavior-specific Praise?_

Results for Mom and Dad are presented in Figure 3.1.

_Mom._ During baseline, the rate of behavior-specific praise per 15 minutes for Mom ranged from 0.1 to 2.0, with a mean of 0.9. During baseline, the data path showed a relatively low, stable, and slightly descending trend. After parent training was implemented, the behavior-specific praise per 15 minutes for Mom ranged from 4.6 to 8.9, with a mean of 6.1. Following parent training, the data path showed an immediate
change in level, followed by a slight decrease, where it leveled off forming a stable trend, with no data points overlapping with baseline. Once feedback and praise were added, the behavior-specific praise per 15 minutes for Mom ranged from 5.5 to 18.8, with a mean of 11.4. During the feedback and praise condition, the data path again showed an immediate change in level and then a slow, slightly variable, decreasing trend. During maintenance, the rate of behavior-specific praise per 15 minutes for Mom ranged from 1.0 to 8.25, with a mean of 2.8. During maintenance, the data path showed an immediate change in level and then a slightly lower, stable trend.

_Dad_. During baseline, the rate of behavior-specific praise per 15 minutes for Dad ranged from 0.0 to 1.5, with a mean of 0.2. During baseline, the data path showed a stable, low trend. After parent training was implemented, the behavior specific praise rate per 15 minutes for Dad ranged from 6.2 to 10.4, with a mean of 7.4. During parent training, the data path showed an immediate increasing trend followed by a decreasing trend with no overlapping data points when compared to baseline. Once feedback and praise were added, the behavior-specific praise rate per 15 minutes for Dad, ranged from 9.0 to 15.0, with a mean of 11.7. During maintenance, the rate of behavior-specific praise per 15 minutes for Dad ranged from 5.0 to 6.7, with a mean of 6.0. During maintenance, the data path showed an immediate change in level and then a slightly increasing, stable trend.

Research Question 2: Is Parent Training Effective in Increasing Parents’ Use of General Praise?

Results for Mom and Dad are presented in Figure 3.1.
Mom. During baseline, the rate of general praise per 15 minutes for Mom ranged from 0.1 to 5.3, with a mean of 2.8. During baseline, the data path showed an immediate decreasing trend. After parent training was implemented, the general praise statements per 15 minutes for Mom ranged from 0 to 4.0, with a mean of 1.9. During the parent-training phase, the data path showed a slightly variable, decreasing trend. Once feedback and praise were added, the general praise statements per 15 minutes for Mom ranged from 1.7 to 4.5, with a mean of 2.9. During feedback and praise, the data path showed a slight increase followed by a low, variable trend. During maintenance, the general praise statements per 15 minutes for Mom ranged from 1.0 to 8.25, with a mean of 3.4. During maintenance, the data path showed an immediate change in level and then a slightly lower, stable trend.

Dad. During baseline, the rate of general praise per 15 minutes for Dad ranged from 0.00 to 5.3, with a mean of 1.7. During baseline, the data path showed an immediate decreasing trend followed by a stable and low trend. After parent training was implemented, the general praise per 15 minutes for Dad ranged from 6.8 to 21.5, with a mean of 9.1. During the parent training phase, the data path showed an immediate ascending trend. Once feedback and praise were added, the general praise statements per 15 minutes for Dad ranged from 3.0 to 10.0 with a mean of 7.7. During feedback and praise, the data path showed an immediate decrease followed by an increase and stable trend. During maintenance, the general praise statements per 15 minutes for Dad ranged from 3.2 to 7.0, with a mean of 5.1. During maintenance, the data path showed an immediate decreasing, slightly variable trend.
Research Question 3: Is Parent Training Effective in Increasing Parents’ Use of Praise?

Results for Mom and Dad are presented in Figure 3.2.

