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Self-Control Training for Parents of Children with Autism and Related Disabilities in Albania

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A thesis submitted to the faculty of
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Educational Specialist

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ABSTRACT

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and Related Disabilities in Albania

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Self-control can be defined as the ability to select a larger, later reward over a smaller, sooner reward. This ability, also known as gratification delay, has been highly correlated with academic competence and success. Studies that examine gratification delay have identified strategies that have been observed to increase the delay time to reward. This study examined the extent to which parents of children with Autism or a related disability could be trained to teach these strategies. Participants were seven mothers who were all ethnic Albanian. The results indicated that these mothers were able to teach the three strategies they were trained on at a high quality and that there was a preference for one strategy over the other two.

Keywords: Albania, autism, developmental disabilities, intellectual disabilities, parent training, self-control

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I owe more thanks than I will ever be able to articulate to my mother and father who have always believed that I could do anything that I decided I wanted to do. They have supported me unconditionally with every life decision I have made and their trust in me to make the right choices regarding my path in life has given me confidence to pursue my passions. I am also grateful to my aunt and uncle who shared their home with me during my graduate program. Their support, encouragement, and curiosity about my thesis often gave me the motivation I needed to continue working at it.

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CHAPTER 1

Introduction

Walter Mischel, a social psychologist, and his colleagues at Stanford University conducted studies in the late 1960s and early 1970s that have become known popularly as the "marshmallow test" studies. They used marshmallows and other treats to examine factors that impacted children's choices to delay gratification. Each child was seated at a table with a marshmallow directly in front of her or him. At the same time, each was told that a bowl of marshmallows located out of the child's reach would become available if she or he did not eat the single marshmallow while the researcher was away from the room. Participants in the studies were enrolled in the Bing Nursery School at Stanford University (Mischel & Ebbesen, 1970; Mischel, Ebbesen, & Raskoff Zeiss, 1972). In follow-up studies, Mischel and his colleagues found that the children who had waited for the "larger, later reward" were rated as being more competent by teachers and parents than the children were who had chosen the immediately available marshmallow (the "smaller, sooner" reward). Those who originally opted for the larger-later reward also performed better academically, were rated as being more well-adjusted, and were more effective in coping with life stress than their research peers who chose not to delay gratification (Shoda, Mischel, & Peake, 1990).

The original studies remain relevant today. Researchers at the University of Rochester (Kidd, Palmeri, & Aslin, 2013) re-visited the issue of the experimental environment in the work Mischel and his colleagues conducted. Kidd et al. (2013) found that a child's decision to delay gratification could, in fact, be impacted by the immediate environment. Half of their participants were placed in an "unreliable" condition and the other half in a "reliable" condition. Each child was taken to a room by a researcher and invited to work on an art project by herself or himself.

The art project was a Create-Your-Own-Cup project, wherein the child, with the researcher absent, drew on a blank piece of paper that was later inserted into a special cup. Each child received a jar of used crayons and was told that in a few minutes the researcher would return with a tray of new art supplies. The jar was intentionally sealed so that the children could not open it on their own and thus had to wait until the researcher's return. In the reliable condition, the researcher returned with a tray of a new art supplies. In the unreliable condition, the researcher returned without the tray and apologized that the child would have to continue using the same jar. Immediately following the child's completion of the picture, the marshmallow test was administered. The researchers found that the children who had been exposed to the reliable condition waited twice as long as those exposed to the unreliable condition waited before eating the marshmallow.

Other factors that affected the delay of gratification in the original studies included forms of avoidance (for example, covering the marshmallow or covering one's eyes), refraining from thinking about how chewy and sweet a marshmallow is, thinking of something fun that one could do instead, singing a song, abstraction (for example, imagining the marshmallow as an iceberg), and stating self-directed rules (for example, "I have to wait"). These factors have been popularized and outlined on parenting blogs (Ramirez, 2015). Mischel (2014) detailed them and applied them to real-life situations in *The Marshmallow Test: Mastering Self-Control.* For him, teaching children methods for the delay of gratification may potentiate their life stressors.

CHAPTER 2

Literature Review

While Walter Mischel was a professor at Stanford University, he conducted a series of experiments on gratification delay. One of these "marshmallow test" studies was conducted with Ebbesen in 1970. The study acknowledges that, up to that time, extensive research had been conducted examining delaying rewards with animals, but little attention had been given to studying impulse control in humans. One of the main purposes of the study was to examine delay of reward in humans with direct behavioral measures. Based on the theoretical discussions of Sigmund Freud, who believed that creating a "hallucinatory image" of the desired object was beneficial during a delay to gratification, and Jones and Gerard, who believed that anything that made the reward seem more salient improved impulse control, the researchers generated the theory that, "conditions that help the individual attend mentally to the delayed reward for which he is waiting should help him to sustain the delay" (Mischel & Ebbesen, 1970, p. 330).

The researchers noted that another factor impacting an individual's choice to delay gratification is the extent to which they believe that they will actually get the more valuable outcome (Mischel & Ebbesen, 1970). This theory is supported by the study conducted by Kidd et. al (2013) where children whose experience with the environment and whether or not it was reliable significantly impacted their choice of either waiting for the larger, later marshmallow reward, or selecting the small, sooner marshmallow reward (Kidd et al., 2013). The purpose of the1970 study, however, was to examine the impact of attention on the choice to delay gratification, not the impact of the environment, so despite acknowledging the theory that when one trusts that they will actually get the larger reward, one's attention to the desired objects is

what was reported from the study. However, it is noteworthy that the study recognized different factors that impact gratification delay that continue to be relevant.

To test the impact of attention on the desired treat, the 1970 study created four conditions: one where the more desirable reward was in view, one where the less desired reward was in view, one where both rewards were in view, and one where neither reward was in view. Contrary to the hypothesis, the study revealed that children waited longest when both rewards were absent. Additionally, children waited for the shorter period of time when both rewards were in view (Mischel & Ebbesen, 1970). A study conducted by Mischel, Ebbesen, and Raskoff Zeiss in 1972 builds on the 1970 study and focuses on specific types of attention in gratification delay. The researchers theorized that children in the 1970 study who were able to delay gratification were able to do so "by engaging in covert and overt distracting responses such as staring at the mirror, covering their eyes with their hands, and talking to themselves" (Mischel et al., 1972, p. 205). These strategies are labeled as "self-distraction." To examine the effectiveness of self-distraction strategies, subjects in the study were given either an overt, covert, or no activity to engage in during the waiting period.

The 1972 study consisted of three experiments. In the first experiment, rewards were physically available in all conditions of the study, unlike the 1970 study where the rewards were either not available, partially available, or totally available. Subjects in this first experiment were assigned to one of three groups: delay-of-gratification contingency where they did not receive any instructions to think about something or participate in an activity, distraction through overt activity where the child was given a toy and told they were allowed to play with it, and distraction through cognition-inducing instructions where the child was told to thinking about something fun. The children in the delay-of-gratification contingency demonstrated mean delay

times of less than half a minute, which is similar to those in the 1970 study who were shown both rewards during the delay. Children in the distraction through overt activity group demonstrated a mean delay time of 8.59 minutes and children in the distraction through cognition-inducing group exhibited a mean delay time of 12.12 minutes, which was much longer than children who were not prompted to engage in any activity that would distract them from the reward. There was no significant difference in waiting time between the group that was given a toy as a distractor and the group that was told to think about something fun as a distraction (Mischel et al., 1972).

The second experiment in the 1972 study focused primarily on cognition as a distraction. Children were divided into three groups and prompted to either think about something fun, think about something sad, or think about the rewards. The children who were told to either think about something sad or to think about the rewards did not demonstrate waiting times that were significantly greater than the group in the first experiment were not given any cue to distract themselves during the delay. However, children that were told to think about something fun demonstrated delay times that were much greater than the other two cognition groups (Mischel et al., 1972). The results of this study emphasize the importance of not just thinking about anything in order to distract oneself but thinking about something positive.

