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Evaluating Small-Scale Simulation for Teaching Abduction Prevention Skills

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Evaluating Small-Scale Simulation for Teaching Abduction Prevention Skills

by

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DEDICATION

I dedicate this manuscript to my mom, Shawna, and my fiancé, Brandon, for continually supporting me in everything I do, but especially over the last two years. I would also like to dedicate this manuscript to my Aunt Sandy and Uncle Garry for supporting me and making Florida more like home. I would like to thank my brother, Geoff, and Monica for always giving me love. Finally, I would like to thank everyone at my practicum site for their support and encouragement.

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ABSTRACT

Approximately 1,600 attempted kidnappings occurred within 2018 (National Center for Missing & Exploited Children, 2019). In a 2016 report by Wolak, Finkelhor, and Sedlak, of the 105 stereotypical kidnappings that occurred in 2011, many resulted in sexual assault, the children are never found, or death. These dangerous circumstances warrant a method of teaching safety skills to children to avoid abduction. Research has shown that small-scale simulation is effective for teaching firearm safety to 3- to 5-year-olds children (Maxfield, Miltenberger, & Novotny, 2019). This research has not been applied to abduction prevention safety. The current study aimed to address this research gap and evaluated small-scale simulation to train abduction prevention skills. Two typically developing 5-year-olds were trained in their homes using behavioral skills training with a small-scale model and dolls. They were assessed using in situ assessments in store aisles, front yards, or a neighborhood park. All participants acquired abduction prevention skills, with one participant requiring a few booster training sessions.

CHAPTER ONE:

INTRODUCTION

Children are taught a variety of safety skills that they may use daily. From wearing a

helmet while riding a bike to not touching the hot stove, parents regularly advise children on

what behaviors they must engage in to stay safe. Although these safe behaviors occur frequently,

other safety skills may never occur but are still equally important to learn. For instance,

abduction prevention skills are hardly ever used, but they are still necessary due to the fatal

results that can occur following an abduction.

According to the National Center for Missing & Exploited Children (2019),

approximately 424,066 children are reported missing each year. This may include runaways,

family custody disputes, or non-family abductions. Non-family abductions are when a child is

taken by someone they know but whom they are not related, such as neighbors, or by strangers.

Approximately 1,600 attempted non-family abductions occurred in 2018 alone. Attempted

abductions are most common among elementary-aged children and preteens. Wolak, Finkelhor,

and Sedlak (2016) report that an estimated 105 children were involved in a stereotypical

kidnapping in 2011. Wolak et al. classified stereotypical kidnappings as those in which the

abductor is a slight acquaintance or stranger, and the child is detained overnight, transported 50

miles or more, held for ransom, abducted with intent to keep the child, or the child is killed.

Of those stereotypical kidnappings that occurred, approximately 74% involved the use of

force or threats, 63% resulted in a sexual assault, 8% resulted in homicide, and 8% resulted in the

child never being recovered (Wolak et al., 2016). Due to these traumatic and life-threatening

results, children must learn and exhibit safety skills in possible abduction situations. Additionally, research has found that children typically do not exhibit all the safety skills when approached and presented with a lure from both known and unknown individuals (Goldfarb, O'Brien & Krackow, 2008; Holcombe et al., 1995; Poche, Brouwer, & Swearingen, 1981).

To prevent these kidnappings and their dangerous outcomes, researchers have evaluated three key approaches to training safety skills: informational approaches, behavioral skills training (BST), and in situ training (IST). Informational approaches include those that may be most familiar to the public, such as DVDs that tell children what they may encounter and how they should behave if they ever encounter these situations. An example of this is the Stranger Safety DVD (Sima S. Enterprise LLC, 2017) designed to teach kids abduction prevention skills. The informational approaches typically involve instructions, modeling, and verbal rehearsal, but never require participants to physically rehearse the skills (e.g., Beck & Miltenberger, 2009). Research has not shown that informational approaches are effective at teaching children abduction prevention skills; children either do not score any higher than they did in baseline or they do not score any higher on post-intervention assessments than those who received no intervention in a control group (Beck & Miltenberger, 2009; Miltenberger et al., 2013; Miltenberger & Thiesse-Duffy, 1988; Poche, Yoder, & Miltenberger, 1988).