**Mom.** During baseline, the rate of praise per 15 minutes for Mom ranged from 2.0 to 6.0, with a mean of 4.2. During baseline, the data path showed a relatively low, descending trend. After parent training was implemented, the rate of praise per 15 minutes for Mom ranged from 6.0 to 12.3, with a mean of 8.0. During parent training, the data path showed an immediate change in level followed by a descending trend with no data points overlapping with baseline. Once feedback and praise were added, the rate of praise per 15 minutes for Mom ranged from 6.2 to 22.5 with a mean of 13.7. During the feedback and praise condition, the data path showed an immediate change in level followed by a slow, slightly variable, decreasing trend once Dad began intervention. During maintenance, the rate of praise per minutes for Mom ranged from 3.0 to 16.4, with a mean of 6.2. During maintenance, the data path showed an immediate increase, followed by a slightly variable, decreasing trend.

**Dad.** During baseline, the rate of praise rate per 15 minutes for Dad ranged from 0.0 to 6.0, with a mean of 2.2. During baseline, the data path initially showed a decreasing trend followed by a stable and low trend. After parent training was implemented, the praise rate per 15 minutes for Dad ranged from 7.1 to 19.6, with a mean of 14.4. During parent training, the data path showed an immediate change in level and an increasing trend with no overlapping data points when compared to baseline. Once feedback and praise were added, the praise rate per 15 minutes for Dad ranged from 14.00 to 25.00, with a mean of 19.3. During the feedback and praise condition, the data
path showed an immediate change in level, followed by a decrease in trend. During maintenance, the rate of praise per minutes for Dad ranged from 9.5 to 12.0, with a mean of 11.2. During maintenance, the data path showed an immediate decreasing, slightly variable trend.

**Research Question 4: Does the Number of Spoken Words by a Young Child with ASD Increase as the Rate of Parents’ Praise Increases?**

Results are presented in Figure 3.3.

Even though the researcher cannot report that the increase in the child’s number of spoken words is solely a function of an increase in the parents’ use of behavior-specific praise, the data demonstrate that as the parents’ use of praise increased, the child’s number of spoken words increased as well.

Before either parent received training, Caleb’s rate of spoken words per 15 minutes ranged from 45 to 124.5, with a mean of 89.8. The data path showed an immediate decrease followed by a slightly increasing and stable trend. After Mom received training, Caleb’s rate of spoken words per 15 minutes ranged from 66.8 to 102.7, with a mean of 95.8. The data path showed an immediately increasing and slightly variable trend. After Mom received feedback and praise, Caleb’s rate of spoken words per 15 minutes ranged from 73.3 to 203.2, with a mean of 124.2. The data path showed a slightly variable and increasing trend.

After Dad received training, Caleb’s rate of spoken words per 15 minutes ranged from 119.1 to 203.2, with a mean of 155.9. The data path showed an immediate increase followed by a decreasing trend. After Dad received feedback and praise, Caleb’s rate of
spoken words per 15 minutes ranged from 84 to 167.5, with a mean of 117.2. The data path showed an increasing trend followed by a decreasing and variable trend.

As mentioned previously, during the course of this study, the child was receiving at least 20 hours of in-home behavioral intervention, which focused on communication as well as adaptive behavior skills. Caleb also attended speech therapy one time per week during the course of this study. These extra services are considered confounding variables when analyzing the relationship between parents’ use of praise and the child’s number of spoken words. Thus, based on the available data, it was difficult to determine if there was a functional relation between parents’ use of praise and the child’s spoken words. On the other hand, the available data did suggest such a possibility. For example, by analyzing the data collected before parent training and comparing it to data after parent training was implemented, there is a progressive improvement in Caleb’s spoken words.

Research Question 5: Are the goals, procedures, and outcomes of this parent training package socially valid?

Social validity was measured across the two participants, Mom and Dad. The results of the ten question social validity questionnaire are as follows.

The goal of increasing parental use of praise is important: Both Mom and Dad answered “Very important.”

The goal of increasing the number of spoken words used by a child with developmental disabilities is important: Both Mom and Dad answered “Very important.”
I am satisfied with the praise training I was given: Both Mom and Dad answered “Completely satisfied.”

