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Peer Tutoring To Teach Children To Seek Help When Lost

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PEER TUTORING TO TEACH CHILDREN TO SEEK HELP WHEN LOST

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by

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ABSTRACT

PEER TUTORING TO TEACH CHILDREN

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There are many programs that are designed to teach children safety skills. Skills such as gun safety, first aid, and abduction prevention have all been taught using a method called Behavioral Skills Training (BST). However, BST only teaches a few children at a time and is often taught by an expert. This study aimed to test whether young children (5 year olds) can learn from older peer trainers (11 & 12 year olds) who have been taught to use BST. The safety skill targeted for the current study was the behavior of seeking help when lost in a store because the use of peer training has not yet been studied in terms of teaching this skill. Two young learners and two trainers participated in the study. The results of varied: one learner supported the hypothesis, while the other learner's performance did not meet the required criteria. Future research should include more research participants, a larger variety of safety skills, and improved efforts in recruiting.

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CHAPTER I

STATEMENT OF THE PROBLEM

Over the past decades, numerous laws have been developed for the protection and safe keeping of children. However, far too often, the weekly news reports devastating incidents involving one or more children - ranging from playing with fire, to gunplay, to access to hazardous cleaning supplies, to abductions. Many such incidents may have been avoided if the children had been taught specific and proper safety skills.

As young children grow older, their time apart from caregivers increases. During these bouts of independence, they may encounter situations in which they do not know the proper behaviors to display in order to keep safe. Training programs and instructional videos have been used to teach proper safety skills to children. For example, a pro-gun organization sponsored a commercially available instructional gun-safety video that targeted 4 to 6 year olds. Results showed that watching the video led to the children correctly reporting what they should do when they find a gun. However, the children were unable to reliably display the appropriate behavior when they found a gun during a role-play scenario (Himle, Miltenberger, Flessener, & Gatheridge, 2004). Since then, researchers have tried a number of strategies to improve the instruction of a variety of safety skills for children.

Safety skill areas such as gun safety, first aid, and abduction prevention have been the primary targets in the research. While no one doubts that these are important areas to address, there is also a critical need to teach children how to seek help when lost in the community. The need to teach this skill is significant; in 2002, the Department of Justice

released the results of a parent survey in which 90% of surveyed parents admitted to losing their child at some point. Also, according to interviews, convicted child molesters commonly admitted that when committing child crimes, they took advantage of such situations (Forgione, 1976). To date, only four studies (Bergstrom, Najdowski, & Tarbox, 2012; Hoch, Taylor, & Rodriguez, 2009; Pan-Skadden et al., 2009; Taylor, Hughes, Richard, Hoch, & Coello, 2004) have been published in which seeking help when lost was explicitly taught. All of these studies used Behavioral Skills Training (BST) procedures to teach one child at a time, and all have shown successful results in teaching children to seek help when lost. However, the cost in terms of time and resources to teach one child at a time is so great that it's unlikely to be extended to all children who need the training. One solution is to use group-based peer tutoring to address this issue. Teaching peers to train other children proper safety skills, including seeking help when lost, can create an environment in which children can learn from one another and reduce the need for expensive individualized training. The chapter that follows reviews the literature on safety skills, behavioral skills training, and peer tutoring and sets the stage for the current study.

CHAPTER II

REVIEW OF THE LITERATURE

As toddlers grow into preschool-aged children, they become increasingly self-reliant, and begin to venture further from their caregiver(s). This independence may lead children to face situations where they may not know the appropriate behavior to use at a given time. For example, young children may find themselves being approached by strangers or face any number of unexpected emergencies or hazards without the skills to stay safe. It is important for parents, teachers, and other caregivers to anticipate these situations and teach children the skills they will need to safely negotiate such circumstances.