BST is a form of active teaching which involves instructions and modeling, similar to the traditional, informational approach. However, unlike informational approaches, BST also involves rehearsal and feedback. The children immediately practice the safety skills prompted through instruction and modeling and are provided with feedback on their performance; the children are also given many chances to rehearse the behaviors with feedback until they correctly perform the skills many times in a row (e.g., Miltenberger, 2008). Research has shown that BST

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is effective at teaching some children to demonstrate abduction prevention skills, but others may need additional training to perform the skills in the generalization setting (Carrol-Rowan & Miltenberger, 1994; Miltenberger & Thiesse-Duffy, 1988; Olsen-Woods, Miltenberger, & Foreman, 1998; Poche et al., 1981)

IST is another active learning approach which involves interrupting the child during a natural environment assessment when he or she does not exhibit the safety skills and immediately administering a BST session (e.g. Gunby, Carr, & LeBlanc, 2010). Studies have investigated the effects of IST for teaching abduction prevention skills to children. Results suggest that the combination of BST with IST is an effective method for teaching the skills, and is often better than BST alone (Gunby, Carr, & Leblanc, 2010; Johnson et al., 2005, 2006). Additionally, it has been found that IST is effective for promoting generalization of abduction prevention skills with individuals with disabilities (Fisher, Burke, & Griffin, 2013; Sanchez & Miltenberger, 2015).

Although it is important to know that these methods are effective for teaching abduction prevention skills, it is also important to find more accessible ways to use these methods considering having a trained researcher is not always feasible. Researchers have investigated a variety of methods to make these trainings more accessible, such as having parents or peers conduct BST and IST, using video modeling, computerized BST, and simulated training using small scale models.). Results have shown that these approaches are often effective and are all more accessible methods (Godish, Miltenberger, & Sanchez, 2017; Gross, Miltenberger, Knudson, Bosch, & Brower-Brietweiser, 2007; Miltenberger, Thiesse-Duffy, Suda, Kozak, & Bruellman, 2008; Miltenberger et al., 2013; Tarasenko, Miltenberger, Brower-Breitwieser, & Bosch, 2010; Vanselow & Hanley, 2014).

An additional, potentially more accessible form of training that has been utilized in many different fields of study is simulation training. For example, pilots use simulators before getting in the cockpit, military leaders use simulations before entering battle, doctors use simulation training before performing surgery. As detailed by Martin and Siceloff (2017) astronauts use simulation training for many hours before launching into space so that they know exactly how to manage the controls and what to do in situations that may arise in the future. These methods allow individuals to learn and practice the skills without encountering the real situation and posing a safety risk to themselves or others.

Some studies have used small-scale models to train safety skills. Page, Iwata, and Neef (1976) used a small-scale model to teach pedestrian skills, and Maxfield, Miltenberger, and Novotny (2019) used a model to teach firearm safety. In these studies, the researchers developed a small-scale model of a natural environment and utilized dolls as models to train the safety skills to the participants. For instance, Maxfield et al. created a small-scale model of a house, which was placed on a table within the participant's home. The participant was given a doll, and a small firearm was placed somewhere within the model (on a table, on the floor, etc.). The researcher used the doll to model and verbalize the target behaviors, then instructed the participant to practice the same behaviors they just observed with the doll, including the simultaneous verbalization of those behaviors. Once the training was complete, participants' safety skills were assessed through a simulation assessment using the small-scale model, followed by an in situ assessment where the participants were observed via hidden video as they found a disabled gun in their home. Results suggested that all participants learned the safety skills and engaged in them during in situ assessments.

The purpose of the current study is to extend Maxfield et al.'s (2019) research evaluating small scale simulation training. This training method has yet to be evaluated for abduction prevention skills. Therefore, the current study tested the effects of small-scale simulation training to teach abduction prevention skills to neurotypical children.

CHAPTER 2:

METHOD

Participants and Setting

Participants were two typically developing children. Angelina and Seamus were a 5-year-old girl and boy, respectively. Both participants were able to follow simple instructions and able to report events that occurred in another location. Seamus' mother expressed interest in participation due to their recent move to the area. They had moved from another state and she was concerned with Seamus' safety in a new area. She stated that participating in this study could help her feel more secure in his safety. Angelina's parents expressed interest in participating after hearing about this study in connection with other safety skills research. Both sets of parents expressed wanting to see how their child would respond, as they have discussed abduction safety skills, but were unsure what their child would do if the situation was to present itself.

A probe assessment was conducted to ensure that participants had reporting skills. The probe assessment involved participants being instructed to enter a room, speaking to an adult in the room, returning to the instructor, and reporting what was said by the adult. These assessments were done in the natural environment in a manner that aimed to avoid reactivity. For instance, the researcher and Seamus were in his living room. Seamus' mother walked into the other room, she called Seamus to her, told him to ask the researcher if she would like to work at the table or in the kitchen, and Seamus came back to the researcher to repeat the question. The researcher recruited both participants via word of mouth through neighbors and colleagues.

