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Evaluating Video Modeling to Teach Caregivers to Conduct Paired-Stimulus Preference Assessments

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by

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ABSTRACT

Stimulus preference assessments have been shown to identify stimuli that are likely to function as reinforcers for individuals with disabilities. It is important to identify these stimuli to increase the effectiveness of interventions. The ability to conduct a stimulus preference assessment is a skill that parents and caregivers should have. Research on training preference assessments is limited to staff, teachers, and students. The following study evaluated the effectiveness of video modeling to teach caregivers to conduct paired stimulus preference assessments. The results showed that video modeling was effective and that the results maintained during a one week follow up.

CHAPTER ONE: INTRODUCTION

Researchers in applied behavior analysis have taken a special interest in increasing the accessibility of assessment and intervention procedures to nonprofessionals. When serving individuals with disabilities, it is in their best interest to involve everyone (within the individual's environment) in the assessment and treatment process in order to increase the likelihood of generalization and maintenance of skills. Specifically, evidence suggests that involving parents and caregivers in the treatment process can increase maintenance of acquired skills (Anderson, Avery, DiPietro, Edwards, & Christian, 1987; Christophersen, Arnold, Hill, & Quilitch, 1972), maintain problem behavior reduction (Kelley, Embry, & Baer, 1979; Sanders & Glynn, 1981), and enhance skill acquisition (Adubato, Adams, & Budd, 1981; Anderson et al., 1987; Muir & Milan, 1982). Given these advantages, it is important to investigate methods to make interventions accessible to parents, caregivers, and staff of individuals with disabilities.

The literature on parent and staff training is extensive. There have been many studies assessing treatment packages designed to teach parents and staff to reduce problem behavior (e.g. Anderson & McMillan, 2001; Christophersen et al., 1972; Krantz, Macduff, & McClannahan, 1993; Seiverling, Williams, Sturmey, & Hart, 2012), teach new skills (e.g. Ben Chaabane, Alber-Morgan, & DeBar, 2009; Crockett, Fleming, Doepke, & Stevens, 2007; Hsieh, Wilder, & Abellon, 2011;Muir & Milan, 1982; Rinald & Mirenda, 2012) and to conduct functional analyses (Kunnavatana, Bloom, Samaha, Lignugaris/Kraft et al., 2013; Lambert, Bloom, & Kunnavatana, 2013).

The success of these studies indicates the feasibility of training parents to conduct assessment and intervention procedures. However, practitioners agree that before implementing any interventions, it is important to identify stimuli that serve as potential reinforcers for an individual. Stimulus preference assessments have been shown to do that (Fisher et al., 1992). In fact, research also suggests that the stimuli identified through preference assessments actually do function as reinforcers when used as such (Green et al., 1988; Green, Reid, Canipe, & Gardner, 1991). It is important for parents and caregivers to acquire this skill set for a variety of reasons. First, children with intellectual disabilities often have limited interests, as the children age their interests have the potential to change. However due to their history of limited interests, parents could become blind to possibility of novel reinforcers. In addition, as behavior analytic services are faded and parents are expected to take on a larger role within treatment implementation, it is beneficial for parents to have the ability to reassess their children's preferences over time or with novel stimuli. Studies have investigated ways to teach a variety of nonprofessionals to conduct preference assessments, however, there is no research involving parents or caregivers (e.g., Graff & Karsten, 2012; Lavie & Sturmey, 2002; Roscoe & Fisher, 2008; Weldy, Rapp, & Capocasa, 2014).

Lavie and Sturmey (2002) were the first to evaluate a method of teaching individuals to conduct preference assessments. They used brief instructions, a video model, and rehearsal with feedback to teach three assistant teachers to conduct a paired stimulus (PS) preference assessment. They found that this method was effective, and all three participants scored 80% or better immediately following training. This study set the stage by demonstrating that nonprofessionals could be trained, and that training could be brief (80 min). Roscoe, Fisher, Glover, and Volkert (2006), evaluated the extent to which performance feedback or

reinforcement (contingent money) affected the acquisition of skills. The researchers taught trainees to conduct PS and multiple-stimulus without replacement (MSWO) preference assessments. They found that performance only increased after feedback was implemented; contingent money had no effect on performance. In addition, they found that written instruction alone was not effective in increasing performance. Extending these results, Roscoe and Fisher (2008) investigated a similar treatment package involving role playing and feedback. This treatment package was effective in teaching newly hired behavioral technicians to conduct both PS and MSWO preference assessments.

Although Roscoe et al. (2006) demonstrated that written instructions alone were not effective in teaching preference assessments, additional studies attempted to identify methods of teaching that did not involve the presence of a trainer. These methods could include modified written instructions or video modeling. Often, the trainer is a behavior analyst or someone otherwise qualified. This expert training could cost money and may not be an option for all parents, staff, or agencies.

Graff and Karsten (2012) evaluated enhanced written instructions containing step-by-step instructions, diagrams, and no technical jargon. Researchers used two groups to evaluate whether the simple addition of a data sheet could alter the effectiveness of the original written instructions when teaching PS and MSWO preference assessments. Group one received written instructions derived from a methods section, followed by the enhanced written instruction described above. Group two received the written instructions, followed by a data sheet to accompany those instructions, and finally the enhanced written instructions. Both groups required enhanced written instructions to meet mastery criterion. Although feedback was the critical component in Roscoe et al. (2006), this was not the case for Graff and Karsten (2012).