Teaching appropriate safety skills has been the focus of past research related to a narrow range of risky situations. They include preventing gunplay (Himle et al., 2004; Jostad, Miltenberger, Kelso, & Knudson, 2008; Miltenberger et al., 2005), abduction prevention (Beck & Miltenberger, 2009; Johnson et al., 2005; Poche, Brouwer, & Swearinger, 1981; Poche, Yoder, & Miltenberger, 1988), first-aid (Marchand-Martella, Martella, Agran, & Salzberg, 1992), and seeking help when lost (Pan-Skadden et al., 2009).

Himle et al. (2004) successfully taught young children (4 to 5 years old) the proper behaviors to display when they come across a firearm in their environment. The researcher targeted three skills: (1) not touching the firearm in any way, (2) leaving the area in which the firearm is located, and (3) telling an appropriate adult about the unattended firearm. In order to accurately record the target behaviors, the researcher

created a scoring system. A score of 0 indicated the child touched the firearm, a score of 1 indicated the child did not touch the firearm, but did not leave or notify an adult, a score of 2 indicated the child did not touch the firearm, and left the area without notifying an adult, and a score of 3 indicated that the child performed the correct behaviors as taught. During baseline assessment, half the children touched the firearm at least once, and the others did not touch the firearm, but remained in the area without performing the appropriate actions. After training, results showed all participants performed the correct behaviors to criterion.

Johnson et al. (2005) taught preschool-aged children abduction-prevention skills. In this study, the researchers also broke down the skill into three targeted behaviors. When approached by a stranger, the child (1) should say "No", (2) walk or run away immediately (within 10s), and (3) tell a trustworthy adult. Similar to Himle et al. (2004), Johnson et al. (2005) devised a point system to score the child's acquisition of the three skills. The researchers approached the children using one of the following four common lures: authoritative, simple, incentive, and assistance requests. In the authoritative lure, the confederate told the child that a parent or teacher gave permission for the child to go with him or her (e.g., the confederate might say, "Your mom said I needed to pick you up today."). In the simple lure, the confederate tells the child to come with him or her (e.g., "Would you like to go for a ride?"). In the incentive lure, the confederate tells the child that s/he would receive a prize for accompanying him or her (e.g., "I'll buy you candy if you come with me."). In the assistance request lure, the confederate asks for help (e.g., "Can you help me find my puppy?"). The results showed that appropriate responses to

these lures from baseline to training to follow-up assessments increased. Scores ranging from 0 to 2 obtained during baseline were increased successfully to the criterion score of 3. All of the children were able to display the appropriate skills in abduction prevention during follow-up assessment.

Research on safety skills is not limited to young children as participants. People of all ages and abilities are at risk for injury, including those with developmental disabilities who tend to be at higher risk than the general population (Leland, Garrard, & Smith, 1994). For older learners with disabilities, the primary goal is to become independent in the community. Deficiencies in safety skills can hinder this effort (Taylor et al., 2004). Research with disabled participants has focused on such topics as seeking help when lost (Bergstrom et al., 2012; Taylor et al., 2004), disposing of dangerous materials (Winterling, Gast, Wolery, & Farmer, 1992), first aid (Marchand-Martella et al., 1992), and abduction prevention (Gunby, Carr, & Leblanc, 2010).

This extended line of research has focused on participants who have been diagnosed with a variety of developmental disabilities and has addressed a range of ages. For example, Marchand-Martella et al. (1992) taught 4 participants with moderate intellectual disabilities (ages of 7-11) to properly administer first aid to treat simulated injuries such as burns, cuts, and abrasions not only to themselves but also to others. The training effectively increased the participants' first-aid skills as well as promoted generalization from the training area (a staged kitchen) to the participant's home and school.

Teenagers diagnosed with autism were successfully taught to seek assistance when lost in the community (Taylor et al., 2004). In this study, Taylor and colleagues used a pager to signal the participants to use the appropriate help-seeking behaviors. The participants were first taught in a classroom environment to give a communication card to an adult when paged. The communication card contained the participant's name, a statement that they were lost and in need of assistance, and instructions to call a caregiver. The second stage was a community-based assessment. This procedure was similar to the classroom-based training; however, the participants were out in the community wearing a pager and had a communication card in their possession. Unlike the training condition, the teacher moved out of sight, then s/he would activate the pager. All three of the teenage participants were able to produce the communication card and request help in response to the vibrating pager when out in the community. Another study successfully extended the Taylor et al. (2004) study to the use of cell phones instead of pagers (Hoch, Taylor, & Rodriguez, 2009). The target responses that were taught to this new group of participants were (1) answer the cell phone, (2) follow the instructions given to find an adult, (3) say a help statement such as "I'm lost", (4) give the cell phone along with a communication card to the naïve adult, and (5) wait with the adult until reunited with their caregiver.