The simulation trainings and assessments were conducted in the home, while the in-situ assessments were conducted in public spaces, such as a store aisle or a park.

Materials

Small-scale models of a variety of settings were used in this study. The settings included, a toy aisle of a store, a park, and a yard with a house in the background. All models were generic renderings of these settings. Each model included three sides and a bottom with no front-facing wall or a top. For instance, the toy aisle included three walls (an open front) with no roof. The outdoor locations were represented with playground equipment in a grassy area (park) and a sidewalk (front yard). The sides of these locations included trees and playground equipment (park), and the front of a house with trees (front yard) with no front wall or top to represent a sky. The open wall and lack of a roof in the store model and the open layout of the models of the other settings allowed the participants to manipulate the dolls around the model. Printed backdrops and small props/items were included to make the model more realistic. Some props that were used included a small bike and swings.

Confederates for the in situ assessments were both males and females between 22 to 35 years of age, of varying races. These participants were Master and Doctoral students at the University of South Florida. Ten different confederates were used for this study. Some confederates conducted sessions for both participants, but each participant never saw the same confederate more than once.

Dolls and video cameras were also needed for this study. At least three dolls were used per participant; one doll to act as the child, one doll to act as the parent/guardian, and one to act as the adult who was attempting to lure the child. Additionally, a cell phone with video recording

capabilities was used to record sessions for scoring interobserver agreement (IOA) and treatment fidelity calculations.

Target Behaviors

The target behavior was the abduction prevention safety skill in response to an abduction lure during an in-situ assessment. The safety skill was broken down into three target behaviors: say no when asked to go with the confederate, leave the area/get away from the confederate within 30 s, and tell an adult what happened. These behaviors were scored on a 0-4 scale; 0 = agreed to go, 1 = said nothing, stayed in the area, and did not tell an adult 2 = said no, stayed in the area, and did not tell an adult, 3 = said no, left the area, but did not tell an adult, 4 = said no, left the area, and told an adult. It should be noted that the child was required to leave the area to receive a score of 3 or above; if they stayed in the area and yelled to their parent, the score was still considered a 2.

No distance was included in the definition (e.g. walk more than 10ft from confederate within 30s) because the distances that the participants had to travel to find their parents varied. For example, if the participant were in the store, they may only need to walk 10ft around to the next aisle to find their parent, but at the park they may need to walk more than 20ft due to the open area.

Assessment

In situ assessments were conducted as the primary assessment of the intervention. Simulation assessments were conducted at the end of each phase to determine if the results corresponded with the results of the in situ assessments. The in situ assessments were conducted within the real environments depicted by the models. The participant did not have any knowledge that an in situ assessment was occurring. A confederate unknown to the child was the

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person presenting the abduction lure. Target behaviors were observed by the primary researcher, who was unseen throughout the assessment, usually positioned somewhere behind the child. The confederate was also trained in the target behavior scoring criteria to aid in accurate scoring.

The participant was taken to one of the environments from the model. The locations changed between the park, store, and home for each in situ assessment. During the sessions, the parents and researcher worked together to set up the environment/scenario for the assessments. For instance, the participant may have gone to the store with his/her parent. The child was then instructed to either go to an aisle or that the child should stay in the aisle he/she is in while the parent grabs something from another, specified aisle close by. After 5-10 s alone, a confederate entered the aisle and approached the participant. Whichever direction the confederate entered from, a researcher was standing on the opposite end, so that when the child turned to speak to the confederate, he/she was not able to see the researcher observing. After approaching the child, the confederate said "hi" with brief, casual small talk (e.g. "hi, how are you? That's a cool toy you're looking at), then presented an abduction lure.

Three types of lures were used in random order for each assessment; assistance lures (e.g., asking for help), incentive lures (e.g., offering an item such as candy), and authority lures (e.g., saying the parent wanted the child to leave with the confederate). If the child agreed to leave with the confederate, the confederate made an excuse and walked away immediately. If the child said nothing, the confederate delivered an excuse and walked away after 20 s. If the child said "no," the confederate said "okay" and walked away. If the child ran away but gave no verbal response, this was accepted as equivalent to saying "no" and the confederate walked away. If the child left the area but did not report the lure, the parent said nothing. If the child left and reported the abduction lure, the parent said "thank you" to the child.