Enhanced written instructions were sufficient in teaching all 11 participants. In addition, teachers rated the enhanced written instructions as easier than the original instructions.

Similarly, Ramon, Yu, Martin, and Martin (2015) compared a method section to a self-instructional training manual in teaching a MSWO preference assessment. The self-instructional training manual was similar to the enhanced written instructions used in Graff and Karsten (2012). Researchers used modeling to facilitate acquisition of skills for participants who did not meet mastery criteria after initial training. Out of the nine participants, none met mastery criterion following the methods section, four met criterion following the self-instruction training manual, and the remaining five participants met criterion following modeling. This finding expanded on Graff and Karsten (2012), demonstrating that self-instruction manuals may not be effective for everyone, and that additional training may be necessary.

Another treatment package that does not require the presence of a trainer is video modeling. Video modeling and video modeling plus other components including instructions and feedback, has been used to teach a variety of skills to staff and parents including discrete trial training (Catania, Almeida, Liu-Constant, & Reed, 2009; Vladescu, Carroll, Paden, & Kodak, 2012), functional analysis methodology (Moore & Fisher, 2007; Wallace, Doney, Mintz-Resudek, & Tarbox, 2004), and stimulus preference assessments (Lavie & Sturmey, 2002; Miljkovic, Kaminski, Yu, & Wishnowski, 2015; Weldy et al., 2014).

Weldy and colleagues (2014) demonstrated that video modeling could be an effective, time efficient, and inexpensive method of teaching staff to implement MSWO and free operant preference assessments. The authors used a video model that included vocal instructions, and taught staff in a group setting. All staff met mastery criterion following one or two viewings of the video.

Similarly, Miljkovic et al. (2015) evaluated video modeling and video modeling followed by a self-instruction manual to teach students to conduct MSWO preference assessment. They found that video modeling alone was not sufficient to train students to meet the mastery criterion of 85%. However, it is important to note that although participants did not meet mastery criterion, they fell just below the criterion level. There was a substantial increase in their score following one viewing of the video model. In this study, all participants moved on to the self-instruction manual plus video model phase. The researchers failed to evaluate whether a second viewing of the video model would be sufficient to teach the skills.

The purpose of this study was to evaluate the effectiveness of video modeling to train parents to conduct PS preference assessments on their children. Although video modeling alone was not effective in Miljkovic et al. (2015), it resulted in a substantial improvement and could have been effective following a second viewing. Video modeling has been effective in teaching a variety of other skills, and was effective in teaching preference assessments (Weldy et al., 2014). This study extended the literature in three ways. First, it evaluated training of preference assessments with a novel population. The majority of the studies described above used participants who had experience working with individuals with disabilities, or who were students (e.g. Graff & Karsten, 2012; Lavie & Sturmey, 2002; Roscoe & Fisher, 2008; Weldy et al., 2014). The nature of the participants could have had an effect on their ability to learn the skills. It is necessary to evaluate if parents can learn these skills in a similar manner. Second, this study extended the research on the effectiveness of video modeling in general, as well as video modeling specifically to train preference assessments. Finally, this study assessed the generalization of skills on actual individuals with disabilities rather than actors. It was

hypothesized that the video model would be effective in teaching parents to conduct a PS preference assessment.

CHAPTER TWO: METHOD

Participants and Setting

The participants in this study included three parents and their sons; Sarah and her 22-year-old son Peter, Khloe and her 8-year-old son Justin, and Jennifer and her 3-year-old son James. All of the children were diagnosed with Autism Spectrum Disorder and two (Justin and James) were receiving ABA services on a weekly basis. Although Peter was not receiving services at the time, he received services in the past. All of the children presented with limited verbal repertoires and cognitive impairments. They all communicated wants and needs in three to five word sentences, but required assistance to complete daily tasks. In addition, all caregivers reported that their sons were "picky" when it comes to toys, or "only like a handful of things." Children were included if they were at least 3 years old, and were diagnosed with an intellectual disability or presented with a limited verbal repertoire. They were excluded if they exhibited severe problem behavior such as aggression towards caregivers or self-injurious behavior, or had physical limitations that prevented them from reaching out and grabbing an item. In addition, parents were excluded from the study if they had experience in behavior analytic course work or training in conducting or directly observing preference assessments. All participants were recruited through word of mouth at agencies serving individuals with autism or a flyer posted on social media.

All phases of the study took place in the participants' homes at an agreed upon time. In addition, the assessments and training took place in a room that contained at least one table and

two chairs. Sarah's sessions took place in her living room that included a card table (1 m by 1 m, .6 m tall) with three chairs pushed against a white board wall, a television, a couch, and Peter's academic and behavioral supports (visual supports, token boards, workbooks, etc.). Khloe's sessions took place in the living/dining room area of the home, at a table (1 m by 1.1 m, 1 m tall) with four chairs, a couch, Justin's toys, and the television. Finally, Jennifer's sessions took place in the dining room of the house that included a round table (.8 m tall, 1.5 m diameter) with six chairs, a flower centerpiece, and placemats. James sat in a booster seat during sessions.

Materials

The researcher provided the stimuli needed to conduct the PS preference assessment. Each participant required five stimuli, and stimuli varied across participants depending on the caregiver interview (see figures 2-4 for list of stimuli). In addition, a timer, data sheets (see Appendix A) and pencils/pens were provided to the parents during every session. An iPad or iPhone was used to video record sessions.