In all of the above cases, deliberate, overt training of the necessary skills in a context-relevant (or simulated) setting led to improvements in the acquisition of safety skills by either children or individuals with developmental disabilities. The general

methodology for teaching safety skills in the previous studies has consistently been Behavioral Skills Training.

Behavior Skills Training (BST)

In the 1970s, researchers began to use training packages to teach children social skills (Bornstein, Bellack, & Hersen, 1977; O'Conner, 1972). Each study had success using certain aspects of what would later become BST. O'Conner (1972) found that modeling improved peer interaction among preschoolers more than the use of social reinforcement alone. Bornstein, Bellack, and Hersen (1977) used modeling, reinforcement, and corrective feedback after a role-play scenario to teach assertiveness behaviors in children. These studies laid the foundation for what we know now as BST.

In 1981, behavioral methods were being used to train safety skills to children (Poche et al., 1981). Poche et al. taught children abduction-prevention skills using modeling, rehearsal, and positive feedback. These early components evolved into the 4 components of modern BST; instruction, modeling, rehearsal, and feedback (Miltenberger, 2012).

The instruction component is aimed at teaching the learner the target skill by describing the targeted response(s). For this component to be successful, it is important for the instructor to be as specific as possible, and this is especially important when the targeted response consists of a chain of behaviors. It is also best to provide instruction that: (1) describes the response at the learner's level, (2) describes the correct order in which the learner is expected to perform the behavior(s), and (3) delivers instructions only when the learner is ready. Instructions should be delivered as many times as needed.

BST is designed to have the learner listen to the instructions, watch the demonstrations, and then rehearse the described response(s) (Miltenberger, 2012).

The modeling component of BST consists of the targeted behavior being demonstrated for the learner. The learner watches the demonstration of the behavior, and then immediately imitates the behavior. Modeling is effective only if the learner already has an imitative repertoire. Modeling can be delivered live or symbolically (Miltenberger, 2012). For example, video modeling has been used to teach abduction prevention to preschoolers (Ponch et al., 1988), vocational skills to adults with autism (Allen, Wallace, Renes, Bowen, & Burke, 2010), and complex play to preschoolers with autism (D'Ateno, Manginpanello, & Taylor, 2003).

Rehearsal gives the learner a chance to perform and perfect the response. This step should come only after the response has been clearly and repeatedly described and modeled for the learner. Rehearsal should be used in an appropriate role-play setting or appropriate environment in which the learner would be expected to perform the taught response. Rehearsal gives the instructor a chance to see the learner perform the response and provide feedback; both reinforcement for correct behaviors and corrective comments for improvement (Miltenberger, 2012).

Miltenberger (2012) notes that the feedback component may be the most critical part of BST. Immediate reinforcement for those aspects of the learner's behavior that are performed well will create a reinforcement-rich learning environment that enhances and maintains motivation. Immediate corrective comments for those behaviors that require additional work will give the learner a chance to improve on their next trial. He also

recommended that a positive comment always be delivered before any corrective comments to minimize any punitive effects of the feedback (Miltenberger, 2012). As part of BST trainings, a number of new developments have been added to increase training efficacy, including *in situ* assessment and training, and peer tutoring.