In the third experiment of the 1972 study, the reward was placed in an opaque cake tin under the table during the delay. Children were put into one of three conditions: a “no-ideation” condition where they were given no instructions to think about anything in particular, a “think fun” condition where they were told to think about something fun, or a “think rewards” condition where they were told to think about the reward. In the condition where they were told to think about the reward the mean waiting time was only .78 minutes, which is similar to the other experiments in the study where students were either not given any instructions about something

to think about or were not given a toy to play with. There was no significant difference in mean delay times between the "no-ideation" condition and the "think fun" condition, which suggests that once a reward is not physically available, distraction does not necessarily need to occur in order for children to delay gratification (Mischel et al., 1972).

Looking at all three experiments, the researchers note how remarkable it is that a simple, brief instruction could have such an impact on a child's ability to delay gratification (Mischel et al., 1972). These experiments demonstrate the effectiveness of positive distraction (thinking about something fun or "positive") and avoidance (placing the reward out of sight and/or out of reach) and how quickly children can greatly increase their delay to gratification by receiving instruction or a distracting object from an adult. The ability to delay gratification, also known as self-control, has been highly correlated with academic competence and success (Shoda et al., 1990), thus, it is an important skill to teach to children.

While the studies previously mentioned focus primarily on positive distraction and avoidance, another strategy that has been implemented to aid in gratification delay will be referred to as self-directed speech. A study published in 2002 by Kudadjie-Gyamfi and Rachlin demonstrates the effect of rules, or hints, in governing behavior. Participants completed a self-control task where they were selected either a favorable overall alternative or a favorable local alternative. The task lasted 650 seconds and participants were instructed to make as many points as possible during that time period. The participants were randomly put into two groups. The first group, the HINT group, was given a hint at the beginning of the task that would help them in maximizing their points during the first block of the task. After the first block, the contingency changed but the participants in the HINT group were not given any hints about the contingency change. Even though the original hint that the HINT group was given no longer maximized their

point earnings based on the new contingency, the HINT group continued to follow the hint that maximized their point earnings during the first block. The NO-HINT group, however, was more sensitive to the contingency change in the second block than the HINT group and the results of the study indicate that they altered their behavior based on the new contingency in order to maximize their point earnings. This study demonstrates that rule-governed behavior may aid in the acquisition and exhibition of self-control so long as the contingencies do not change (Kudadjie-Gyamfi & Rachlin, 2002).

Albania

Families in developing countries have limited access to services and resources related to having a child with disabilities. Albania is one such developing country, located in Southeastern Europe. Albania has a population of three million people and it is estimated that the number of children with disabilities is between 17,700 to 24,000 (Cuko, Kulla, & Kasapi, 2012; Radoman, Nano, & Closs, 2006). In addition to the elevated stress, anxiety, and depression that Albanian families who have a child with disabilities experience, they are also more likely to live in poverty than families who do not have a child with disabilities (Emerson, 2007; Fujiura, Park, & Rutkowski-Kmitta, 2005; Merkaj, Kika, & Simaku, 2013).

Ethnic Albanians are a distinct ethnic group that resides largely in the Western Balkan region in Southeastern Europe. Due to historical factors, the borders in the Southeastern Europe have been drawn with and without ethnicity as a consideration. For example, the former Yugoslavian Republics of North Macedonia, Serbia, Montenegro are home to large minorities of Ethnic Albanians. Likewise, Albania is home to ethnic Serbs, Montenegrins, and Macedonians. To the south, Greece has areas historically inhabited by individuals identifying as ethnic Albanians, and Greeks have a sizeable minority in Albania. The disputed Republic of Kosovo

located northeast of Albania has an overwhelming majority of ethnic Albanian citizens, with sizeable Serb minorities. Therefore, it is better to understand nationality in terms of ethnic identity. Thus, when we speak of Albania or Albanians, we are referring Albanians as a nation.

Very little research has been conducted in Eastern Europe regarding self-control or self-regulation in children. However, in 2015, a team of researchers conducted a study in Kosovo looking at self-regulation in ethnic Albanian children. Albanians are an ethnic group that live in the Balkans, which includes the countries of Kosovo, Albania, and Montenegro. The authors of the study explain that this was the first of its kind to be conducted in Kosovo since the conflicts in that region in the late-1990s. Their argument for conducting the research in Kosovo was that "the study adds to current efforts to understand the skill formation of children in low- and middle-income countries and might lay the groundwork for initiating a campaign in Kosovo focusing on the importance of self-regulation for children's learning and development" (von Suchodoletz, Uka, & Larsen, 2015, p. 842). The results of study demonstrated that self-regulation in the Albanian children who participated in the study was related to academic competence, where children who exhibited more self-control also demonstrated higher academic abilities. Therefore, this study confirms and extends research that has been conducted with American, Asian, and European children to this sample of Albanian children that self-regulation is an important skill for students to demonstrate in preparation for starting school. The researchers in the study recognize that one limitation is that they did not include children with special needs in their sample (von Suchodoletz et al., 2015). This current study will continue to study extend the research of self-regulation and self-control in Eastern European children in Albania by including parents of children with special needs.

Gratification Delay and Autism

Previous studies have addressed self-control in children with autism. One study entitled *Self-Control in Children with Autism: Response Allocation During Delays to Reinforcement* implemented a progressive-delay schedule of reinforcement with three children with autism in an attempt to decrease disruptive behavior. The children ranged in age from 5-7 years old. Requirements for the participants were that they had to be able to follow simple instructions, speak in small phrases, comment spontaneously, and make requests (Dixon & Cummings, 2001). For each of the participants, the disruptive behavior to be decreased was related to self-injury. A stimulus preference assessment was given to determine the most preferred item for each participant. All sessions of the study were conducted in the participants' homes.

To determine a natural baseline for how long the participants could wait before consuming their preferred item, a large reinforcer was placed in front of them on a table and they were told by the experimenter to "wait as long as you can before eating [playing with] –" This baseline condition remained effective until the time each participant waited was relatively stable. During the next baseline, referred to as Part 1 of the choice baseline, the participants were presented with a smaller reinforcer they could have immediately, or a large delayed reinforcer. The experimenter would ask the child, "Do you want the small [item] now, or would you like the big [item] after waiting for a while?" If the child chose the larger delayed reinforcer, the waiting time was 12 times that of the natural baseline mean waiting time. Part 1 of the choice baseline condition ended when the child chose the smaller reinforcer for four consecutive sessions. Part 2 of the choice baseline condition involved both the large and small quantities being available immediately. The experimenter asked the child, "Do you want the small [item] now or do you want the big [item] now?" The condition concluded when the child selected the larger item for

four consecutive sessions. During the final condition, referred to as the self-control training, the participants were given three options: (a) a small immediate item, (b) a larger delayed item without a response requirement, and (c) a larger delayed item with a response requirement. The response requirement for each of the participants was to match a sample stimulus card to a selection of comparison stimuli. At the beginning of each session, the experimenter asked the child, "Do you want the small [item] now, do you want the big [item] in a little while, or do you want the big [item] after working on your program?" The initial delay was the average of the child's natural baseline waiting time and was gradually increased during subsequent sessions. The self-control training condition remained in effect until the delay was equal to 12 times the average of the natural baseline waiting time.

This study found that during the self-control training condition, all children showed a preference for the larger item when it was associated with an activity contingency over the smaller item and the larger item without the activity contingency (range, 90-98%). The results indicate that self-control may be increased by using progressive delays in order to gain access to a larger reinforcer and by giving an intervening activity to participate in during that delay.

Another study that addresses self-control in children with autism entitled, *Reduced Delay of Gratification and Effortful Control Among Young Children with Autism Spectrum Disorders* compares delay of gratification in children with autism to peers of similar age and IQ. The authors of the study note that "children with autism spectrum disorders (ASDs) exhibit impaired executive control on experimental measures and reduced effortful control on temperament questionnaires" (Faja & Dawson, 2015, p. 91). The authors note several studies that have linked effortful control to successful gratification delay among typically developing children. Participants included 21 children with idiopathic autism spectrum disorders and 21 typically

developing children. Pairs were matched based on chronological age and only children with IQ scores that were in the average or above average range were included in the study. All of the children with an autism spectrum disorder had a previous clinical diagnosis of autism.