Target Behaviors

Target behaviors for the PS preference assessment were adapted from the procedures described in Fisher et al. (1992). A complete task analysis of the target behaviors can be found in Appendix B. A brief description of the target behaviors is as follows: allow the child to sample all items individually for up to 30s each before beginning the assessment. Then, set two stimuli on the table in front of the child and wait for up to 30s. If the child touches an item, immediately remove the other item and let the child interact with the chosen item for up to 30s. If the child does not respond, prompt him/her to sample each item separately for 30s each. Then re-present

both items and wait 30s. If the child still does not approach the items, remove them and move on to the next pair. If at any point the child attempts to approach both items, block this attempt. Continue this method until all pairs have been assessed. Record on the data sheet, which item was selected from each pair presentation.

Assessments

Prior to and following intervention, assessments were conducted on how accurately participants conducted the PS preference assessment with their sons. The researcher instructed the participant to conduct a paired stimulus preference assessment with her son. The researcher said, "I had you identify five items that your son likes. Now I'd like for you to conduct a paired stimulus preference assessment to determine the rank order which your son prefers each item." Prior to the start of the study, the researcher asked that the participant refrain from looking up preference assessments online. For each assessment the participant was given the five previously identified stimuli, a data sheet, a timer, and a pen or pencil. The researcher instructed the participant that feedback would not be provided and that she should notify the researcher when the assessment is completed. If the participant asked for help or feedback, the researcher responded with "I'm sorry, I can't answer any questions, please do the best that you can." All assessments were video recorded via iPad and an independent observer(s) scored at least 33% of each participant's assessments. After the assessment, the researcher thanked the participant for her participation, collected the data sheets, and left. Participants were given a score (percentage of steps correct) for each assessment by calculating the number of steps performed correctly and dividing it by the total number of steps, then multiplying by 100.

Inter-Observer Agreement

Inter-observer agreement (IOA) was assessed for 50% of Sarah's sessions, 34% of Khloe's sessions, and 40% of Jennifer's sessions, across all phases of the study. IOA averaged 96.2% throughout the study, 95.8% for baseline sessions, 96.2% for post training sessions, and 96.5% for follow up sessions. IOA ranged from 96.5% to 100% for Sarah, 93% to 100% for Khloe, and 88.3% to 100% for Jennifer. The researcher video recorded all sessions using an iPad or iPhone. During sessions in which IOA was assessed, a trained independent observer scored the videos indicating which skills the participant performed correctly/incorrectly (see Appendix C). IOA was calculated by dividing the number of agreements by the number of agreements plus disagreements for each assessment, then taking the average across all assessments. An agreement was defined as both observers scoring a step on the task analysis in the same way, either correct or incorrect. In addition, any discrepancy in items determined as non applicable (n/a) was scored as a disagreement. At the beginning of data collection, agreement for baseline sessions dropped below 90% agreement, resulting in additional observer training. Following booster training, IOA maintained above 90%.

Treatment Integrity

In addition to caregiver implementation of the preference assessment, treatment implementation was video recorded to ensure fidelity. The researcher recorded the process of viewing the video model; this video was viewed by an independent observer who used a checklist to assess treatment integrity (see Appendix D). Treatment integrity remained at 100% for all intervention sessions.

Social Validity

Social validity was assessed using a survey given to the parents at the conclusion of the study. The survey inquired about their thoughts on the procedures, how well they performed, the importance of the skills, and the likelihood that they would utilize the skills in the future (see Appendix E).

Experimental Design and Procedure

This study used a non-concurrent multiple baseline design across participants. Prior to beginning data collection, the researcher used BST to train two research assistants to collect IOA data. Once the observers demonstrated mastery (at least 90% agreement with the researcher), the study began.

Caregiver Interview

At the beginning of the study, the researcher interviewed caregivers to identify stimuli to include in the preference assessment. The caregivers were asked to identify five different non-edible stimuli that they believed their child might like. The stimuli were not limited to what was available in the home. If the caregivers believed the child might like a certain item that they did not own, the researcher obtained the item to be used in the preference assessment. Most caregivers had some difficulty identifying five items; however Sarah reported that it was very difficult for her to identify five items that were not edible. Following the interview, the researcher asked the caregivers to rank the stimuli from highest to lowest preferred based on their opinion of what the child would like. In addition, the researcher asked the caregivers to indicate how confident they were in that ranking using a percentage.

Baseline

During baseline, the participant was given the necessary materials, and asked to conduct a paired stimulus preference assessment with her son. No additional training materials were provided. Following the conclusion of the assessment, the researcher thanked the participant for her participation, collected the data sheets, and left.

Training

The intervention was a video model with embedded vocal instructions. The video model showed a full demonstration of the preference assessment then broke down each step of the task analysis, first identifying the step, and then showing a clip of the researcher demonstrating that step. Participants were allowed to pause and rewind the video as needed however they were not allowed to ask the researcher any questions related to the implementation of the preference assessment. All of the information that participants received came from the video model and the data sheet provided. In addition, participants were allowed to take notes during the training session however they were not allowed access to those notes during the assessments or any time after the training session. All participants chose to take notes during the training session. Participants could view the video, as many times as they saw fit (during one session) and let the researcher know when they finished reviewing the video. Participants did not have access to the video model during assessments.