In Situ Assessment and Training

BST *in situ* involves training/assessment in the exact situation or locale where the target behavior is likely to occur or be needed. *In situ* is favored because the use of traditional BST frequently occurs outside the environment where the skills are likely to be used, such as in one's home or in a classroom is likely to facilitate transfer (Miltenberger, 2012). This addition to standard BST was in response to a number of cases in which the response was performed accurately in the environment in which it has been rehearsed, but the response did not generalize to different environment. For example, Himle et al. (2004) used *in-situ* assessment and later *in-situ* training when the child did not respond correctly. The researchers first taught gun-safety skills using BST in a classroom setting. Each child had to obtain a score of 3 (based on three behaviors as discussed previously) after going through training. Once the child displayed each skill in the response chain the children were then required to practice the response in a variety of scenarios. The scenarios presented were tailored to each child's family situation and home description. In a classroom setting, the researcher asked the child participant to imagine a scenario in which they accidentally find a gun. For example, the researcher would pretend to be the child's father, and he wants the child to go retrieve a book from another room. Beforehand, the researcher placed a prop gun next to the book in the other

room in plain sight. When the child went to retrieve the book, the child's behavior was recorded on videotape. Baseline measures showed that half of the children failed the assessment. BST training was employed for those children. Following training, for those children who did not respond correctly during the initial post-training assessment or after two booster sessions, the researchers turned the assessments themselves into training opportunities. If a child did not respond appropriately or immediately, the trainer would intervene with instructional training, modeling, and feedback. Turning the assessments into training opportunities led to the children's success in subsequent assessments.

Because the current study represents a preliminary test of BST training conducted by elementary-aged peers, we were reluctant to attempt in-situ assessment until the proposed procedures are shown to be effective in more controlled and constrained environments. Initial training and assessments for the current study will be conducted in a supervised, controlled training setting in a university classroom decorated like a grocery store. Although the conclusions will be somewhat limited by these procedures, it is most ethical to postpone *in situ* assessment until evidence of successful peer-training using BST methods can be established.

Peer Tutoring

The success of peers as tutors stems from the relative salience of peers to the child's natural environment and has led to many studies using peers to teach social interactions (Gumple & Frank, 1999; Kamps et al., 1992; Pierce & Schreibman, 1995, 1997; Xu, Gelfer, Sileo, Filler, & Perkins, 2008). Researchers have studied the effectiveness of peer tutoring in areas such as increasing social skills from socially-

rejected children (Gumpel & Frank, 1999), increasing the interactions for students with autism in an integrated first-grade classroom (Kamps et al., 1992), increasing social skills and play behaviors in young children with autism (Pierce & Schreibman, 1995, 1997), and increasing social interactions for students whose second language is English (Xu et al., 2008).

In these studies, evidence emerged that peer tutoring not only helped those students targeted for the study, but also helped some of the tutors themselves. For example, Gumpel and Frank (1999) had older, socially isolated boys serve as peer tutors for younger, social-isolated boys. The two older boys were trained by a researcher to provide social-skills training on the five components of social competence outlined in Gumpel (1994). The peer tutors then met alone with their tutee 4 times per week. These meetings consisted of the tutor engaging in a brief discussion of the tutee's social behavior since their last meeting. Also in this meeting the tutor and tutee would review the self-monitoring sheet the tutee used and if necessary would review the component of the social competence model that coincided with the deficit. For this study the researchers hypothesized that although their intervention was designed for the benefit of the younger students, there would be "collateral positive effects" (p.115) on the older students. The results of their study demonstrated that not only could cross-age peer tutoring be used to teach social skills to the tutee, but also that it was beneficial for the tutor as well since the tutor engages and becomes fluent at the behavior(s) they are teaching.

Peer Tutoring and Safety Skills

Peer tutoring research has not been limited to teaching children social skills. Combined with the use of behavioral skills training, peer tutoring has been used to train safety skills as well. Jostad et al. (2008) investigated the use of peer tutoring to teach gun safety. The researchers taught BST techniques to the peer tutors, who then taught their peers the gun-safety responses using those BST techniques. The results of the study showed that both the trainees and the peers demonstrated the appropriate safety response in the presence of a gun in their natural environment