A delay of gratification task was completed by the participants where they were given the opportunity to choose a smaller, immediate treat, or wait for a larger treat. At the beginning of each session, the child was asked whether they preferred the smaller (e.g., one cookie) or larger (e.g., two cookies) reward. Once child the child indicated which they preferred, the examiner would leave the room and the child was told the examiner was preparing for the next activity. They were not told how long they would have to wait for in order to receive the larger reward. They were instructed that if they preferred not to wait, they could ring a bell and the examiner would return immediately and the child would receive the smaller treat. The experimenters conducted a rule check to ensure that all children understood the rules. The task lasted 15 minutes or ended when the child either rang the bell or violated a rule. The duration of the delay that the child was able to wait was recorded and the child passed if they waited the entire 15 minutes. The experimenters also recorded the amount of time looking at the bell to measure the ability to shift attention.

The two groups differed significantly in the amount of time they waited. The mean wait time for the group of children with ASDs was 11 min 9 seconds, while the mean wait time for the group of typically developing children was 14 mins, 45 seconds. Passing rates also differed significantly. For the autism group it was 57.1% versus 90.5% for the typically developing group. However, the groups did not differ in the proportion of time they spent looking at the bell and treat. This study indicated that children with ASDs “were not able to wait as long to receive

a larger, desired reward. Likewise, the rate of children with ASD who passed by delaying gratification for the entire 15 min was lower" (Faja & Dawson, 2015, p. 97).

Gratification Delay and Related Disabilities

Studies have also examined the effect of Attention Deficit Hyperactivity Disorder (ADHD) on self-control. One in particular, entitled *A Procedure to Teach Self-Control to Children with Attention Deficit Hyperactivity Disorder*, examined the effectiveness of verbal mediation in teaching children with ADHD self-control (Binder, Dixon, & Ghezzi, 2000). The study acknowledges that "few studies to date have examined whether children who display impulsive behavior can be taught self-control and if verbal skills actually play a role in this type of choice making" (p.233). After a baseline was established where all three children involved in the study displayed a preference for the smaller, sooner reward, sessions of self-control training were conducted. Two types of verbal mediation were taught—one involved the children repeating "If I wait a little longer, I will get the bigger one," and the other involved the children viewing flashcards and naming the objects on those flashcards. The results of the study demonstrated that the children were able to display increased levels of self-control regardless of which of the two types of verbal mediation they engaged in. This suggests that simply having an intervening activity is as effective as engaging in verbal mediation that describes the contingency rule, such as "If I wait, I get the bigger one" (Binder et al., 2000).

Progressive Delay

One method that examiners have used to increase gratification delay in both children with Autism and children with Attention Deficit Hyperactivity Disorder is progressive delay (Binder et al., 2000; Dixon & Cummings, 2001). In a progressive delay procedure, the examiner gradually increases the delay to the reinforcer in order to increase tolerance to a delay. The study

mentioned previously that examined self-control in children with ADHD aimed to increase self-control by combining progressive delay techniques with verbal mediation. Researchers in the study demonstrated that self-control, or time of delay before the reinforcer, could be increased in children with ADHD using progressive delay in combination with other techniques. It is important to note that in this study, only examiners were involved in implementing the self-control training and parents were not involved (Binder et al., 2000).

Another study mentioned earlier looked at the effectiveness of progressive delay as a strategy to increase self-control in children with Autism. In addition to the progressive delay, participants were given the choice to engage in an activity during the delay. The study demonstrated that self-control could be increased by implemented a progressive delay in combination with an intervening activity (Dixon & Cummings, 2001). It is important to note that this study also involved only examiners in the implementation of the self-control training. In order to simplify the process of increasing self-control in children with Autism and related disabilities and to make the training more accessible to parents, progressive delays were not used in the current study.

Research Questions

The study will seek to answer the following research questions:

1. To what extent will parents learn to teach their child specific methods for delaying gratification?
2. To what extent will parents prefer to teach some methods over others?
3. To what extent will parents rate the training they receive as having high social validity?

The research hypothesis is that parents will be able to learn to teach their child the specific strategies at a high quality, that parents will show a preference to a positive distraction as a strategy over the other methods, and that parents will rate the training as having high social validity given that they lack resources in Albania and will likely respond well to receiving support.

CHAPTER 3

Method

Participants

Seven mothers that have a child with autism or a related disability, such as a developmental disability, participated in the study. Prior to the study, IRB approval was obtained from Brigham Young University, and at the beginning of the study participants signed a consent form that had been translated into Albanian. Participants were recruited through our partner at a university in Albania, in conjunction with a service center for children with disabilities where the present study was conducted. Table 1 shows the participant demographics. In Albania, psychiatrists are the only professionals who can provide a diagnosis of a developmental disability and in order for parents to enroll their child at the service center, parents must provide a diagnosis of a developmental disability. Therefore, all mothers who participated in the study have a child with a developmental disability as diagnosed by a psychiatrist. All seven of the participants were born in Albania and all seven participants currently reside in Vlorë. They range in age from 29.6 years to 39.5 years. Participant level of education ranged from vocational training to PhD. Their children with autism or a related disability range in age from 4.5 years to 13.4 years. Every child was born in Vlorë, Albania. P06 completed the knowledge test and the pre-simulation but did not complete the study. Participant demographics are shown in Table 1.

Table 1

Participant Demographics

Participant Number	Parent's Age	Child's Age	Parent Hometown	Child's Birthplace	Parent Level of Education
P01	29.6	4.5	Tepelenë	Vlorë	High School
P02	33.7	10.3	Vlorë	Vlorë	High School
P03	39.5	13.4	Vlorë	Vlorë	Masters
P04	39.1	6.6	Fier	Vlorë	Vocational
P05	35.5	6.1	Kruje	Vlorë	High School
P06	31.6	7.7	Vlorë	Vlorë	Masters
P07	36.5	9	Tirana	Vlorë	PhD

Note: All parents' hometown and children's birthplace towns are located in Albania.

Setting

Country. The study was set in Albania, a developing Eastern European country on the Adriatic Sea. Albania shares a border with Greece, Kosovo, Macedonia, and Montenegro. Albania has a poverty level of approximately 34% according to The World Bank (The World Bank in Albania, 2017). There are very few services for families with a child with Autism and the participants in the current study were informed that the study would be addressing improving self-control in children with Autism and related disabilities. In Albania, families who have a child with disabilities are more likely to live in poverty in addition to elevated stress, anxiety, and depression (Emerson, 2007; Fujiura et al., 2005; Merkaj et al., 2013).

Training rooms. The training rooms were located at the Community Service Center for Children with Disabilities in Vlorë, Albania. The center is associated with Save the Children. The training sessions were conducted in a room that was three square meters. The session consisted of the parent, a trainer, and a coder who all spoke fluent Albanian.

Materials. All training materials and documents were translated from English to Albanian by a native Albanian speaker who speaks English as a second language. Those translations were then reviewed by a native English speaker who speaks Albanian as a second

language to ensure the content maintained the same meaning when translated. Forms that were completed by participants during the study were translated into English by a native Albanian speaker who speaks English as a second language and checked by a native English speaker who speaks Albanian if there were any questions about the meaning of the translations.

During the study, cameras were placed in the training rooms at a 45-degree angle during simulations and parent trainings. The purpose was to capture the participant's quality of implementation of the different strategies to measure training fidelity.

Intervention Procedures

Baseline. Parents were given a knowledge test to assess their current knowledge and implementation of various gratification delay strategies. We determined which strategies the parents were currently aware of and use and to what degree the parents use them (seldom, sometimes, often). We worked with a local team of translators and students who speak Albanian and assisted us in interpreting and tallying the knowledge test. Parents also participated in pre-simulations where occurrences of different strategies were tallied by an observing researcher who was fluent in Albanian.