My understanding of the praise statement procedures that I learned is clear: Both Mom and Dad answered “Completely clear.”

I found the strategies used to increase praise rates to be acceptable: Both Mom and Dad answered “Very acceptable.”

I found the strategies used to increase my use of praise statements to be convenient: Both Mom and Dad answered “Very convenient.”

I am willing to use the given strategies in my daily routine to increase my use of praise statements: Both Mom and Dad answered “Very willing.”

These procedures would be easy to use in various environments (home, school, community: Both Mom and Dad answered “Very easy to use.”

By increasing my use of praise, my child’s number of spoken words increased: Both Mom and Dad answered “Greatly increased.”

In the space provided on the social validity questionnaire used for the parents to make comments or suggestions regarding the procedures, Mom reported that “It was useful to see how natural activities within the home such as meal time, can still be used to teach and incorporate skills in order to increase Caleb’s language.”
Figure 3.1 Parents’ use of general and behavior-specific praise statements
Figure 3.2 Parents’ combined praise
Figure 3.3 Child’s spoken words
CHAPTER 4

DISCUSSION

The purpose of this study was to examine the effects of a parent-training package on parents’ use of praise statements. This study investigated whether using a parent-training package consisting of training, feedback, and praise would increase the parents’ use of praise (both general and behavior-specific praise statements). In addition, the study sought to discover a relationship between parents’ use of praise statements and the number of spoken words used by a child with autism. Overall, the findings indicate a functional relation between the parent training intervention and the parents’ use of behavior-specific praise. Additionally, when feedback and praise were added, parents’ use of behavior-specific praise statements increased further.

The results of this study are consistent with previous studies that demonstrated the effectiveness of using training packages to modify behavior (Coddington, Feinberg, Dunn, & Pace, 2005; Cooper, Thomson, & Baer, 1970; Lafasakis & Sturmey, 2007; Reinke, Lewis-Palmer, & Martin, 2007; Sanders & Glynn, 1981). Given that the role of parental involvement in the education of children with disabilities has increased (Neef, 1995), parent training is an integral part of interventions implemented within the home setting. According to Lafasakis and Sturmey, even though parents are involved in their children’s
early education, it is still unclear what strategies to use to train parents effectively, whether the newly taught skills will generalize, and how the training affects the children.

The parent training implemented within this study confirms findings based on staff training, teacher training, and parent training investigations. The training program used by Codding et al. (2005) to train teachers to implement behavior support plans within the classroom consisted of review, modeling, prompting, and performance feedback. This training proved effective in improving teacher performance. A study by Petscher and Bailey (2006) used training, which included introducing parents to goals, procedures, definitions, expectations, discussion and modeling, as well as posttests. The previously mentioned study conducted by Lafasakis and Sturmey (2007) incorporated the use of modeling, rehearsal, and feedback. The current study used a combination of definitions, modeling, role-play, and assessment to train parents in the use of praise statements.

The effectiveness of performance feedback has been demonstrated in several prior studies (Codding et al., 2005; Phaneuf & McIntyre, 2007; Reinke et al. 2007; Roscoe, Fisher, Glover, & Volkert, 2006). Feedback has been used by teachers in general and special education classrooms to improve implementation of interventions, to improve staff performance, and to improve the performance of parents as interventionists within the home setting. The current study confirmed previous research by demonstrating the effectiveness of using feedback to improve interventionists’ use of behavior-specific praise statements.
A study conducted by Sanders and Glynn (1981) used feedback to give parents examples of how descriptive praise and other contingent consequences can increase appropriate child behavior. Feedback on teacher performance within classroom settings has proven effective as well. A study conducted by Reinke, Lewis-Palmer, and Martin (2007) examined the effects of visual performance feedback on teacher use of behavior-specific praise and demonstrated a significant increase in the use of praise once visual performance feedback was implemented.