Simulation assessments were conducted within the participants' homes using small-scale models. Simulation assessments involved the participant using a doll to exhibit the safety skills within one of the three small scale models of an environment the child encountered - a store aisle, the park, or his/her front yard. In this assessment, the researcher instructed the participant to go to an area in the model, then the researcher brought the "adult" doll to that same area. The adult doll then presented an abduction lure. The safety skills were scored, using the specified rules, based on the behavior the child made the doll exhibit after the lure had occurred. No feedback was given to the participant at the end of these assessments. The assessments were conducted once at the end of baseline and intervention phases. These simulation assessments were compared to the results from the in situ assessments to see if there was correspondence between the scores.

Training times ranged between 15 to 45 min for both initial training session and any required booster sessions. Angelina required a total of 30 min for training, whereas Seamus required approximately 2hr of training between his initial training and the additional three booster sessions that were needed.

Interobserver Agreement, Treatment Integrity, and Questionnaires

Interobserver agreement (IOA) data were collected for 100% of in situ assessments and 83% of training sessions. Data were collected either in person by the present confederate or with recorded videos of the sessions by a research assistant. IOA specifically for the participant telling an adult about what happened was also recorded by the parents as the child was not in earshot of the confederate. If the child could not be heard from the researcher's position, phone calls were used to hear the behavior from a farther location. Parents would text confirmation of the behavior exhibited which the researcher would show to the confederate as well. The target behaviors were

scored by each observer, then the number of agreements of the five target behaviors being scored was divided by the number of agreements and disagreements. That number was multiplied by 100 to get the percentage of agreement between the observers. IOA was 98.39% for in situ assessments (97.30% for Seamus and 100% for Angelina) and 96% for the safety skills the child exhibited with the doll training sessions (95.79% for Seamus and 100% for Angelina) with a range of 80% to 100% for both training and in situ assessments for six training and 15 in situ assessment sessions.

Treatment integrity was assessed using task analyses (see Appendix A and Appendix B); these task analyses listed the researcher's, confederates', and parents' behaviors during in situ assessments and intervention sessions. A research assistant recorded if the primary researcher had correctly executed the steps during 95% of all sessions. Data were collected for 100% of in situ assessments and 83% of training sessions. The research assistant scored either in person or through the video recordings of each session. Treatment integrity was calculated by dividing the number of correct steps by the total number of steps and multiplying by 100. Treatment integrity was 100% for in situ assessments and 95.83% for training sessions (96.25% for Seamus and 93.75% for Angelina) with a range from 93.75% to 100% for six sessions.

Social validity was assessed through a questionnaire given to the parents of the participants. The questionnaire (see Appendix C) included five items, scored on a 5-point Likert scale, regarding how parents felt about the procedure and the results of the intervention. Items included questions such as "I believe my child is less likely to go off with strangers after participating in this study," and "I would recommend this training to other parents."

A side effects questionnaire was given to the participants' parents at the end of the study (see Appendix D). The current study used a modified version of Maxfield et al.'s (2019)

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questionnaire. The modified version included the same questions, but the vocabulary was changed to represent abduction rather than firearm safety. This included questions such as "Compare to before this study my child now appears afraid to leave parents, showing fear of strangers." A scale from strongly agree to strongly disagree was included under each question

Procedure

This study used a multiple baseline across participants design to evaluate the effectiveness of small scale simulation training on generalized use of abduction prevention skills. We limited the number of assessments in baseline to two and three to limit the number of encounters each child had with the strangers/abduction scenarios, as well as to limit the number of confederates needed for the study. The study consisted of two main phases: baseline and small-scale simulation training.

Baseline. In situ assessments were used to collect baseline data. A simulation assessment was conducted at the end of baseline. During baseline assessments, the researcher and parents provided no feedback to the participants. Phase change decisions were made based on in situ assessment data.

Simulation training. The small-scale model was placed on a tabletop within each participant's home. The participant and the researcher sat in front of the model. A doll was used to act out the target behaviors, and other dolls were used to act out behaviors of necessary adults, such as the parents and those luring the children. During training, the "stranger" doll delivered a lure and the researcher instructed the participants to manipulate the child doll to exhibit the safety skills. The participants also were asked to verbalize the actions of the doll as they were happening. The researcher used the doll to model the correct behaviors as well as the verbalization of the behavior. The participant was then given the opportunity to practice using

the doll to exhibit the target behaviors and was provided feedback based on his/her responses. Participants received praise for correct behaviors and corrective feedback for any incorrect behaviors. There were multiple opportunities for practicing the behaviors with each of the three types of abduction lures and three different locations; a store, a park, and the front yard. The participant practiced until he/she independently scored a 4 in at least three consecutive scenarios across any of the models. Within 1 day following training, an in situ assessment was conducted. If the child scored less than 4, a booster simulation training session was conducted, followed by another in situ assessment. If the child scored less than 4, a second booster simulation training session was conducted, followed by another in situ assessment.