Parent training. Parents received training on the importance of being able to delay gratification and the different strategies they were taught in order to help their child learn to delay gratification and exhibit self-control. They were given a self-control strategy script for each of the strategies that were taught: positive distraction, self-directed speech, and avoidance, and completed a training with a researcher to practice using the script. During the training session, parent efficacy in using the self-control strategy script was recorded to determine if the parent was able to use the script to teach the skill. The researcher was also be scored to assess their fidelity in training each skill.

Post-test. A post-test in the form of a simulation with a researcher was completed by each participant while another researcher observed. The observing researcher kept a tally of how often the participant used each of the new skills that were taught during the intervention to determine if the participant implemented the strategies they learned, as well as determine which strategies they preferred to use.

Measures

Knowledge test. A knowledge test was given to the participants before the intervention to evaluate which, if any, strategies they are currently using to help their child delay gratification. The knowledge test asked participants six open-ended questions that give a scenario in which their child might become frustrated when they required to wait for something they want. The parent was asked what they do when faced with that type of situation. The responses were coded into parenting strategies typically used by parents to help children wait. We determined whether or not a certain strategy occurred, as well as the frequency of how often each participant mentioned using the strategy.

Demographics questionnaire. Participants completed a demographics questionnaire that asked questions about their background, such as their date of birth, where they are from, and their highest level of education. Participants were also asked about their child's greatest strength as well as their biggest weakness. The questionnaires were completed on-site where the intervention was conducted, so participants had the opportunity to ask researchers for any clarification about the questions if necessary.

Simulations. In order to access an increase in skill-level, parents participated in pre- and post-simulations. A researcher played the role of a child and requested a cookie every 30 seconds for two and a half minutes. A tally was kept by a second researcher that was in the room

observing the simulation. The tally indicated which of the three skills (positive distraction, self-directed speech, and avoidance), if any, the parent used during the simulation. An option was given for "other" if parents did anything other than the three target skills. Researchers were given definitions of each of the skills they were looking for during the simulation. The pre-simulation was conducted before the parents received the intervention training, while the post-simulation was conducted shortly after the training.

Task analysis form. To ensure that each participant received the same instruction during intervention training, researchers completed a checklist during the training. One researcher followed a training script with the participant to teach and practice the strategy, while a second researcher in the room filled out the task analysis form. The researcher who filled out the form checked + or - for whether or not the steps for implementing each self-control strategy were presented with fidelity, as well as the quality to which the step was presented, ranging from low quality to high quality. The researcher also checked + or - for whether or not the participant acquired the explicit steps for implementing the strategy, as well as the quality to which they demonstrated each step, ranging from low to high quality.

Social validity questionnaire. Upon completing the intervention, participants completed a 10-question social validity questionnaire. The questionnaire was a Likert scale that assessed whether or not parents believed they would use the skills they learned with their child. It also asked participants how likely they would be to teach the skills they learned to other parents in the future.

Interobserver agreement. Interobserver agreement (IOA) was calculated on 33% of the training videos. The *Task Analysis* was coded by coding each item as either an agreement or disagreement resulting in an overall score of 100% agreement for task completion and 93.5% for

the quality of task completion. The *Knowledge Test* was calculated on 33.3% of all items across all participants by a second rater. Using total count method, the smallest of the two frequency counts was divided by the largest resulting in 92.2% agreement. IOA was completed on a total of 35.4% pre- and post- Simulation items by using the total count method where the smallest of the frequency counts was divided by the largest of the frequency counts resulting in a percentage of agreement for each code. On average the two observers agreed on 82.5% of each frequency.

Design and analysis. The study used a quasi-experimental within-group design. Observational data was analyzed using within subject visual analysis to detect changes in levels and cross-participant trends. Effect sizes were calculated using Cohen's *d* (Cohen, 1988). Participant questionnaires were analyzed using a coding rubric to evaluate the extent to which parents mastered the information presented in the session.

CHAPTER 4

Results

The first research question of this study is, "To what extent will parents learn to teach their child specific methods for delaying gratification?" The second question of the study is, "To what extent will parents prefer to teach some methods over others?" In order to measure participant acquisition and preference of teaching each of the skills, each parent participated in pre- and post-tests in the form of a simulation. The simulations allowed researchers to observe which skills parents were using before the self-control training and which they showed a preference for after completing the training. Fidelity checklists were followed during the self-control training to ensure that participants demonstrated competency in teaching each skill. The target skills are identified as "positive distraction," "self-directed speech," and "avoidance." Other methods used by participants to delay gratification have been noted.

Knowledge Test

On a knowledge test completed at the beginning of the study, 100% of parents indicated on at least one scenario that they use distraction as a method in order to help their child delay gratification. On the other hand, 0% of parents indicated using self-directed speech on any of the scenarios as a strategy to delay gratification and 29% reported using avoidance as a strategy. Seven other strategies were identified on the knowledge test. Forty-three percent of parents reported using calming down techniques, such as breathing techniques, to help their child delay gratification. Forty-three percent of parents also reported allowing their child to earn the thing they wanted by performing a non-preferred activity before gaining access to the item. Punishment, primarily in the form of negative punishment (e.g., removing access to toys) was used by 29% of parents in an effort to decrease tantrums caused by the requirement to delay

gratification. Seventy-one percent of parents remind their child of why they have to wait for something. Similar to reminding their child of why they have to wait, 29% of parents reported that they firmly reiterate that the child must wait. Twenty-nine percent of parents also reported on at least one scenario of giving in to their child and allowing them to have an item without having to wait for it. Fifty-seven percent of parents reported ignoring their child's tantrum-like behavior when they are upset about having to wait for something. The knowledge test demonstrated that all parents in the study use distraction as a strategy to help their child wait, but only 29% practice avoidance and none of the parents use self-directed speech with their child. These results are shown in Table 2.

Table 2

References to Self-Control Strategies

Participant	Positive Distraction	Self-Directed Speech	Avoidance
01	9	0	0
P02	0	2	0
P03	5	0	0
P04	2	0	0
P05	3	0	0
P06	8	1	0
P07	5	0	0
Mean	4.57	0.43	0

Simulations

Pre- and post-simulations were conducted to evaluate what strategies participants used to help their child wait for something they wanted. During the simulations, a researcher played the role of a child and requested a cookie every 30 seconds for two and a half minutes. Another researcher observed the simulation and tallied which strategies the parent demonstrated. The results from the simulations also show which strategies parents demonstrate a preference for.

Positive distraction. Positive distraction was defined as helping the child (or researcher) focus on something else while waiting. Researchers observing the simulations were given the following examples of positive distraction: “the parent tells the child a story, sings a song with the child, talks with the child about something other than the item.” On the pre-simulation, P01 used positive distraction four times, which accounted for 57% of her efforts to deter the researcher from eating the cookie. During the post-simulation, P01 again used positive distraction four times, which accounted for 57% of her efforts to deter the researcher from eating the cookie. P02 used positive distraction zero times out of her five attempts to deter the researcher from eating the cookie during the pre-simulation. On the post-simulation, P02 used positive distraction eight times, which accounted for 89% of the strategies she used to deter the researcher from eating the cookie. Similar to P02, P03 used positive distraction zero times out of five strategies used during the pre-simulation. That number increased to four instances of using positive distraction, accounting for 67% of strategies used during post-simulation. P04 used positive distraction as a strategy two instances out of six, accounting for 33% of strategies used during the pre-simulation. During the post-simulation, that number increased to five out of seven, accounting for 71% of strategies used. P05 used positive distraction as a strategy zero times out of two attempts to deter the researcher from eating the cookie during the pre-simulation. Use of positive distraction increased to five instances out of eight, accounting for 63% of strategies used. During the pre-simulation, P06 used positive distraction as a strategy in four out of five attempts to deter the researcher from eating the cooking, accounting for 80% of strategies used. P06 did not complete the study so no post-simulation data is available. P07 used positive distraction as a strategy in one out of six attempts, which accounted for 17% of strategies used during pre-simulation. That number increased to five out of eight, or 63% of strategies used

during post-simulation. As a whole, participants used positive distraction as a strategy to deter the researcher from eating the cookie 11 times out of 36 strategies used, accounting for 31% of strategies used during the pre-simulation. During post-simulation, participants used positive distraction as a strategy 31 times out of 45 strategies used, accounting for 69% of strategies used. These results are shown in Table 3.