The feedback given to parents within this current study was based on research conducted by Cooper, Thompson, and Baer (1970), which provided teachers with feedback at the onset and close of each session, including a daily rate. Results of the study by Cooper et al. found that the training procedures including feedback modified teacher behavior. The current study extended these findings by demonstrating the effectiveness of feedback in modifying parent behavior.

Findings were also consistent with Sutherland et al. (2000), who investigated the effects of an observation-feedback intervention on the rate of a teacher’s behavior specific praise of students with EBD. Results of their study demonstrated that providing feedback to the teacher was successful in increasing the frequency and the quality of praise statements. At the conclusion of their study, however, the researchers found that the effects of the observation-feedback intervention were not maintained over time.

Much of the previous research related to using training packages to modify behavior has focused on training teachers and staff members. The effects of parents training other parents known as pyramidal training, has also been a topic of recent
research (Kuhn, Lerman, & Vorndran, 2003; Neef, 1995). There is far less research devoted to using training packages to train parents to implement interventions within the home setting. This study extends the research on training packages and focuses on the importance of its use for teaching behavior modification procedures to individuals within the natural environment.

Further, there is a large body of research devoted to the positive effects of praise by teachers, yet there is far less research on the effects of parents’ praise. Within the current study, a parent training package was used to increase parents’ use of praise. The current research sought to discover a relation between parents’ increased use of praise and the number of spoken words used by a child diagnosed with autism. This study extends the research on the positive effects of praise and identifies parent training as an effective mode to increase parents’ use of praise.

As a secondary measure in this study, the child’s number of spoken words was recorded. Given that rewards in the form of verbal praise and positive feedback enhance motivation (Cameron & Pierce, 1996), the experimenter hoped to find a functional relation between the parents’ increased use of praise and the child’s number of spoken words. Research on behavior modification has found that praise is a successful technique used within classrooms to increase rule compliance, peer relations, academic performance, and attention (Harris, Wolf, & Baer, as cited in Henderlong & Lepper, 2002; Madsen, Becker, & Thomas, 1977; O’Leary & O’Leary, 1977). According to Henderlong and Lepper (2002), praise has been shown to increase a child’s desire to
partake in the activity that was praised; therefore, based on these findings, this study attempted to increase the child’s use of spoken words by increasing the parents’ praise.

Limitations

Despite great efforts by everyone involved in this study, all research has limitations especially research studying human behavior in the natural environment. First, given that this study focused on implementing an intervention across parents in a home setting, the multiple baseline design across subjects was used. According to Cooper, Heron, and Heward (2007), the multiple baseline across subjects design, which is the most widely used of all forms of the multiple baseline design, consists of one target behavior selected for two or more subjects. Although it is most favorable to use a multiple baseline design with more than 2 subjects in order to demonstrate a functional relation, the researcher was not able to do so because the Mom and Dad were the only participants, there was no other guardian in the family.

Another limitation can be seen by visually analyzing the graphs. When the second participant, the Dad, was trained in the first phase, there is a noticeable increase in his use of praise yet there is a noticeable decrease in the Mom’s use of praise. Although the Mom’s noticeable decrease in praise once the father was trained is a limitation, the decrease is a natural consequence. Given that the Dad’s rate of combined praise (both general and behavior-specific) during baseline was very low (mean = 2.4), it was evident that the Mom was using much more praise. Once the Dad was trained to use praise, the Mom did not use as much praise. The Mom’s decrease in praise could be attributed to the Dad’s increase in praise use. Although the researchers did not anticipate this
occurrence, it was bound to occur naturally due to the fact that two people may not want
to talk over each other all the time, in the natural environment of the dinnertime setting.

The third limitation is related to the low agreement for Caleb’s number of spoken
words. The low agreement is a limitation and is due to the fact that the primary observer
had been working with the child for three years prior to this study and was familiar with
the child’s communication delays. Given that the primary observer had worked with the
child, she had a better understanding of the child’s verbal utterances even though they
were sometimes difficult to understand. However, the secondary observer had no
previous experience working with the child and therefore had a more difficult time
interpreting the child’s words.