CHAPTER THREE:

RESULTS

Figure 1 shows the results of this study. There was an immediate increase in safety scores for both participants after the intervention was implemented. Angelina engaged in all the safety skills after one training session, Seamus required additional booster sessions. Angelina had high, stable responding after the intervention, then dropped to a 3 during a 4-week follow-up. Seamus never met criterion before his parents decided to terminate participation. Figure 1 shows the results including the simulation assessments conducted at the end of the baseline and intervention phase. The results in Figure 1 suggest a correspondence between responding in the in situ assessments and simulation assessments.

Angelina

During the first baseline session, Angelina told the confederate she was not allowed to go with her but stayed in the area and did not report. In the second assessment, she did not reply to the confederate, stayed in the area, and did not report the lure to her parent. She had a 2 and a 1, respectively. After two baseline sessions after Angelina brought up the abduction scenarios to her mom asking what she should do if someone approaches her. Based on her question, we decided to implement the intervention. After one simulation training, Angelina consistently scored a 4 for three consecutive assessments. During Angelina's last data point in intervention, she did not immediately run to her mom but did leave the area. Once her mom came back to the area, approximately 1-2 min later, Angelina immediately told her mom what occurred. Because she ran away immediately and told within a minute or two, she was given a score of 4.

A 4-week follow-up was conducted with Angelina. She did not run away from the area but engaged in the other safety skills (said "no" and reported the incident). Angelina self-reported that she didn't leave because her mom had said "you stay here" before leaving, and she "did what mom said." A booster session and extra assessment were not conducted per parents' request.

Seamus

Seamus' first assessment was considered a 0; after the lure was presented Seamus said yes, then ran inside and told his parents he wanted to go to the park to get candy a man said he had. However, the confederate presented his excuse before Seamus ran away which is what caused the 0. If Seamus had run away before the excuse could be made, he would have scored a 1 which is what happened in the next assessment. During the second baseline assessment, Seamus agreed to go with the confederate, began walking away, but did run away after walking a few feet; This was all done before the confederate could deliver her excuse. He did not tell an adult what occurred, and this resulted in a score of a 2. In his third baseline assessment, Seamus agreed to leave with the confederate. Following the intervention, Seamus continuously switched between a score of a 3 or 4 as he did not always report what happened to his parents. On one occasion Seamus reported the lure to his parents days later. Follow-up was not conducted due to the parents' wishes to terminate participation.

Social Validity and Side Effects Questionnaires

On the social validity questionnaire, parents strongly agreed that their children were safer now if they were to be approached by a stranger (M=5). Parents agreed that their children enjoyed participating in the study (M=4) and that the training was cost-effective (M=4.5). Parents agreed that they would recommend this study to others (M=4). Parents felt neutral that

they were confident that their children would respond appropriately if ever approached by a stranger (M=3). One parent commented that they felt the small-scale model training was "definitely valuable" but had "mixed feelings about the assessments."

Parents were asked to fill out a side effects questionnaire at the conclusion of participation. One parent reported that their child was a little more scared to leave parents and was showing fear of strangers. One parent reported that there was no change in their child being afraid to leave their parents or showing fear of strangers. Both parents reported that their children were a little more cautious to be near strangers. One parent reported that their child was a little more upset about the issue of strangers, personal safety, etc. One parent reported no change in their child being concerned about the issue. One parent reported being pleased and one parent reported being very pleased that their children participated in the study. Both parents reported being very satisfied with the way the researcher communicated what was going on throughout the study.
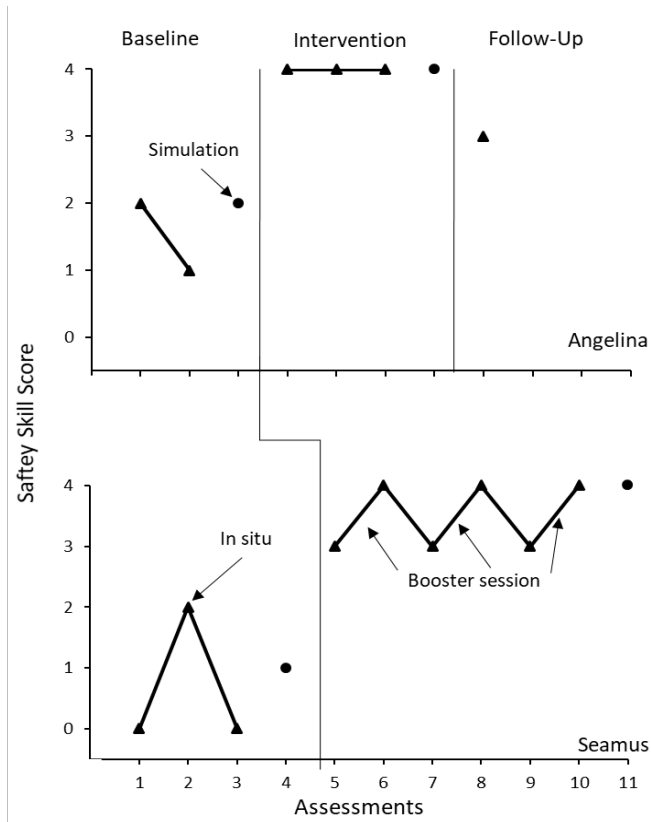
Figure 1. In situ assessments are indicated by triangles. Simulation assessments are indicated by circles.