Table 3

Occurrences of Positive Distraction from Pretest to Posttest

Participant	Pre	Post
P01	4	4
P02	0	8
P03	0	4
P04	2	5
P05	0	5
P06	4	-
P07	1	5
Mean	1.57	5.17

Self-directed speech. Self-directed speech was defined as helping the child (or researcher) verbalize his/her intention to wait for something. Researchers observing the simulations were given the following examples of positive distraction: "the parent prompts the child by saying something like, 'Do you want to wait?' Say you want to wait.' or 'Are you going to wait? Tell me you're going to wait.'" On the pre-simulation, P01 used self-directed speech three times, which accounted for 43% of her efforts to deter the researcher from eating the cookie. During the post-simulation, the rate declined and P01 used self-directed speech one time, which accounted for 14% of her efforts to deter the researcher from eating the cookie. P02 used self-directed speech two times out of her five attempts to deter the researcher from eating the cookie during the pre-simulation. On the post-simulation, P02 used self-directed speech zero times, which accounted for 0% of the strategies she used to deter the researcher from eating the

cookie. P03 used self-directed speech four times out of five strategies used during the pre-simulation, which accounted for 80% of strategies used. That number decreased to one instance of using self-directed speech, accounting for 17% of strategies used during post-simulation. P04 used self-directed speech as a strategy three times out of six strategies used, accounting for 50% of strategies used during the pre-simulation. During the post-simulation, that number decreased to one out of seven, accounting for 14% of strategies used. P05 used self-directed speech as a strategy zero times out of two attempts to deter the researcher from eating the cookie during the pre-simulation. That number increased to one instance out of eight, accounting for 13% of strategies used during post-simulation. During the pre-simulation, P06 used self-directed speech as a strategy in one out of five attempts to deter the researcher from eating the cooking, accounting for 20% of strategies used. P06 did not complete the study so no post-simulation data is available. P07 used self-directed speech as a strategy in five out of six attempts, which accounted for 83% of strategies used during pre-simulation. That number decreased to two out of eight, or 25% of strategies used during post-simulation. As a whole, participants used self-directed speech as a strategy to deter the researcher from eating the cookie 18 times out of 36 strategies used, accounting for 50% of strategies used during the pre-simulation. During post-simulation, participants used self-directed speech as a strategy 6 times out of 45 strategies used, accounting for 13% of strategies used, indicating of shift of preference away from self-directed speech as a strategy to help delay gratification. These results are shown in Table 4.

Table 4

Occurrences of Self-Directed Speech from Pretest to Posttest

Participant	Pre	Post
P01	3	1
P02	2	0
P03	4	1
P04	3	1
P05	0	1
P06	1	-
P07	5	2
Mean	2.57	1

Avoidance. Avoidance was defined as helping your child (or researcher) avoid the item he/she is waiting for by covering it up or putting it out of view. Researchers observing the simulations were given the following examples of avoidance: "the parent covers up the item, the parent prompts the child to not look at the item, the parent tries to hide the item in some way, the parent prompts the child to hide the item in some way." On the pre-simulation, P01 used avoidance zero times, which accounted for 0% of her efforts to deter the researcher from eating the cookie. During the post-simulation, the rate increased and P01 used avoidance two times out of seven, which accounted for 29% of her efforts to deter the researcher from eating the cookie. P02 used avoidance three times out of her five attempts, or 60% of the attempts, to deter the researcher from eating the cookie during the pre-simulation. On the post-simulation, P02 used avoidance one time out of nine strategies used, which accounted for 11% of the strategies she used to deter the researcher from eating the cookie. P03 used avoidance zero times out of five strategies used during the pre-simulation, which accounted for 0% of strategies used. That number increased to one instance of using avoidance, accounting for 17% of strategies used during post-simulation. P04 used avoidance as a strategy zero times out of six strategies used,

accounting for 0% of strategies used during the pre-simulation. That number remained the same during the post-simulation where zero out of seven, or 0% of strategies used were avoidance.

P05 used avoidance as a strategy zero times out of two attempts to deter the researcher from eating the cookie during the pre-simulation. That number increased to two instances out of eight, accounting for 25% of strategies used during post-simulation. During the pre-simulation, P06 used avoidance as a strategy in zero out of five attempts to deter the researcher from eating the cooking, accounting for 0% of strategies used. P06 did not complete the study so no post-simulation data is available. P07 used avoidance as a strategy in zero out of six attempts, which accounted for 0% of strategies used during pre-simulation. That number increased slightly to one out of eight, or 13% of strategies used during post-simulation. As a whole, participants used avoidance as a strategy to deter the researcher from eating the cookie three times out of 36 strategies used, accounting for 8% of strategies used during the pre-simulation. During post-simulation, participants used avoidance as a strategy seven times out of 45 strategies used, accounting for 16% of strategies used. These results are shown in Table 5.

Table 5

Occurrences of Avoidance from Pretest to Posttest

Participant	Pre	Post
P01	0	2
P02	3	1
P03	0	1
P04	0	0
P05	0	2
P06	0	-
P07	0	1
Mean	0.43	1.67

P06 baseline data was removed from this analysis because she left the training before the post- simulation was conducted. Cohen's *d* was calculated to determine the overall effect size

from pre- to post-testing across the six remaining participants. The effect size for changes from pre- to post- was large for *Positive Distraction* (2.50) and the *Total* (1.73), and medium for *Avoidance* (0.657). Effect sizes showed decreases for Self-Directed Speech (large; -1.47) and Other (medium; (0.61). It is possible that Self-Directed Speech decreased as some of the participants had limitations in verbal communication and the parents determined that using any communication methods would be less effective. Decreases in the Other category indicates that parents allocated their responses to the skills upon which they were trained. Allocating responses to more effective, research-based skills is an overall positive, and large increases in total skill use indicate a positive observed effect for the study.

Training Fidelity

One purpose of the study was to examine to what extent parents would be able to acquire the skills to teach their child strategies to delay gratification. In order to measure this, task analysis forms were completed during the parent training phase of the study. During parent training, an observer rated researchers with a + or – to indicate whether or not the steps for implementing each self-control strategy were presented with fidelity. Parents were then rated on a scale from 1 to 5, with 1 indicating low quality and 5 indicating high quality, which reflected their ability to reproduce the steps they had been taught. Fidelity and Acquisition were 100% across all three strategies for participants P01, P04, P05, and P07, indicating that researchers presented the training with 100% fidelity and participants were able to model each item on the task analysis form. Training fidelity was 89% for P02 and acquisition was 100%. Training fidelity for P03 was 100% and acquisition was 92%. Quality of acquisition ranged from 4.58 to 5

on a scale of 1 to 5, indicating a high quality of acquisition of teaching the strategies. These results are shown in Table 6.

Table 6

Training Fidelity Task Analysis

	P01	P02	P03	P04	P05	P07
Positive Distraction Fidelity	5.0	4.5	5.0	5.0	4.5	5.0
Positive Distraction Acquisition	5.0	5.0	4.5	5.0	5.0	4.5
Self-Directed Speech Fidelity	5.0	5.0	5.0	5.0	5.0	5.0
Self-Directed Speech Acquisition	4.8	5.0	4.0	5.0	5.0	5.0
Avoidance Fidelity	5.0	3.3	5.0	5.0	5.0	5.0
Avoidance Acquisition	4.5	5.0	4.0	5.0	5.0	5.0

Social Validity

The third and final question of this study is, “To what extent will parents rate the training they receive as having high social validity?” Participants completed an anonymous 10-question social validity questionnaire immediately following the study in order to answer this question. The purpose of the social validity questionnaire was to evaluate to what degree participants viewed the strategies they were taught as being effective and to assess to what degree participants would be willing to teach other parents the skills they were taught and if they would be willing to have other parents teach them skills to help their child’s behavior. Participants indicated whether they disagreed, somewhat disagreed, were neutral, somewhat agreed, or agreed to statements on the questionnaire. Six participants completed the questionnaire.