The fourth limitation is related to the results of the social validity questionnaires.
Although the social validity questionnaires demonstrate positive results related to all
questions, these results may not be completely accurate. Given that the participants had a
working relationship with the primary observer, their responses may have been inflated in
order to please the experimenter. Even though the primary observer made an effort to ask
the participants to respond honestly and candidly when completing the questionnaires,
provided the participants a few days to complete the questionnaires on their own time,
and asked them to complete the questionnaires anonymously, the results are still
unreliable.

The fifth limitation is related to Caleb’s number of spoken words. Environmental
factors in the family’s natural home environment might also be a limitation, especially
related to the child’s increase in number of spoken words. Given that this study took
place over a series of months, and given that the child was enrolled in pre-school, speech therapy, and intensive behavioral therapy during the duration of this study, the increase in the child’s number of spoken words in not necessarily a function of the parents’ use of praise.

The sixth limitation is related to the fact that no generalization measures were taken. Unfortunately, due to time constraints, the researcher was unable to measure whether the parents’ increased use of praise generalized to environments other than the dinnertime setting.

Lastly, the Mom and Dad’s reaction to the video camera could be a limitation. Even though it was observed that the Mom and Dad reacted to the videotape during the first two to three recorded sessions, it was also observed that they quickly became immune to the fact that a video camera was being used to record them during dinnertime. The parents’ behavior could have been influenced by their knowledge of the video camera.

**Implications for Future Research**

Future research should address the limitations that were found within this study. For example, in the future, it would be beneficial to include multiple families. Implementing an intervention across multiple families including Mom and Dad would help to replicate and validate the findings of the current study. Including multiple families would also allow for the analysis of diverse factors that would be naturally incorporated when working with a variety of family structures.
While conducting this research, the primary observer found that the 4-year-old daughter, who was present during the dinnertime setting, began to imitate her parents’ use of praise. Unfortunately this behavior was not of primary interest to the researcher and therefore data were not collected, but this would be an interesting dependent variable to measure in the future. Future research could attempt to extend the research to using training packages with not only parents but siblings as well.

In order to address interobserver agreement issues, perhaps it would be beneficial to allow the second observer to be present in the home while the session is in progress. Using a direct measurement of the target behaviors of interest would allow for more valid measurement of the number of words spoken by the child. Also, using direct measurement would also eliminate the sound inconsistencies that are often associated with video and audio recording devices such as the digital video tape used in this study. These provisions would likely increase the agreement between the primary and secondary observers.

To address the suspected bias demonstrated in the social validity questionnaire results, the primary observer could assess social validity at different points within the study such as before the study began, in the middle, at the end, and perhaps a few months after the end of the study. The primary observer could also make more of a deliberate effort to ask the participants to respond candidly, representing their true opinions. Additionally, a second observer could be used to administer the directions and social validity questionnaire. Perhaps having the second observer, who is unknown to the
family, explain the directions and administer the questionnaire would increase the accuracy of the responses and eliminate the participants’ bias.

Within the current study, a natural consequence was observed in relation to a decrease in the Mom’s praise due to an increase in the Dad’s praise. In order to maintain high rates of praise when both parents are trained and are provided with feedback, it would be important for future researchers to emphasize goal setting. While a goal was provided during feedback, the parents did not always reach that goal during each session. Placing a greater emphasis on reaching the set goal would help to maintain high rates for both Mom and Dad. In order to maintain high rates of praise when both parents are in training, future research could also have the dependent variable be a ratio of praise statements to other statements (e.g., negative or neutral statements).

Although this study does include a maintenance phase, future research should report data on how long the parents were able to maintain their high rates of using praise statements. Long-term maintenance data would only strengthen the results of the current study and validate claims that the parent training package was effective over a long period of time.