Assessments

Following one viewing of the video, assessments were conducted as they were in baseline. Participants were instructed to conduct a paired stimulus preference assessment with

their sons. The researcher did not provide any additional instructions or answer any questions. Data collection ended after the participant scored at 90% or above for three consecutive assessments.

Booster Training

Following the first assessment after the presentation of the video model, if a participant scored below the mastery criterion of 90% (derived from the mastery criterion used in Weldy et al., 2014), the video model was shown again prior to the next assessment as described above.

Follow-Up

An assessment was conducted in the same manner as baseline 1 week after the final post-training assessment data point.

CHAPTER THREE: RESULTS

Figure 1 depicts the percentage of correct steps in the task analysis each time the parents conducted a PS preference assessment in baseline and after training. Following training, all three participants demonstrated an increase in the percentage correct immediately. Khloe did not achieve 90% immediately following the training, so a booster training session was conducted and she met mastery criterion for the following two assessments. During the third assessment following booster training, Khloe skipped a pair. She recorded the pair on the data sheet however while conducting the assessment she skipped over it, resulting in a score of 89%. Due to her consistent fidelity with other pairs and during other assessments as well as time constraints, the researcher decided to continue to the follow up phase. During follow up, Khloe maintained a score above the 90% criterion. These results indicate that a video model can be effective in teaching parents to conduct PS preference assessments. In addition, this method resulted in skills that maintained over 1 week.

Figures 2, 3, and 4 illustrate the results of the PS preference assessments for each child. The researcher averaged the percentage of selections for each item across all assessments in which parents met criterion. Table 1, organizes the results of the three PS preference assessments in which parent's scored the highest. It displays preferences in order of most preferred (1) to least preferred (5). Items that have a decimal number are items the child selected with an equal percentage. In addition, the table compares the results to the parents' predicted rankings. The results in table 1 show that the preferences of the children varied. Most and least preferred items

were somewhat consistent for all children, however items in the middle tend to vary. These results illustrate how difficult it may be for parents to predict their children's preferences. It also indicates that the children's interests are not as restricted as their parents may have believed. These results provide further evidence for the need to teach parents this skill set.

At the conclusion of the study, parents completed a social validity survey (see Appendix E) inquiring about their opinions of the intervention, their performance, the importance of the skills, and the likelihood that they would utilize the skills in the future. With the exception of one participant who indicated she "agreed" with the statement "I will use these skills again in the future", all participants indicated they "strongly agreed" with every item on the survey. The video model proved to be a socially valid training method that was enjoyable to watch, effective, and not intrusive.

Table 1

Caregiver Predictions and Child Preferences

Caregiver ranking	Child Assessment 1	Child Assessment 2	Child Assessment 3
Sarah	Peter Assessment 1	Peter Assessment 2	Peter Assessment 3
1. Music	1. Slime	1. Slime	1. Index Cards
2. Slime	2. Sand	2. Index Cards	2. Sand
3. Index Cards	3. Music	3. Sand	3.5 Slime
4. Sand	4. Bubbles	4. Music	3.5 Music
5. Bubbles	5. Index Cards	5. Bubbles	5. Bubbles
Khloe	Justin Assessment 1	Justin Assessment 2	Justin Assessment 3
1. iPad	1. iPad	1.5 Truck	1. iPad
2. Small train	1.5 Phone	1.5 Small Train	2. Phone
3. Big Train	1.5 Truck	3. iPad	3. Small Train
4. Phone	4. Big Train	4.5 Phone	4.5 Truck
5. Truck	5. Small Train	4.5 Big Train	4.5 Big Train
Jennifer	James Assessment 1	James Assessment 2	James Assessment 3
1. Tablet	1. Tablet	1. Tablet	1. Tablet
2. Train	2. Ball	2. Train	2.5 Ball
3. Music	3. Puzzle	3.5 Puzzle	2.5 Puzzle
4. Ball	4. Train	3.5 Ball	3.5 Train
5. Puzzle	5. Music	3.5 Music	3.5 Music

Note. This table compares each caregiver's hypothesized ranking of items to the actual preferences of their child determined by the three PS preference assessments in which parents scored the highest. Rank numbers with decimal points indicate that the items were selected at equal percentages.