CHAPTER 4

DISCUSSION

The purpose of this study was to investigate the effectiveness of small-scale simulation training to teach 5-year-old children abduction prevention skills. There has been some research conducted on this training method for other safety skills but none yet for abduction prevention skills. The results of this study suggest that the training method was effective at teaching the safety skills for both participants, however, it did not produce consistent responding for one individual. Additionally, during Angelina's follow-up session, she did not score a 4, but she still maintained higher responding than her initial baseline. Seamus required three booster sessions; after each booster his score increased to a 4 but reverted to a 3 by the next assessment. Angelina did not require any booster sessions to produce stable responding after training. Seamus was removed from the study by his parents before other training methods were implemented (e.g. in situ training or a reinforcer component), so it is unclear what other training methods would have been required for him to engage in the skills consistently across assessments.

It is important to note that Seamus' mother reported that he often has trouble reporting certain information to his parents. She stated that if someone has been mean to him at school (e.g., teasing, cutting in line, ignoring, etc.), he won't tell his parents even if they mention that the teacher already let them know what happened. The researcher conducted an informal interview with Seamus at the conclusion of the final booster session asking him how he feels about telling his parents "bad news" or "something scary." Seamus did not answer the question and began engaging in a variety of avoidance behaviors (e.g. throwing a ball, asking to go

outside, turning away, talking about something off-topic, etc.). It is unclear if this avoidance of "negative" interactions may have influenced his scores.

Another possible explanation for the inconsistent responding may be the time between assessments. Typically, at least one week was between each assessment to avoid overexposure to these situations that the participants had likely never encountered before. However, when conducting training and booster sessions, an in situ assessment was conducted the following day. Following a training session, Seamus responded with complete accuracy during the in situ assessment. However, the next assessment, on average about a week later, he reverted to failing to exhibit the reporting behaviors. This indicates that the behavior was not maintaining across longer than one day period.

While Seamus failed to consistently exhibit the reporting skill, it is important to note that he was still engaging in the skills necessary to keep himself safe. The primary goal of the reporting behaviors is to inform parents of a possible threat for them to alert the community. This is meant to keep the rest of the community safe by making others aware. The parts of the target behavior (saying no and running away) are those which are key to keeping the individual safe. Seamus was consistently engaging in these behaviors thus keeping himself safer.

The findings of this study suggest that small-scale simulation training could be an effective way to teach abduction prevention skills. It adds to the literature on using these table-top models and dolls to train safety skills that have been shown for pedestrian skills and gun safety (Maxfield et al., 2019; Page et al., 1976). These findings suggest that some participants may need extra booster sessions with the trainings, to continue performing the important safety skills needed to keep themselves safe. More research with more participants is needed to substantiate this finding.

One limitation of this study was the behavioral definition of the abduction prevention skill of reporting the abduction attempt. There was not an explicit requirement for the time between the lure and when the participants should tell their parents about the lure. For Angelina's last data point in intervention, she ran from the confederate but did not immediately go find her mom. Her mom came to Angelina less than 2 min after Angelina fled the area, then Angelina told her mom what had happened. Unlike Seamus' data point where he told an adult more than 24 hr later, Angelina reported while she was still within the general area of the scenario, the store. Due to this fact and the fact that the behavioral definition does not include a time limit on when the child tells, it was agreed that this data point would be considered a 4. Future research should include a time frame (e.g., 30s) for participants to tell an adult or change the definition to include the participant actively searching for the adult until they find and report to the parent immediately. Reporting should not occur more than 5s after making contact with the parent again.