Five out of six participants (83%) agreed that, “it is important to teach my child strategies to help them wait before receiving something.” One participant (17%) indicated that they somewhat agreed with that statement. Four participants (67%) indicated that they agree with the statement that, “distraction is a good strategy to help my child wait for something.” One participant (17%) indicated that they somewhat agree with that statement while one participant (17%) indicated that they disagree with the statement. All participants (100%) indicated that they agree that, “verbalizing the intention to wait is a good strategy to help my child wait for something.” Participants were divided on the statement that, “placing an item out of sight is a good strategy to help my child wait to receive that item.” Three out of six participants (50%) indicated that they agree with that statement, with one (17%) indicating that they somewhat agree, one (17%) indicating that they were neutral, and one (17%) indicating that they somewhat disagree with the statement. These results indicate that participants demonstrate the highest rate of agreement that self-directed speech is a good strategy to help their child wait.

Three out of six participants (50%) agree that they trust the person who taught them the skills, and three out of six participants (50%) somewhat agreed with that statement. Four out of six participants (67%) of participants indicated that they would be willing to teach the skills to other people in their homes. One participant (17%) somewhat agreed with that statement while one participant (17%) disagreed with the statement. Half of participants agreed that they would allow someone to come to their house to show them how to help their child’s behaviors. One participant (17%) somewhat agreed and two participants (33%) disagreed that they would allow someone to come to their home to teach them skills to help their child’s behaviors. Three out of six participants (50%) agreed that having a fellow parent teach them skills aligns with their values. Two participants (33%) somewhat agreed with that statement, while one participant

(17%) somewhat disagreed with the statement. In response to the statement, “allowing a fellow parent into my home fits my definition of hospitality,” two out of six participants (33%) agreed with the statement, two out of six (33%) somewhat agreed, and two out of six (33%) were neutral. All participants (100%) agreed that they will use the skills they learned in the future. Overall, parents seem to view self-directed speech as the strategy that will help their child the most when waiting for something and positive distraction as the least effective strategy out of the three, which contradicts simulation scores where positive distraction was used four times more frequently than the other strategies during the post-simulation and self-directed speech was used the least often. In order to calculate an average level of agreement, the level of agreement was assigned a numerical value with 1 being disagree, 2 being somewhat disagree, 3 being neutral, 4 being somewhat agree, and 5 being agree. These results are shown in Table 7.

Table 7

Responses to Social Validity Questionnaire

Questions	
1. It is important to teach my child strategies to help them wait before receiving something	4.8
2. Distraction is a good strategy to help my child wait for something	4.2
3. Verbalizing the intention to wait is a good strategy to help my child wait for something	5.0
4. Placing an item out of sight is a good strategy to help my child wait to receive that item	4.0
5. I trust the person who taught me the skills	4.5
6. I would be willing to teach the skills to other people in their homes	4.2
7. I would allow somebody to come to my house to show me how to help my child’s behaviors	3.5
8. Having a fellow parent teach me skills aligns with my values	4.2
9. Allowing a fellow parent into my home fits my definition of hospitality	4.0
10. I will use these skills in the future	5.0

CHAPTER 5

Discussion

The purpose of this study was to determine if parents of children with Autism would be able to acquire the ability to teach their child with Autism strategies to delay gratification. The study also aimed to determine if parents demonstrated a preference for a certain strategy. It was hypothesized that parents would able to acquire the skills to teach the strategies at a medium high to high quality level and that parents would show an equal preference to the three strategies taught. This study builds on Walter Mischel's research of gratification delay in that it aims to demonstrate that skills that he observed in children that were able to successfully delay gratification can be taught to parents to teach to their children. It also builds on research that has indicated that children with Autism and related disabilities demonstrate a more difficult time delaying gratification than typical peers (Binder et al., 2000; Faja & Dawson, 2015). Progressive delays in combination with strategies like verbal mediation and providing an intervening activity have been shown to increase self-control in children with Autism or ADHD. These strategies were implemented and taught by examiners and in order to create a training that was accessible to parents, this study removed the component of progressive delay and focused on strategies that would be simpler for parents to implement and teach their children (Binder et al., 2000). The findings of previous research, that self-regulation is related to academic competence, has been shown to also apply to Albanian children (Shoda et al., 1990; von Suchodoletz et al., 2015). This study will continue to extend research of self-control to children in Albania but will include parents of children with special needs.

The first question of the study was, "To what extent will parents learn to teach their child specific methods for delaying gratification?" The results show that participants were able to

demonstrate the ability to teach each strategy at a high quality, with acquisition scores ranging from 4.58 to 5 on a scale from 1 to 5 on task analysis rating forms. In regard to the second question of the study, which asks, “to what extent will parents prefer to teach some methods over others?” participants demonstrated a shift in preference of strategy. During pre-test simulations, participants used strategies similar to self-directed speech ($M = 2.57$) more frequently than strategies similar to positive distraction ($M = 1.57$) or avoidance ($M = 0.43$). On post-test simulations, participant preference shifted to positive distraction ($M = 5.17$), compared to self-directed speech ($M = 1.00$) and avoidance ($M = 1.17$). The third question of the study was, “to what extent will parents rate the training they receive as having high social validity?” Five out of six participants agreed to the statement that it is important to teach their child strategies to help them out and one out of six somewhat agreed to that statement. Six out of six participants agreed that self-directed speech is a good strategy to help their child wait, but they were divided on their opinion of positive distraction and avoidance. Six out of six agreed and one out of six somewhat agreed that positive distraction is a good strategy and one participant disagreed with that statement. Three out of six participants agreed that avoidance is a good strategy and one participant somewhat agreed, one was neutral, and one somewhat disagreed.

Limitations

One limitation of this study is the small sample size ($N = 7$) and one participant did not complete the study. Caution should be used before generalizing the results of this study to other groups of people. However, this study provides preparatory information for more research to be conducted with parents of children with autism related disabilities in developing countries. Another limitation is the short length of data collection, which occurred during a one-day session. Because the study was conducted internationally, there were time constraints that limited

the ability to measure participant retention of the strategies that were taught. The time restraint also limited the ability to observe the participants teaching and practicing the strategies with their child. Future studies should be conducted in a more natural environment where participants are able to practice teaching the strategies to their child.

Implications for Practice

Training scripts similar to the ones used in this study would be useful in a variety of settings. This study has shown that the scripts facilitate training parents to teach strategies that are related to an ability to delay gratification. Future research should consider involving the children of the parents in the study so that parents are able to practice the strategies they are taught with their child. Future research should also consider observing participants in the home to determine if they continue to use the strategies with their child after the training has been completed. Future research may consider measuring the child's ability to delay gratification before and after they are taught the strategies by their parent.

Conclusion

This study added to research that has demonstrated that children with autism related disorders have more difficulty delaying gratification than typical peers in that it shows that parents of children with autism related disorders can be trained to teach their child strategies that have been observed to help children delay gratification. Participants in the study acquired the skills to train the strategies at a medium high to high quality level and showed preference to positive distraction, which had the highest occurrence during post-test simulations. Participants also rated the training as having high social validity. These finding suggest that parents can be trained to teach strategies to their child that would help the child delay gratification.

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APPENDIX A

Training Scripts

Training Script: Positive Distraction

Materials

Treat

Definition and Rationale

When your child is required to wait before receiving something he/she wants, one strategy to help them wait is called "positive distraction." This means you are helping your child focusing on something else while they are waiting. Positive distraction has been shown to help children successfully wait for something they want.