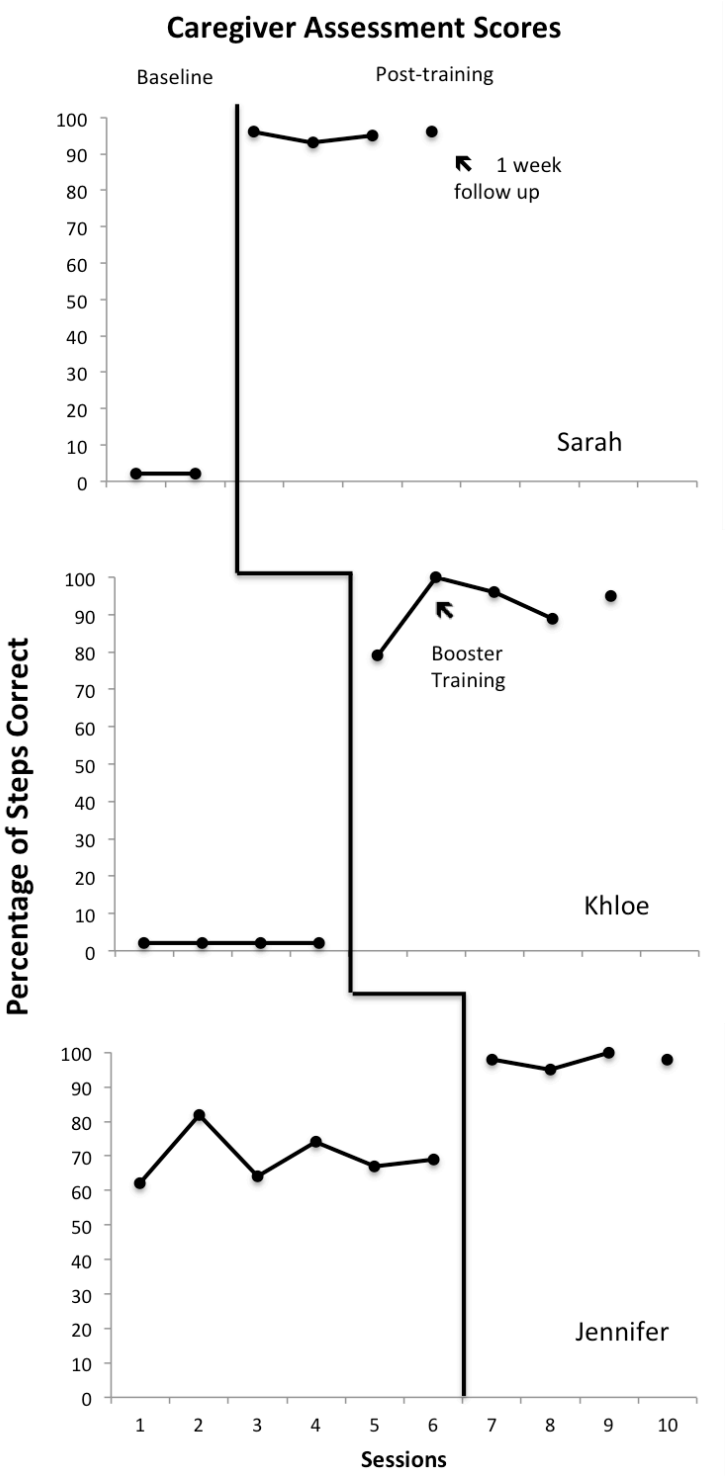

Figure 1. The percentage of steps correct for each caregiver during each assessment in baseline, post training, and follow-up.

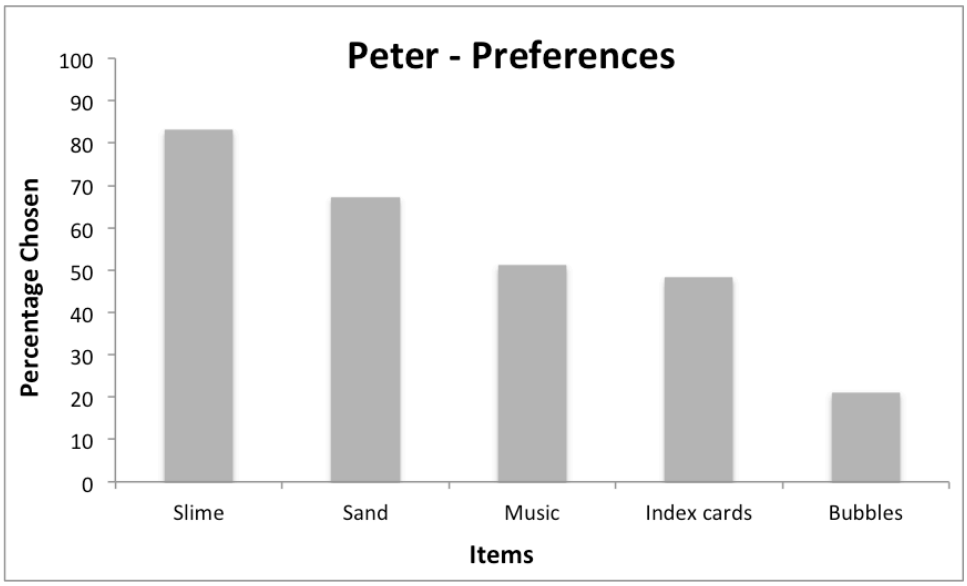

Figure 2. This bar graph depicts the preferences of Peter during the PS preference assessments conducted by his mother, Sarah.