Additionally, it would be beneficial to change the time frame for when the child leaves the area. This time frame should be shortened to teach the safest responding to the participants. The child should leave the area immediately or at most 5s after the lure is presented.

A second limitation would be the wording of parental instructions during in situ assessments. During Angelina's follow-up assessment, she was instructed to "stay right here." Through her self-report, this instruction was the reason she did not engage in the safety skill of running away within 30s. Future research should make sure to emphasize the importance of engaging in the safety skills. Future research should include a training component that explains/emphasizes to the participants that even when instructed to stay in an area, if a safety issue arises, it is okay to engage in the appropriate safety responses, even if it requires them to

disobey some other instruction. Safety skills should be taught to be a priority over other instructions.

Additionally, it is important to look at the reactions of parents during assessments. The researcher and parents had discussed the simple "thank you" response that parents were asked to give if their child reported the confederate's actions. This was done to avoid the possibility of reinforcing responding and thus altering future in situ assessments, especially in baseline, but it isn't an entirely natural response. Parents would most likely respond by telling their child that they will report the incident to either police or some management, not thank the child and move past the event. This may be why Seamus did not consistently engage in the appropriate behaviors. He was told during training that it was very important for him to inform his parents of what happened to keep him and others safe, yet when he did the appropriate response, the only recognition was "okay, thank you." This may not have acted as enough reinforcement to maintain the behavior. Future research should look to find a way for parents to respond naturally in a way that would aim to avoid altering future assessments.

Future research should replicate this study to get clearer results and conclusions. At this time, the study only includes two participants which limits the conclusions that can be drawn from the data. Future research should include more participants of varying ages. Both participants were 5 years old. It is unknown if this training would be effective for younger children. Maxfield et al. (2019) showed that small-scale simulation training was effective for training firearm safety for children 5-years-old and younger. Future research on small scale simulation training needs to be conducted with younger children and children with disabilities across a number of safety threats.

Overall, these findings suggest that BST using a small-scale model and a few dolls were sufficient for teaching 5-year-old children abduction prevention skills, with some booster sessions needed. These results are preliminary with only two participants so additional research is needed. This method of training may be useful because teaching can occur without having children encounter potential abduction scenarios. Also, based on the current results (and those from Maxfield et al., 2019) that showed correspondence between results of in situ assessments and simulation assessments, there is a possibility that participants may only need to be assessed using the table-top model and dolls to demonstrate their skill acquisition. Additional research should be conducted to better substantiate these findings showing a correspondence between the two forms of assessment. If substantiated, researchers might use repeated measures with simulation assessments of safety skills in baseline and intervention with occasional probes using in situ assessments. Less reliance on repeated in situ assessments would make this research more socially acceptable and potentially increase accessibility.

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APPENDICIES

Appendix A: In Situ Assessment Treatment Integrity Sheet

IN SITU ASSESSMENT	Sess #1	Sess #2	Sess #3	Sess #4	Sess #5	Sess #6	Sess #7	Sess #8	Sess #9	Sess #10
1. Assessor is out of view	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
2. Parent instruct child to go to location/stay in location alone	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
3. Parent informs participant where they will be if the participant needs them	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
4. Parent is out of view	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
5. After 5-10s, participant is approached by Confederate	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
6. Confederate presents lure	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
7. If participant agrees or does not respond after 20s, confederate makes up an excuse to leave by themselves	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
8. If participant says "no" to leaving, the confederate walks away	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
9. If child reports to parent, parent says "thank you" but with no additional praise or feedback	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
10. Data is recorded	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

Items: _____/100=_____*100=_____

TxI Collector Name(s) and Signature(s):

Appendix B: Simulation Training Integrity Sheet

TRAINING	Sess #1	Sess #2	Sess #3	Sess #4	Sess #5	Sess #6	Sess #7	Sess #8	Sess #9	Sess #10
1. Assessor sets up materials	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
2. Assessor brings participant to table	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
3. Assessor sits near (next to or in front of) participant	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
4. Present the model to the participant and describe the roll of each doll (e.g. "This doll will be the father.")	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
5. Place parent doll away from child	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
6. Instruct the participant to engage in an activity within the small-scale model (e.g., go to the toy aisle, play in the front yard)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
7. Have the "stranger" doll present the lure	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
8. If participant does not engage in one or more safety skill steps:										
8a: Immediately stop the participant's play with doll	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
8b: Deliver corrective feedback	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
8c: Model the correct behavior using the doll	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