Teaching young children how to seek help when lost is an area that requires improvement and further investigation. As mentioned before, 90% of parents have admitted that their child has become lost at one time or another (US Department of Justice, 2002). Interviews with child molesters revealed that abductions and molestations are often not planned, and usually occur when an opportunity arises (Forgione, 1976). Although the use of BST and *in-situ* training has shown success in teaching a variety of safety skills, there is a need for a more efficient and more effective way to teach proper safety skills to all children (Jostad et al., 2008). Peer training may provide that avenue. First, multiple peers trainers may help increase the speed of training relative to reliance on a single adult teacher to train dozens of kindergartens. Second, individualized instruction tends to be more effective then large group instruction was behavior is concerned. Finally, the salience of peers may create a greater level of comfort for learning the new skill, compared to an adult, who may be perceived as "lecturing" a child on how to behave.

Purpose of the Current Study

The purpose of the current study is to determine the degree to which peer tutoring can be used to successfully teach skills for seeking help when lost in the community using BST. This study will add to the current limited research in the area of safety skills training. Specifically, this study investigates the question of whether elementary-school aged peer-trainers can be taught to effectively utilize the stages of BST to teach younger elementary school-aged peers to appropriately seek help when lost.

CHAPTER III

METHOD

Participants

Two older elementary school–aged children participated as the peer trainers. Students were recruited from the local elementary school. Jane (pseudonym) was 11 years old; Mary (pseudonym) was 12 years old. Both peer trainers were in the 5th grade. Two younger elementary school-aged children participated as the learners. Marshall (pseudonym) was 5 years old; Deena (pseudonym) was 5 years old. Both learners were in kindergarten.

Materials

With permission from the elementary school principal, initial recruitment relied on the use of informational flyers. The flyers invited parents of students who had been identified as potential candidates for the study to consent to their child being interviewed to be either and learner or a peer trainer (Appendices A & B) participant in the study. Once the children were identified, the flyers (Appendices A & B) were sent, and parent permission to be interviewed only was returned, the school counselor then interviewed the children using scripts. The flyer made it clear that only a portion of those students who responded was likely to be needed for the actual research study and that parents would have an opportunity to agree to their child's participation, prior to the beginning the study. Two separate interview scripts were used, one for the learners (Appendix C) and one for the trainers (Appendix D). Once a student identified as a candidate for the study, a second letter was sent home to parents informing them of the time, date and

location of the study (Appendices E for learners & F for potential trainers). A parent packet (Appendix G) that explained BST and the steps for teaching a child how to seek help when lost was also provided to the parents of the children that participated in the study. Informed consent forms (Appendix H) included a brief summary of the study, of their child's role, and the university-approved informed consent form with detailed contact information for the lead researcher, the faculty advisor and the Central Washington University Human Subjects Research Office. Debriefing forms (Appendix I) were distributed as children completed the study.

A letter granting permission for the research to be conducted at the school (Appendix J) was obtained from the school principal before any flyers were sent. (Letter of cooperation is on file with CWU HSRC office).

Similar to the scripts used by the school counselor during the interview process, the lead researcher and research assistant used a script for gaining assent from the learners (Appendix K). The peer-trainers signed an assent form indicating their willingness to participate in the study (Appendix L).

Recruiting of Subjects

Initial Invitation to Interview. The school principal was contacted to gain permission to recruit students. Upon gaining permission, the school counselor was briefed about the study and asked to screen students for English fluency and normal cognitive development, and to select those students who would best be served by the training. At that point, informational flyers inviting parents to grant permission for their child to participate in an initial interview were given to the identified students. The

researchers were not told which students received the invitation and which did not. Parents who did not have confidence in their child's ability to seek help appropriately when lost were encouraged to participate and it was clear that they were only agreeing to have their child interviewed; a subsequent invitation to participate was sent after the interview process was completed.

Prescreening for Learners. During the scripted interview (Appendix C), the school counselor asked the children to describe what they would do if they found themselves lost in a store. Only those kindergartners who did not describe a similar or comparable method for safely seeking help when lost were invited to participate. Invitations to participate (Appendix E) with the time, date and location of the study (and contact information for parents with questions) were sent home with those children by the school counselor. Follow-up confirmation phone calls were also used as a reminder for the study upcoming date.