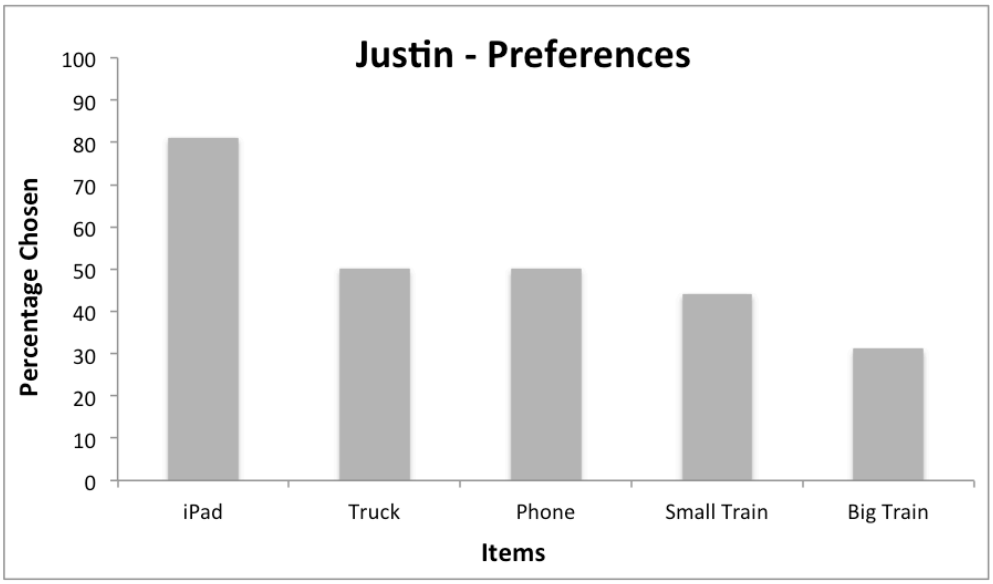

Figure 3. This bar graph depicts the preferences of Justin during the PS preference assessments conducted by his mother, Khloe.

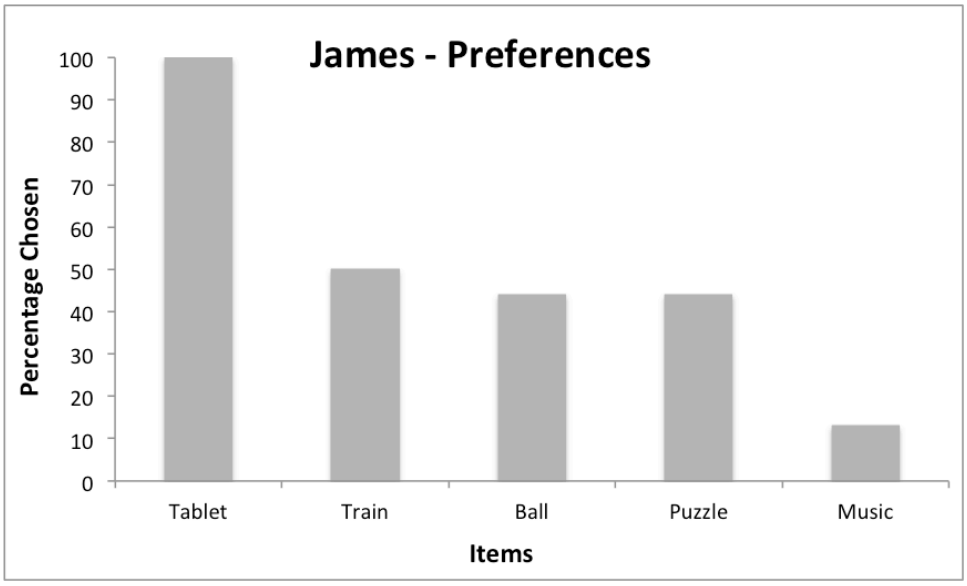

Figure 4. This bar graph depicts the preferences of James during the PS preference assessments conducted by his mother, Jennifer.

CHAPTER FOUR: DISCUSSION

This study provides evidence that a video model is an effective training method for teaching parents to conduct PS preference assessments with their children. The findings extend the literature by further demonstrating that video modeling is an effective training method when implemented to teach individuals to conduct a PS preference assessment. In addition, this study evaluated the feasibility of training this skill set with a novel population, parents of children with intellectual disabilities. Finally, assessments were conducted using the participants' children rather than simulated clients. The findings demonstrate that assessment with actual clients/students can be conducted immediately after training rather than testing skills in a role-play or simulated assessment first, then on actual clients. This knowledge can save time and money when providing this training to parents.

In addition to the findings regarding the effectiveness of the video model, this study investigated parent's ability to predict their children's preferences. Results indicated that caregivers were confident in their predictions, (confidence percentages ranged from 60%-90%) but their predictions often varied from the results of the preference assessments and different preference assessments differed as well. These findings suggest the caregivers had some difficulty identifying the specific rank order of their children's preferences and provide support for the importance of teaching parents the skill set needed to conduct an actual preference assessment.

The full video model was 9 min long. Sarah and Jennifer met mastery criterion following one viewing of the video and neither participant paused or rewound the video, demonstrating a total training time of 9 min. Khloe required one additional viewing of the video making the total training time 18 min. In addition, the researcher used her computer (MacBook Pro), video camera (Sony Camcorder), tripod, free video editing software (iMovie), and toy items to create the video model. The researcher spent 1.5 hr creating the video (10 min preproduction, 20 min production, and 1 hour post production). The time needed to create the video may increase or decrease depending on the creator's skill level with video production. However, if replicating this study, it is not necessary that the researchers create a video. Researchers can search the Internet for a video model that is already made. This training method appears to be both a time and cost efficient alternative when training this skill set.

Although we do not have data to identify what features of the video model contributed to its effectiveness, we can speculate that a number of features were important. First, according to the participant's opinions (strongly agree) on item 2 of the social validity survey, the video was very easy to understand. Each step was explained thoroughly using modeling and instruction simultaneously with the entire sequence and then each step individually. Second, the video was short (9 min), making it likely that viewers remained focused throughout and retained the information presented. Finally, the behavior of watching videos is one that most individuals have experience with in comparison to reading articles/research or other forms of written instruction. This history could have contributed to the speed with which the skills were learned, as well as maintenance of the skills.