In order to improve the maintenance of parents’ use of praise, future research could include a self-monitoring phase of the study. Including a self-monitoring phase would decrease the need for direct intervention from others, and therefore, the parents would be able to self-monitor their own behavior. Training the parents to self-monitor could perhaps maintain their use of praise for a longer amount of time.
Due to time constraints, the researcher was not able to include any measures of generalization. Future research should measure how well the participants are able to generalize their use of praise statements across other environments (e.g., in public, at family gatherings, school functions). Generalization measures would allow researchers to understand what parent training interventions create effective changes in behavior across multiple settings.

**Implications for Parents/Practitioners**

Findings from this study have several implications for parents and practitioners. Overall, the results indicate that the parent training package consisting of training, feedback, and praise was effective in increasing the parents’ use of praise statements. The positive effects of this research demonstrate that practitioners and clinicians can use such strategies in order to train parents to implement interventions within the home setting.

The current research indicates that one initial training session paired with daily feedback and praise may be sufficient in increasing and maintaining increased rates of the target behavior (i.e., praise). Depending on the target behavior under investigation, training, feedback, and praise may be efficient strategies within an intervention package.

This study also addresses the important issue related to the ability of parents to adhere to and implement interventions within the natural home setting. The results of this current study demonstrate the Mom and Dad’s ability to be trained to use praise statements in order to increase their son’s number of spoken words. Often times, parents do not have the confidence in order to carry out intervention procedures within the home.
The results provide parents and practitioner’s confidence that parent training is effective and that parents are capable of implementing interventions within the home.

The results of the social validity questionnaire suggest that the parents found the intervention to be important, clear, and easy to use. The Mom reported that the intervention was useful in that it demonstrated how natural activities in the home could still incorporate teaching opportunities. These findings suggest that this is a useful intervention to be used with parents.

Even though this study incorporates the use of a trained interventionist in order to implement the behavioral intervention, parents who do not have access to an interventionist could use self-monitoring strategies such as goal setting, videotaping, or the use of a cueing device such as the MotivAider™ to achieve the same outcomes.

**Conclusion**

In conclusion, the results of this study indicate that the use of training, feedback, and praise within an intervention package was effective in increasing the praise used by Mom and Dad in the natural home setting. Although a functional relation between the training and the child’s behavior could not be determined, the findings indicate that the parents’ increased use of praise may have contributed to the increased use of spoken words by the child, suggesting that parent training is an important part of intervention for children with autism. While it is always important to study intervention strategies that can be used by teachers and clinicians, it is equally important to study effective strategies that
can be used within the home setting as well. Given the fact that parents are often involved in, if not in charge of, coordinating services for their children, studies involving effective and time efficient training strategies for parents are of absolute importance.
Appendix A

Parent Consent Script
Script for Obtaining Consent to Participate in Research

You and your child are invited to participate in a research study. The title of the study is “The effects of parent training on parent use of appropriate praise and child’s use of spoken words.” Dr. Moira Konrad, Quinn Montgomery, and Ken Luu are conducting this study.

This study will last approximately 9-12 weeks. Social interactions between you and your child during dinnertime will be logged three days a week. The number of spoken words used in your child’s statements will also be logged. Additionally, each parent will receive parent training separately and the effects of that training will be observed.

You and your child may leave the study at any time. If you or your child decides to stop participating in the study, there will be no penalty to you or your child. Your decision will not affect your future relationship with The Ohio State University.

We do not anticipate any risks associated with your participation in this study. Possible benefits may include an increase in the social interactions between you and your child and an increase in the number of spoken words used by your child.

You may refuse to participate in this study without penalty. If you choose to participate in this study, you may discontinue participation at any time without penalty. By signing the consent form, you do not give up any personal legal rights you may have as a participant in this study.