Prescreening for Peer Trainers. The older, 5th grade children were also interviewed for clarity of speech and knowledge about safely seeking help when lost (Appendix D). It was not critical that the older children knew how to seek help when lost as that skill was taught later, but they needed very clear, articulate speech if they were to serve as peer trainers. The discussion about seeking help when lost informed us about their knowledge and their speaking ability. Children with clear, articulate speech received an invitation to participate. Invitations to participate (Appendix F) with the time, date and location of the study (and contact information for parents with questions) were sent home with those children by the school counselor. Children who spoke too quietly or were

difficult to understand, and those who provided inappropriate responses (e.g. "I would grab some food and run out the door".) were not invited to participate as peer trainers, but were thanked and dismissed. For those who were willing for their child to participate, follow-up confirmation phone calls were also used as reminders for the upcoming study date.

Procedure

Designated Training/Testing Locations. The parent(s) brought their child to the Psychology Building at Central Washington University (CWU). Two adjacent classrooms in the psychology department were used concurrently throughout the study. The first classroom was used as the location for all peer-training sessions and initial assessments. The second classroom was utilized as a waiting room for both parents and children. Books, coloring pages, crayons and other art supplies were provided as entertainment while the children waited. There was a minimum of two research assistants in each room at all times to supervise and ensure child safety.

Arrival and Informed Consent. Peer trainers arrived first; an hour later the student learners arrived. In both cases, a more detailed informed consent (Appendices H) process was completed. The HSRC document was read to the parents while the children waited in the supervised waiting room. Parents were repeatedly reminded that they could terminate their child's participation at any time. When informed consent forms were signed, the children were escorted individually into the training room. Once they were in the training room, the study was explained further and assent was obtained from the peer trainer via an assent form (Appendix L). Assent for the learners was obtained at the

beginning of every trial/session throughout the study using the before mentioned script (Appendix K).

Behavioral Skills Training for Peer Trainers. Before the arrival of the learners, the lead researcher provided BST to the two peer-trainers simultaneously on how to seek help when lost. Two research assistants were present as well to observe the training and become familiar with the response chain. To ensure consistency, a BST checklist was used both by the lead researcher and by the peer trainers (Appendix M). The training consisted of the four standard BST components: instruction, modeling, rehearsal, and feedback.

Instruction. The lead researcher explained each step of the behavior and why it was important to only talk to store employees and not unknown adults. Information in this section was adapted from the preschool/kindergarten targeted lesson plan for personal safety used by the school.

Modeling. Next, the lead researcher explained each step of the modeling process and how to model seeking help. The lead researcher then modeled each step of the desired response so that the peer trainers could observe the response chain first hand.

Rehearsal. Each of the peer trainers was then given a chance to perform the behavior modeled by the researcher.

Feedback. Feedback was provided to the peer trainers by first providing a positive comment some aspect of the learner's performance and then explaining where they needed improvement, if any. In BST, it is recommended that positive reinforcing

feedback always come before corrective feedback. This means the instructor must find at least one aspect to reinforce before any other feedback is given.

For the purposes of this study, the term "lost" was to be defined as, from Taber, Alberto, Hughes and Seltzers (2002), "not being able to find the person with whom you arrived at a particular destination" (p.143). The peer-trainers were taught to respond appropriately when they were "lost." The appropriate response chain had four steps:

1. Immediately looking right and left without leaving the aisle
2. Walking toward the front of the store
3. Approaching a cashier
4. Gaining assistance from the cashier with an appropriate "lost statement"

Following acquisition of the four steps by the peer-trainers, the lead researcher instructed the peer-trainers in how to use the steps in BST to teach their learners. During the training, the lead researcher emphasized the importance of approaching a cashier instead of an unknown adult to seek help and how to explain this to the learner. During the modeling portion of the training, the lead researcher acted as if he was lost in a store and could not find his caregiver. While performing the appropriate help-seeking behaviors, the researcher listed the steps out loud, and encouraged the peer-trainer to do the same during rehearsal with learners.