There were a few notable limitations of this study. The first being that the video model failed to address how to respond to any problem behavior emitted by the child during the

preference assessment. Due to the fact that interventions that are implemented to decrease problem behavior are individualized and based on functional assessment information, the researcher chose to avoid addressing this issue in the video model. However, occasionally this proved to be a challenge for participants. Participants seemed unsure how to respond during instances in which their child left the table, or engaged in other disruptive behavior. On a few occasions, the researcher had to redirect the child back to the table for the participant to finish the assessment. The video model could have been improved by adding a few tips for managing the typical types of disruptive behavior that can occur during preference assessments or other assessment and teaching procedures.

In addition, due to an error by the researcher, the video model and scoring sheet did not include one aspect of the PS preference assessment that should be included in the task analysis. The task analysis should state that the participants should vary the presentation of the pairs so that an item is placed on the left and the right side at least one time. The purpose of this step is to prevent the occurrence of the child picking items based on the side that they are placed. The researcher did not include this instruction in the video model therefore participants were not evaluated on this aspect of the assessment. After further examination of the assessments, the researcher determined that a side bias did not occur for any of the children (Peter picked left 51%, right 49%; Justin picked left 41%, right 59%; James picked left 55%, right 45%).

Future studies should replicate these procedures with more parents and a variety of client populations to provide additional evidence on the effectiveness of this training method. When replicating these procedures, researchers should address the limitations listed above. In addition, researchers should investigate this training method to teach parents to conduct other types of preference assessments including the multiple stimulus with and without replacement

assessments and free operant preference assessments. Furthermore, it would be valuable to evaluate the generalization and maintenance of these skills by assessing parents' ability to conduct this assessment with new items including edibles. Finally, future studies should further evaluate the use of video modeling to teach parents to conduct additional behavior analytic interventions.

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APPENDICES

Appendix A: Paired Stimulus Preference Assessment Data Sheet

Date: _____

Items:

A. _____ B. _____C. _____

D. _____E. _____

Pairings:

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

Item Selections	# Presentations	% Selections
A.		
B.		
C.		
D.		
E.		

Appendix B: Paired Stimulus Preference Assessment Task Analysis

1. Randomly pair each item with all of the other items.
2. Bring child to the table
3. Present each item individually and allow the child to interact with the item for 30s each
4. Present the first pair of items
    a. If the child approaches one item, remove the item that was not chosen and allow the child to sample the chosen item for 30s.
    b. If the child approaches both items, block the approach.
    c. If the child does not approach either of the items, prompt the child to sample each item individually for 30s. Then re-present both items and follow items a-b.
    d. If the child still does not approach the items, move on to the next pair.
5. Record which item was selected
6. Remove the chosen item after 30s. If the child stops interacting with the item before the 30s have elapsed, remove it and begin the next pair.
7. After 30s remove the item and begin the next pairing.
8. Repeat steps 1-5 for the remainder of the pairs.
9. After all pairs have been presented, calculate the percentage of selections for each item.

Appendix C: IOA Scoring Data Sheet

Observer: **Date:** **Participant #:**

Assessment #:

Child is brought to the table	Correct	Incorrect	N/A
Child is allowed to sample all 5 items individually until the child stops interacting with it, or 30s have elapsed.	Correct	Incorrect	N/A

Pair 1: (repeats for all ten pairs)

Pair 1 is presented	Correct	Incorrect	N/A
Chosen item is sampled until the child stops interacting with it, or 30s have elapsed	Correct	Incorrect	N/A
Item that was not chosen is removed	Correct	Incorrect	N/A
Approaching both items is blocked	Correct	Incorrect	N/A
If an item is not chosen in 30s, child is prompted to sample both items individually for 30s	Correct	Incorrect	N/A
Items are represented	Correct	Incorrect	N/A
Chosen item is sampled until the child stops interacting with it, or 30s have elapsed	Correct	Incorrect	N/A
Item that was not chosen is removed	Correct	Incorrect	N/A
Approaching both items is blocked	Correct	Incorrect	N/A

If an item is not chosen, the items are removed and the next trial begins	Correct	Incorrect	N/A
Chosen item is removed before next pair is presented.	Correct	Incorrect	N/A
Caregiver does not provide additional attention while child is interacting with item. – (i.e. the only attention delivered should be related to the instruction to chose an item)	Correct	Incorrect	N/A

All items are paired with other items	Correct	Incorrect	N/A
# of selections are recorded for each item	Correct	Incorrect	N/A
# of presentations are recorded for each item	Correct	Incorrect	N/A
% selected is recorded for each item	Correct	Incorrect	N/A

Total # correct: _____ Total possible: _____ Score: _____

Appendix D: Treatment Integrity Checklist

The participant watches the video Video model is played entirely at least once	Yes Yes	No No	
Researcher does not provide any additional instructions	Yes	No	
If the participant asks for help or feedback, the researcher responds with "I'm sorry, I can't answer any questions, do the best that you can"	Yes	No	N/A
If the participant asks, the researchers says yes the video can be paused, or rewound, or viewed again	Yes	No	N/A
The participant verbally expresses that he or she is done with the video	Yes	No	N/A

Appendix E: Social Validity Survey

Directions: Please circle the choice that indicates how much you agree with each statement.