8d: Instruct the participant of safety skill steps until all steps are completed correctly	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
8e: Represent the model and scenario until the participant completes all steps correctly in a total of 5 scenarios	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
9. If the participant engages in all safety steps correctly, deliver social positive reinforcement (e.g., praise statements, high-fives, etc.)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
10. Records the score	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
11. Repeat with 2-3 different lures	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
12. Repeat with 2-3 different locations	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

Items: _____/160=_____*100=_____

TxI Collector Name(s) and Signature(s):

Appendix C: Social Validity Questionnaire

On a scale of 1 to 5, Please circle the number that relates to your level of agreement with the statements below
I believe my child is safer now if he or she is approached by a stranger   1   2   3   4   5 strongly disagree   disagree   neutral/no opinion   agree   strongly agree
I would recommend this training to others.   1   2   3   4   5 strongly disagree   disagree   neutral/no opinion   agree   strongly agree
My child enjoyed participating in this study.   1   2   3   4   5 strongly disagree   disagree   neutral/no opinion   agree   strongly agree
I am confident that my child will respond appropriately if ever approached by a stranger.   1   2   3   4   5 strongly disagree   disagree   neutral/no opinion   agree   strongly agree
I believe this training was a cost-effective way to teach abduction safety to my child.   1   2   3   4   5 strongly disagree   disagree   neutral/no opinion   agree   strongly agree

Additional comments regarding the study:

_____

_____

_____

_____

_____

Appendix D: Side-Effects Questionnaire Items

1. Compared to before this study my child now appears:

    a. Scared: afraid to leave parents, showing fear of strangers

    __Much more scared

    __A little more scared

    __No change

    __Less scared

    __Much less scared

    If a change occurred, please describe briefly

    _____

    _____

    _____

    b. Cautious: hesitant to be near strangers

    __Much more cautious

    __A little more cautious

    __No change

    __Less cautious

    __Much less cautious

    If a change occurred, please describe briefly

    _____

    _____

    _____

    c. Upset: concerned about the issue of strangers, personal safety, etc.

    __Much more upset

    __A little more upset

    __No change

    __Less upset

    __Much less upset

2. Other changes I noted in my child's behavior are: Please describe or mark N/A if no change was observed

_____

_____

_____

3. How pleased are you that your child participated in the study?

    __Very pleased

    __Pleased

    __Neutral

    __Disappointed

    __Very disappointed

4. How satisfied are you with the way the researchers communicated what was going on throughout the study?

    __Very satisfied

    __Satisfied

    __Neutral

    __Unsatisfied

    __Very unsatisfied

5. Did you terminate your child's participation in the study? Yes or No

If yes, please explain why

_____

_____

_____

6. Please note any additional comments you have about the study.

_____

_____

_____

Appendix E: USF IRB Approval

UNIVERSITY OF SOUTH FLORIDA
USF RESEARCH & INNOVATION

RESEARCH INTEGRITY & COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd, MDC35, Tampa, FL 33612-4799
(813) 974-5638   FAX (813) 974-7091

8/26/2019

Jessica Ritzmann
ABA-Applied Behavior Analysis
10912 Sakonnet River Dr
203
Tampa, FL 33615

RE: **Full Board Approval for Initial Review**
IRB#: Pro00040984
Title: Evaluating the Effects of Small-Scale Simulation for Teaching Abduction Prevention
         Skills

Study Approval Period: 8/16/2019 to 8/16/2020

Dear Ms. Ritzmann:

On 8/16/2019, 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):

Protocol 40984 Version 1 8-20-19.docx

Consent/Assent Document(s) *:

SB Combined Consent and Parental Permission 8-20-19.docx.pdf
Verbal Assent Script 8-20-19.docx **

*Please use only the official IRB stamped informed consent/assent document(s) found under the
"Attachments" tab. Please note, these consent/assent documents are valid until the consent
document is amended and approved. ** Please note that the verbal assent is not stamped.

Research Involving Children as Subjects: 45 CFR §46.404
This research involving children as participants was approved under 45 CFR 46.404: Research
not involving greater than minimal risk to children is presented.

Requirements for Assent and/or Permission by Parents or Guardians: 45 CFR 46.408
Permission of one parent is sufficient and assent will be obtained as outlined in the IRB application.

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 via an Amendment for review and approval. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) business days.

We appreciate your dedication to the ethical conduct of human subjects 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., Chairperson
USF Institutional Review Board