For questions, concerns, or complaints about the study please contact Moira Konrad (Principal Investigator) or Quinn Montgomery (student investigator).
For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

Date: 
Signed: 

Date: 
Signed:
Appendix B

Child Consent Script
CONSENT FOR PARTICIPATION IN RESEARCH

I consent to participating in research entitled: **The Effects of Parent Training on Parents’ Use of Appropriate Praise and Child’s Use of Spoken Words.**

Quinn Montgomery has explained the purpose of the study, the procedures to be followed, and the expected duration of my participation. Possible benefits of the study have been described, as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: __________________________  Signed: __________________________

________________________________________
(student investigator)

Signed: __________________________

________________________________________
(Principal Investigator)

Signed: __________________________

________________________________________
(Participant)
Appendix C

Child Verbal Assent
Script for Obtaining Child Verbal Assent

• You are being asked to be in a research study. Studies are done to find better ways to teach kids.

• I am going to tell you a little bit about the study and then ask you if you would like to participate. You should ask any questions you have before making up your mind. You can think about it and discuss it with your family or friends before you decide.

• It is okay to say “No” if you don’t want to be in the study. If you say “Yes” you can change your mind and quit being in the study at any time without getting in trouble.

• If you decide you want to be in the study, an adult will also need to give permission.

• The goal of this study is to help your family talk to each other during dinnertime. Would you like to participate in the study?
Appendix D

Parent Training Script
Parent Training Script

Trainer reads to parents:

As you are aware of, positive reinforcement serves to strengthen behavior. Social praise especially in the form of verbal praise is a powerful reinforcer for most people especially those with disabilities. In order to increase the number of words used by your child in his sentences, we have been using praise to reinforce his use of words. Of course any praise is better than none, however using behavior specific praise will help to reinforce the exact kinds of behaviors that need to increase. I will be giving you a short “training session” to increase your use of behavior specific praise aimed at your child’s use of verbal behavior.

Praise:

A generic praise statement is defined as an audible statement made by the parent that refers to one or more of the child’s behaviors that are admirable and approved such as (“Good job!”, “Wow”, “That is great!”) Parent comments that are neutral such as “Okay”, “Correct”, or “Yes” are not considered and therefore not recorded as praise statements.

A behavior specific praise statement is made with reference to an observable behavior (“Nice job using 5 words to ask for milk!”). A behavior-specific praise statement can refer to a general behavior or a specific behavior related to academics and
current ABA programs. Both the generic and the behavior specific praise statements do
not include any form of negative words or phrases.

Generic vs. Specific (Trainer will say each example of praise and ask the parent whether
it is general of specific)

Generic
-“Great!”
-“Wow, look at that!”
-“Yes, You are correct.”
-“Ok, good.”

Specific
-“I like how you used 3 words to ask for a tissue.”
-“Nice work asking to go potty.”
-“Cool, you used 4 words to ask for more pizza!”

Role Play: (Trainer will read child’s conversation part and parent will responding using
the most appropriate response from the 3 examples given in each scenario.)

-Child says, “I like cheese.”
“Yes, cheese.” “Cheese.” “Nice job using 3 words to say you like cheese!”
-Child says, “I want more juice.”
“Great job using 4 words to ask for juice.” “Good job.” “Yes, Juice.”
-Child says, “Look at the doggy.”

“Yes there’s a doggy.” “I like how you used 4 words to tell me about Doggy.”

“Doggy”

Assessment of Understanding: (Trainer will give examples of child’s verbal behavior and parent must respond using the most appropriate use of specific praise. Score at least 80%)

Trainer: “I love to eat carrots.”

*What would be an example of a behavior specific praise statement?*

Trainer: “I want to go outside.”

*Give an example of a behavior specific praise statement?*

Trainer: “Give me crayons please.”

*Give an example of a behavior specific praise statement?*

Trainer: “I’m done with food.”

*Give an example of a behavior specific praise statement?*

Trainer: “Spaghetti is good.”

*Give an example of a behavior specific praise statement?*

Trainer: “Daddy, do you like salad?”