The peer-trainers then had a chance to rehearse help-seeking skills that they just observed and the researcher provided feedback. To teach the peer-trainer to use appropriate feedback, the researcher engaged the two trainers in role-play. For example, peer-trainer Mary pretended to be the learner and perform the skill incorrectly, in which

case the peer-trainer Jane first made a positive statement and then educated Mary on what should have been done differently and then modeled how the skill should have been displayed.

A final test was given where the peer-trainer was scored on correct use of BST training to teach how to seek help when lost. The peer-trainers selected were given a checklist (Appendix M) to use as a prompt during their final test. The same checklist was available for them to use while they trained the learners. The checklist contains the proper order and small reminders for each of the behaviors to be taught. During the feedback component, the peer trainers were encouraged to write notes on the checklist to use as prompts so that they could better understand each step.

The lead researcher scored the peer-trainer's performance using a five-point Likert scale (See Table 1.) as well as referred to the BST checklist to ensure accurate scoring. Both trainers successfully completed all four steps with a score of 4 on two consecutive trials and then were invited to train learners.

Learner Baseline. Upon arrival, learners waited in the waiting room until their parents completed the informed consent process. Then they were escorted to the training classroom. Each learner's baseline was assessed individually in the training classroom by the lead researcher and one other research assistant. The location was arranged in a way that it simulated a grocery store. Chairs and tables were arranged into aisles and an instructor's desk was used as a cashier station. Food and non-food containers were arranged in the tables to simulate a grocery store. The lead researcher asked each learner to pretend that they were at a grocery store with their parent and pointed out the relative

features ("These are aisles. See all the items. This is the cashier. This is the front of the store."). Next the researcher asked the learner to show what he or she would do if the parent was nowhere in sight, (Parents were not in the room so as to not influence their child in any way.) Each learner was then given 20 seconds to act. Once the trial ended, the learner was thanked and scheduled for training with a peer. Neither of the learners performed the required sequence during baseline and both continued to the training phase.

Table 1.

Likert-Scale Scoring of Peer-Trainers.

Score	Meaning
0	The peer-trainer did not use any component of the BST or used all of them incorrectly.
1	The peer-trainer correctly used one component of the BST.
2	The peer-trainer correctly used two components of the BST.
3	The peer-trainer correctly used three components of the BST.
4	The peer-trainer correctly used four components of the BST.

Peer-Led BST. During the peer-led BST classroom-training phase, the lead researcher and two research assistants were present to assure the seeking help skills were being taught correctly (using BST). Each trainer served as the teacher for one learner. Once the peer-trainer had successfully provided a correct BST session in which the

learner performed each step in the correct order and received full marks on two occasions, the learner was permitted to move on to the classroom assessment.

Classroom Assessment. The assessment occurred on the same day. Successful learners were escorted back to the waiting room in which they had participated in free-choice distractor activities (i.e. games, books, or art materials) while they waited for their assessment. Each learner was assessed individually. The classroom assessment was set up exactly like the peer-led training sessions. One of the research assistants provided the scenario for each learner via brief script, again asking each learner to pretend that they were lost in a store. The researcher started the trial by saying, "Go". If the learner did not act within the allotted time (20 s), the researcher assistant then prompted the learner by saying, "It looks like we are lost, what should we do?" Prompted trials were counted as failed attempts. Two prompted trials resulted in the child being taken back to training for a booster session with their peer trainer. Following each assessment trial, the learner was asked to wait 2 min before the next test began. Consistent with Pan-Skadden's et al (2009) final participant, when two consecutive assessment trials were successfully completed the child was dismissed to the waiting room.

Ensuring Child's Safety throughout the Investigation. The children were observed at all times by a minimum of two research assistants throughout this study. No adults were left alone with the children. Two female research assistants or the parent escorted children to the bathroom.