1. I think it is important to know what my child likes.

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

2. The video was easy to understand

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

3. The video contained information that I consider to be useful

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

4. The video helped me learn the skills

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

5. After watching the video I felt comfortable conducting the preference assessment

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

6. The preference assessment helped me figure out what my child likes

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

7. I will use these skills again in the future

□Strongly Disagree □Disagree □Neutral □Agree □Strongly Agree

Appendix F: Video Model Script

"Today you will be watching a video showing you how to do a paired stimulus preference assessment. The purpose of this assessment is to help identify things that your child might like. Thank you for your participation, you can ask to pause or rewind the video at any time, however you must watch the video in full, and the researcher cannot answer any questions. After you watch the video you will be asked to do this assessment on your child. Please let the researcher know when you are finished with the video. Enjoy!"

Voice Over Instruction	*Clip shown (Researcher acting as parent, "child" will be played by a research assistant)*
Here is a full demonstration on how to do a paired stimulus preference assessment. After watching the whole thing, I will break down each step.	*Full video demonstration of preference assessment with all pairs.*
"First, make sure you have 5 different items and write your pairings on the data sheet. Each item should be paired with all the other items one time. I find it easiest to pair your first item with all the remaining ones, then the second with the remaining and so on. Here is an example. Make sure to present the pairs in	*Close up on data sheet while researcher pairs each items together on sheets of paper.* ***Pairs A to B, A to C, A to D, A to E, then B to C, B to D etc.*** *Places pieces of paper in a hat/bowl and takes them out recording the order on the data sheet.*

random order. It may help to pull the pairs out of a hat and then write them on the data sheet"	
Now that your data sheet is prepared, gather your items and bring the child to the table	*Gathering items on the researcher's side of the table, then retrieving child and prompting the child to sit.*
Its time to do the assessment. First allow the child an opportunity to examine each item individually for 30s. If the child stops interacting with the item before the 30s is up, you can remove the item and move on to the next one	*Places each item individually in front of the child for 30s*
Place the first pair in front of the child, if the child grabs or touches an item, remove the other one and allow the child to play with the item for 30s. If the child stops interacting with the item before the 30s is up, you can remove the item and move on to the next pair. Be sure to not provide any additional attention while the child is interacting with the item.	*Researcher places first pair in front of "child", child selects one item, the other is removed and researcher allows the child to play for 30s.*
Mark which item the child chose on the data sheet. Now remove the item and move on to the next pair repeating the same steps.	*Close up on data sheet, researcher circling the item in the pair that was chosen by the child*

If the child tries to grab or touch both items, block this effort, and prompt the child to "pick one".	*Researcher places first pair in front of child, child approaches both items, researcher blocks this attempt*
After presenting the pair for 30s, if the child does not grab or touch either items, pick one up, say the name of the item and show the child how to play with the item, then hand it to the child for 30s. Remove the item and repeat with the second item.	*Researcher picks up item A, and entices the child then hands it to the child for 30s. Researcher removes item A, picks up item B and shows the child how to play with it then hands it to the child for 30s.*
Now, remove both items and re-present them as you did before for 30s.	*Researcher removes both items then re-presents them for 30s*
Make sure to mark down which item the child chooses once you re-present the pair	*Child selects an item, close up to data sheet researcher marks the item selected*
If the child still does not grab or touch either item, remove them and move on to the next pair. Leave the data sheet blank for that pair.	*Child does not select an item, researcher removes items.*
Now you can move on to the next pair and repeat the same steps	*Researcher removes items, close up to data sheet showing next pair, researcher presents pair.*
Once you go through all the pairs and mark which item the child chose, you can dismiss	*Close up to data sheet completely filled out, child leaving the table*

the child.	
To finish the assessment, you should write the total number of times an item was chosen under "item selections"	*Close up to data sheet, researcher filling out item selection column*
Next, write how many times each item was presented	*Close up to data sheet, researcher filling out # presentations column*
Finally, calculate the % selections by dividing selections by presentations and multiplying by 100%	*Close up to data sheet, researcher filling out % selections column*
The item with the highest percentage is the item that is most preferred by your child, the number with the lowest percentage is the least preferred item. You can repeat this assessment over time to see if you get the same results, or to see if your child's preferences change. You can also do this assessment with different items later on.	*Researcher speaking directly into camera*
Thank you for watching. If you would like to watch the video again, or play a certain part again, please let the researcher know. If you are finished with the video please let the researcher know. Now you will be asked to	*Researcher speaking directly to camera*

perform this assessment on your child. Have fun!	

Appendix G: IRB Expedited Approval for Initial Review Letter

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

April 4, 2016

Cristina Andersen
ABA-Applied Behavior Analysis
Tampa, FL 33635

RE: **Expedited Approval for Initial Review**
IRB#: Pro00025706
Title: Evaluating Video Modeling to Teach Caregivers to Conduct Paired-Stimulus Preference Assessments

Study Approval Period: 4/4/2016 to 4/4/2017

Dear Ms. Andersen:

On 4/4/2016, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

Approved Item(s):
Protocol Document(s):
Caregiver preference assessment protocol version 1 3/24/16

Consent/Assent Document(s)*:
Adult, Version #1 3.31.16.pdf
Parental Permission, Version #1, 3.31.16.pdf
Verbal Assent (child)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s). Coversheets are not stamped or verbal assents.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review

research through the expedited review procedure authorized by 45CFR46.110. The research proposed in this study is categorized under the following expedited review category:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This study involving data pertaining to children falls under 45 CFR 46.404 – Research not involving greater than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board