*Give an example of a behavior specific praise statement?*

Trainer: “I played with Owen today.”

*Give an example of a behavior specific praise statement.*

Trainer: “I want to watch Underdog.”

*Give an example of a behavior specific praise statement.*
Appendix E

Feedback and Praise Script
<table>
<thead>
<tr>
<th>Feedback and Praise Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant:</td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td><strong>Previous Session Rate of Behavior-Specific Praise</strong></td>
</tr>
<tr>
<td>per 15 minutes:</td>
</tr>
<tr>
<td><strong>Example of Appropriate use of Behavior-Specific Praise</strong></td>
</tr>
<tr>
<td>taken from Previous Session:</td>
</tr>
<tr>
<td><strong>Goal of Behavior-Specific Praise rate for Current Session:</strong></td>
</tr>
</tbody>
</table>
Appendix F

Observation Data Sheet
<table>
<thead>
<tr>
<th>Subject</th>
<th>Praise</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G/S</td>
<td></td>
</tr>
<tr>
<td>Mom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Session date: Project # 2007E0816
Observer:

Session #
IOA Day Y/N

Subject: Mom, Dad, and Child
Time Begin:

Target Behavior: Praise (General/Specific)
Time End:
<table>
<thead>
<tr>
<th>Child: Behavior (# of words spoken)</th>
<th>Child: Behavior (# of words spoken)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>
Appendix G

Procedural Integrity Checklist
Parent Training Checklist

<table>
<thead>
<tr>
<th>STEP</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read scripted paragraph explaining the importance of praise and the definitions of general/specific praise statements.</td>
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<tr>
<td>2. Ask parent if they have any questions.</td>
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<tr>
<td>3. Read scripted directions and ask parent to label each given statement as general or behavior specific.</td>
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<tr>
<td>4. Read the scripted directions for guided practice. Provide the parent with the example of child’s verbal behavior and provide the 3 possible examples of behavior-specific praise.</td>
<td></td>
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<tr>
<td>5. Read the scripted directions for the assessment of understanding. Provide the</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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parent an example of the child’s verbal behavior and ask them to provide an appropriate behavior-specific praise statement.

Feedback and Praise Checklist

<table>
<thead>
<tr>
<th>STEP</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provide the feedback and praise worksheet to the parent.</td>
<td></td>
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<tr>
<td>2. Provide parent with the praise rate from the previous session.</td>
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<tr>
<td>3. Provide parent with an example of an appropriate behavior specific praise statement used in the previous session.</td>
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<tr>
<td>4. Provide parent with a goal for current session.</td>
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<tr>
<td>5. Provide parent with their current rate of praise at end of current session.</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

Social Validity Questionnaire
Social Validity Questionnaire

Please circle the responses that best match your opinions of the procedures

Parents:

1. The goal of increasing parental use of praise is important:

   Not Important  Somewhat Important  Important  Very Important

2. The goal of increasing the number of spoken words used by a child with developmental disabilities is important:

   Not Important  Somewhat Important  Important  Very Important

3. I am satisfied with the praise training I was given:

   Not Satisfied  Somewhat Satisfied  Satisfied  Completely Satisfied

4. My understanding of the praise statement procedures that I learned is clear:

   Not at all Clear  Somewhat Clear  Clear  Completely Clear

5. I found the strategies used to increase praise rates to be acceptable:
6. I found the strategies that were used to increase my use of praise statements to be convenient:

Not Convenient Somewhat Convenient Convenient Very Convenient

7. I am willing to use the given strategies in my daily routine to increase my use of praise statements:

Not willing Somewhat Willing Willing Very Willing

8. This procedure would be easy to use in various environments (home, school, community, etc.)?

Not at all Somewhat Easy to Use Very Easy to Use

9. By increasing my use of praise, my child’s number of spoken words increased:

No Increase Very Little Increase Increased Greatly Increased
10. Please use the space below to make any comments or suggestions regarding this study.

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________
LIST OF REFERENCES