Step 1 – Identify something that will distract the child	The first step is to determine what you are going to do to distract your child. You could tell your child a story, sing a song with your child, of offer your child an item other than the one they are waiting for.
Step 2 – Steps for Positive Distraction	**1.** Gain the child's attention or eye contact by saying his/her name. **2.** Smile and have a pleasant look on your face. **3.** Using an enthusiastic tone of voice, tell your child a story (*start with something like,* "*I want to tell you a really cool story!")*, sing a well-known song with them (*you could say something like "How does your favorite song go? Sing it with me!")*, or offer your child a distracting item, such as a toy. **4.** Engage in the distracting behavior with your child until he/she is able to distract himself/herself, has waited long enough to receive the item he/she wanted, or calms down and moves onto something else.
Step 3 – Practice with researcher as the parent	Researcher will place treat on the table. Request the treat, but I will tell you that you have to wait until later to have it, which will make you upset.

	When you get upset, I will: **1.** Get your attention or eye contact by saying your name. **2.** Smile and have a pleasant look on my face. **3.** Using an enthusiastic tone of voice, tell you a story, sing a well-known song with you, or offer you a distracting item, such as a toy. **4.** I will engage in the distracting behavior with you until you calm down.
Step 4 – Practice with researcher as the child	Place treat on the table. I will request the treat, but you will tell me that I have to wait until later to have it, which will make me upset. When I get upset, will: **1.** Get my attention or eye contact by saying my name. **2.** Smile and have a pleasant look on your face. **3.** Using an enthusiastic tone of voice, tell me a story, sing a well-known song with me, or offer me a distracting item, such as a toy. **4.** You will engage in the distracting behavior with me until I calm down.

***Make sure the parents do all of the steps. If they miss a step:*

- *stop them immediately*
- *tell them the step they missed*
- *practice the step they missed with them*
- *start the steps over*

Parents have completed training when they can:

1. Gain the child's attention.

2. Smile and have a pleasant look on their face.

3. Using an enthusiastic voice, engage with in telling a story, singing a song, or offering an item other than the item the child has to wait for.

4. Engage in the distracting behavior with the child until the child calms down, moves onto something else, or has waited long enough to receive the item the child has waited for.

More ideas for Positive Distraction:

- Read a book with your child or give your child a book to read.
- Talk to your child about a memory you share, e.g. talk about a vacation, a funny experience, or a game you enjoy playing together.
- Ask your child how his/her favorite song goes and sing it with him/her.
- Let your child play with his/her favorite toy.
- Ask your child to tell you about his/her favorite show.

Training Script: Self-Directed Speech

Materials

Treat

Definition and Rationale

When your child is required to wait before receiving something he/she wants, one strategy to help them wait is called "self-directed speech." This means you are helping your child verbalize his/her intention to wait for something. Self-directed speech has been shown to help children successfully wait for something they want.

Step 1 – Identify phrases you will use with your child	The first step is to identify a few phrases that you will use with your child to help him/her verbalize his/her intention to wait. Some examples of phrases are, "*I want to wait." "I'm going to wait."*
Step 2 – Steps for Self-Directed Speech	**1.** Gain the child's attention or eye contact by saying his/her name. **2.** Smile and have a pleasant look on your face. **3.** Using a pleasant tone of voice, say one of the self-directed speech phrases to your child *("I want to wait").* **4.** Remain calm and prompt your child to say the phrase with you. • Say to your child, "Say it with me, ok?" • Wait for your child to say "ok" or nod • Ask, "Ready?" • Say, "I want to wait" with your child. **5.** Prompt your child to say the phrase on his/her own. Encourage your child to repeat the phrase if he/she continues to be upset about having to wait. **If your child has minimal verbal skills, have your child hand you a card that says "I want to wait" in place of saying "I want to wait" with you.*
Step 3 – Practice with the researcher as the parent	Researcher will place treat on the table.

	You will request the treat, but you will be told that you have to wait until later to have it, which will make you upset. When you get upset, I will: **1.** Get your attention or eye contact by saying your name. **2.** Smile and have a pleasant look on my face. **3.** Using a pleasant tone of voice, say one of the self-directed speech phrases to you *("I want to wait").* **4.** Remain calm and prompt you to say the phrase with me. **5.** Prompt you to say the phrase on your own. Encourage you to repeat the phrase if you continue to be upset about having to wait.
Step 4 – Practice with the researcher as the child	Place treat on the table. I will request the treat, but you will tell me that I have to wait until later to have it, which will make me upset. When I get upset, you will: **1.** Get my attention or eye contact by saying my name. **2.** Smile and have a pleasant look on your face. **3.** Using a pleasant tone of voice, say one of the self-directed speech phrases to me *("I want to wait").* **4.** Remain calm and prompt me to say the phrase with you. **5.** Prompt me to say the phrase on my own. Encourage me to repeat the phrase if you continue to be upset about having to wait.

*****Make sure the parents do all of the steps. If they miss a step:*

- *stop them immediately*
- *tell them the step they missed*

- *practice the step they missed with them*
- *start the steps over*

Parents have completed training when they can:

1. Gain the child's attention.
2. Remain calm.
3. Say one of the self-directed speech phrases to the child.
4. Ask the child to say the self-directed speech phrase with them.
5. Prompt the child to say the self-directed speech phrase on their own.

More ideas for Self-Directed Speech phrases:

- "I want to wait."
- "I will wait."
- "I am happy when I wait."
- "I like to wait."
- "I am going to wait."

Training Script: Avoidance

Materials

Treat

Definition and Rationale

When your child is required to wait before receiving something he/she wants, one strategy to help them wait is called "avoidance." This means you are helping your child avoid the item he/she is waiting for by covering it up or putting it out of view. Avoidance has been shown to help children successfully wait for something they want.

Step 1 – Identify how you will avoid the item	The first step is to determine what you are going to do to avoid the item. You could have your child put the item out of sight, in another room, or cover it up.
Step 2 – Steps for Avoidance	**1.** Gain the child's attention or eye contact by saying his/her name. **2.** Smile and have a pleasant look on your face. **3.** Using a pleasant voice, calmly explain to your child that he/she will get the item later. Then ask your child to hide the item so it is out of his/her sight, or put it in another room, or cover it up. Remind your child that he/she can still have the item later. **4.** Have the child put the item out of sight, or in another room, or cover it up. **5.** Praise the child by saying, "Thank you for waiting, you can have it later."
Step 3 – Practice with the researcher as the parent	Researcher will place treat on the table. Request the treat, but I will tell you that you have to wait until later to have it, which will make you upset. When you get upset, I will: **1.** Get your attention or eye contact by saying your name.

	2. Smile and have a pleasant look on my face. **3.** Using a pleasant voice, calmly explain to you that you will get the item later. Then ask you child to hide the item so it is out of your sight, or put it in another room, or cover it up. Remind you child that you can still have the item later. **4.** Have you put the item out of sight, or in another room, or cover it up. **5.** Praise you by saying, "Thank you for waiting, you can have it later."
Step 4 – Practice with the researcher as the child	Place the treat on the table. I will request the treat, but you will tell me that I have to wait until later to have it, which will make me upset. When I get upset, you will: **1.** Get my attention or eye contact by saying my name. **2.** Smile and have a pleasant look on your face. **3.** Using a pleasant voice, calmly explain to me that I will get the item later. Then ask me to hide the item so it is out of my sight, or put it in another room, or cover it up. Remind me that I can still have the item later. **4.** Have me put the item out of sight, or in another room, or cover it up. **5.** Praise me by saying, "Thank you for waiting, you can have it later."

**Make sure the parents do all of the steps. If they miss a step:*

- *stop them immediately*
- *tell them the step they missed*
- *practice the step they missed with them*

- *start the steps over*

Parents have completed training when they can:

1. Gain the child's attention.
2. Using a calm pleasant voice, explain to the child that they can have the item later.
3. Ask the child to put the item out of sight, or in another room, or cover it up.
4. When the child complies, praise the child for waiting.

More ideas for Avoidance:

- Let your child place the item on a high shelf so it is out of reach.
- Let your child cover up the item with a blanket or towel.
- Let your child hide the item under a bed or other piece of furniture.
- Let your child hide the item in a closet.
- Let your child put the item in a drawer.

APPENDIX B

Instruments

Consent to be a Research Subject

Introduction
This research study is being conducted by Blake Hansen, an assistant professor at Brigham Young University, Provo, Utah, USA, to determine effective methods of teaching parents of children with disabilities how to manage simple challenging behaviors and teach skills. You were invited to participate because you have a child with a disability.

Procedures
If you agree to participate in this research study, the following will occur:

- You will complete a questionnaire about you and your family
- You will learn three skills from another parent or clinician
- You may teach three skills to other parents
- You will complete an additional questionnaire about the study
- The total time commitment will be two hours

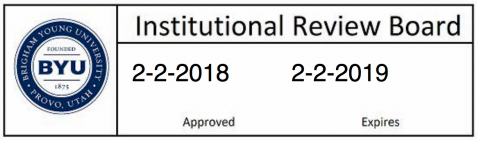
Risks/Discomforts
There is minor risk of loss of privacy through the research process. The researcher will mitigate this risk by assigning you a random number in place of your name on all stored documents. We will share video recordings with others only if you agree to allow the researcher to do so.

Benefits
There will be no direct benefits to you. It is hoped, however, that through your participation researchers may learn how to help parents of children with disabilities.

Confidentiality
The research data will be kept on a password protected computer and only the researcher and staff will have access to the data. At the conclusion of the study, all identifying information will be removed and the data will be kept in the researcher's locked office.

Compensation
Participants will receive $5 USD.

Participation
Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your standing with Brigham Young University.

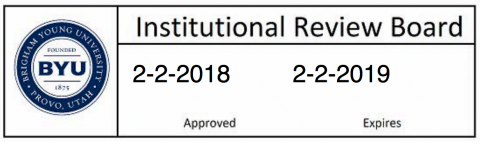


Questions about the Research
If you have questions regarding this study, you may contact Blake Hansen at blake_hansen@byu.edu; 801-422-4691 for further information.

Questions about your Rights as Research Participants
If you have questions regarding your rights as a research participant contact IRB Administrator at 801-422-1461; A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu.

Statement of Consent
I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Name (Printed): _____ Signature: _____ Date: _____



Knowledge Test

Parent Name(s) _____

Child Name _____

Child Age _____

Date _____

1. In as much detail as possible, please describe what you should do when your child wants food that he/she cannot have at that time. For examples, in situations where the child has already eaten too much.

_____

_____

_____

_____

_____

_____

_____

2. Think of a time recently when your child got upset because he/she could not have something right away. Please describe in as much detail what you did in that situation.

_____

_____

_____

_____

_____

_____

_____

3. Imagine your child wants candy first thing in the morning. When you tell your child that he/she cannot have it, he/she starts to whine and cry. What do you in that situation?

4. List as many things as you can think of that you do when your child has a difficult time waiting for something (whether it be food, a toy, etc.)

5. In your opinion, what is the best thing to do when your child is upset because he/she wants something right away.

6. Please explain anything else you do when your child has to wait for something.

Knowledge Test Rubric

Parent Behavior	**Occurrence** *(Yes or No)*	**Frequency***
Distracting the child from the task *Positive Distraction		
Reminding the child about the rules		
Giving the child a choice about his/her behaviors		
Praising the child for waiting		
Physically enforcing the rules (e.g., removing the item from the child's reach) *Avoidance		
Giving verbal direction to the child to comply with the rules		
Having the child verbalize intention to wait *Self-directed speech		
Focusing on the target (e.g. "I wonder what's inside the box"		
Teaching the child strategies to wait		
Passive regard		

* 0 = never; 1-2 = seldom; 3-4 = sometimes; 5-6 = often

Self-Control Simulation

We are going to do a role play. I am going to play the part of a child. You are going to play the part of a parent. Respond to me the way you would to a child. Use the knowledge you have about working with kids with disabilities.

Here is a treat [Hand parent the treat]. *You have already told me, the child, that I have to wait until later before I can have it.*

[Tell the parent you want the treat now. Become upset and frustrated if the parent tells you that you have to wait until later to get it. Repeat every 30 seconds that you want the treat now. If the parent does anything to try and help you calm down or wait, wait 30 seconds after their behavior before you tell them again that you want the treat. The simulation will last for 5 minutes.]

Thank you for participating.

[Do not prompt person playing part of the parent to use any skills (positive distraction, self-directed speech, avoidance).]

Simulation Rubric

Pre-Test										
Skill	1	2	3	4	5	6	7	8	9	10
Positive Distraction										
Self-directed Speech										
Avoidance										

Instructions: Tally the frequency of the skill after each request. Skills used after the first request go in column 1, etc.

Post-Test										
Skill	1	2	3	4	5	6	7	8	9	10
Positive Distraction										
Self-Directed Speech										
Avoidance										

Instructions: Tally the frequency of the skill after each request. Skills used after the first request go in column 1, etc.

Examples of positive distraction: the parent tells the child a story, sings a song with the child, talks with the child about something other than the item
Examples of self-directed speech: the parent prompts the child by saying something like, "do you want to wait? Say you want to wait" or "Are you going to wait? Tell me you're going to wait"
Examples of avoidance: the parents cover up the item; the parent prompts the child to not look at the item; the parent tries to hide the item in some way; the parent prompts the child to hide the item in some way.

Social Validity Questionnaire

	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree
It is important to teach my child strategies to help them wait before receiving something					
Distraction is a good strategy to help my child wait for something					
Verbalizing the intention to wait is a good strategy to help my child wait for something					
Placing an item out of sight is a good strategy to help my child wait to receive that item					
I trust the person who taught me the skills					
I would be willing to teach the skills to other people in their homes					
I would allow somebody to come to my house to show me how to help my child's behaviors					
Having a fellow parent teach me skills aligns with my values					
Allowing a fellow parent into my home fits my definition of hospitality					
I will use these skills in the future					

Task Analysis Form

Training			
	Positive Distraction	**(+ / -)**	**Quality**
Fidelity	Trainee provided script		
	Trainer read rationale		
	Trainer read steps		
	Trainer modeled skill		
	Trainer provided guided practice		
	Trainer provided independent practice		
Acquisition	Gain the child's attention		
	Smile and have a pleasant look on their face.		
	Using an enthusiastic voice, engage with in telling a story, singing a song, or offering an item other than the item the child has to wait for.		
	Engage in the distracting behavior with the child until the child calms down, moves onto something else, or has waited long enough to receive the item the child has waited for.		
	Self-Directed Speech	**(+ / -)**	**Quality**
Fidelity	Trainee provided script		
	Trainer read rationale		
	Trainer read steps		
	Trainer modeled skill		
	Trainer provided guided practice		
	Trainer provided independent practice		
Acquisition	Gain the child's attention.		
	Remain calm.		
	Say one of the self-directed speech phrases to the child.		
	Ask the child to say the self-directed speech phrase with them.		
	Prompt the child to say the self-directed speech phrase on their own.		
	Avoidance	**(+ / -)**	**Quality**
Fidelity	Trainee provided script		
	Trainer read rationale		
	Trainer read steps		
	Trainer modeled skill		
	Trainer provided guided practice		
	Trainer provided independent practice		

Quality
1 low
2 med-low
3 medium
4 med-high
5 high

Acquisition	Gain the child's attention.		
	Using a calm pleasant voice, explain to the child that they can have the item later.		
	Ask the child to put the item out of sight, or in another room, or cover it up.		
	When the child complies, praise the child for waiting.		

Participant name and number: _____

Date: _____

Your name: _____

Notes