Dependent Variable and Data Collection. The responses recorded during the assessment consisted of a score from 0-3 (See Table 2). Points were given depending on

the type of responses given. A score of 0 was recorded if the child did not engage in any of the required steps in the response chain. A score of 1 indicated the child used an alternative method of seeking help, such as moving-up and down aisles, or approached an unknown adult to ask for assistance. A score of 2 indicated the child successfully located a cashier, but failed to request assistance. A score of 3 indicated the child successfully located the cashier, and engaged with the cashier to gain assistance.

Table 2**.**

Likert-Scale for Scoring Learners.

Score	Meaning
0	The learner does not perform any appropriate behaviors
1	The child uses an alternative method of seeking help, such as moving-up and down aisles, or approaching an unknown adult to ask for assistance
2	The child successfully locates a cashier, but fails to gain assistance.
3	The learner performs all behaviors as practiced.

Experimental Design. For this study, a multiple-baseline-across-participants design was used to measure whether or not the learners were successfully taught appropriate help-seeking behavior by their peer-trainers. Multiple baselines designs are among the most widely used and highly flexible designs in applied behavior analysis. The collection of baseline (pre-treatment) data are compared to treatment data to evaluate treatment efficacy. Multiple baseline designs allow an experimenter to predict, verify, and replicate the same treatment across a variety of subjects, settings and/or behaviors.

The basic design of the multiple baseline approach retains the crucial baseline logic of reversal designs without requiring the reversal to show experimental control over the behaviors (Cooper, Heron, & Heward, 2007). This is particularly helpful in situations where removal of the treatment might be harmful to the participant, may be impossible if the treatment is intended to teach a previously non-existent skill, and/or may be impractical from a treatment perspective.

The current study employed a multiple-baseline-across-participants design. The underlying logic of this particular multiple-baseline design requires that several participants with similar behavior-change needs be identified. Pre-treatment baseline data were collected on each participant concurrently. Treatment onset was staggered across participants to rule out time coincidences. As each individual was exposed to the treatment, behavior change was measured. Presumably, if the treatment is not responsible for improvements in behavior, observed behavior changes should not be highly correlated with treatment onset. Conversely, consistent behavior changes following each subsequent treatment imply intervention efficacy. This logic is further tested via continued, ongoing baseline data collection in those participants who are not receiving treatment at that time. As behavior improves for the first subject, the other participants' behaviors (ideally) do not change; thus validating the logic of the null hypothesis and allowing it to be rejected in the first case. Subsequent staggered treatment onsets for the remaining participants provide affirmation and verification of treatment efficacy without the need for a return to baseline (Cooper et al., 2007).

The multiple-baseline-across-participants design is the most widely used design in applied behavior analysis because the targeted behaviors often represent common problems in the larger behavior treatment community. It is an effective way for a clinician or teacher to determine the effectiveness of an intervention for the same behavior across several clients or students (Cooper et al., 2007).

Single-Subject Design and Visual Analysis. The data collected during this study were graphed and then analyzed through the use of behavioral visual analysis. Visual analysis is a standardized inspection process in which the researcher interprets the results of the graphed data by looking at the trend, level, and variability of the data both within conditions and between conditions. Visual analysis is the standard method of data interpretation within the field of applied behavior analysis (Cooper et al., 2007).

There are multiple reasons why this method is preferred within the applied behavior analytic field. Because applied behavior analysis requires that treatment decisions be dictated by the current state of the participant's behavior, in this approach, data are graphed daily. Daily graphing allows the intervention specialist to have immediate visual access to the data making treatment decisions more accurate. Treatment efficacy here is individualized and guided through the use of daily visual inspection of each client's data. The method is not only practical but it is easy to understand and encourages every person to make their own independent interpretations using level, trend and variability. (Cooper et al., 2007)

Visual analysis assists in answering two key questions about the behavior that is being measured. First, is there a meaningful change in the behavior? And, if so, how

much of that behavior change can be attributed to the manipulated variable or treatment? The process of visual analysis answers these questions through interpreting three aspects of the data: trend, level and variability.

Trend is the overall direction that the data are taking within a phase or condition. Typically trend assessments are conducted within the different conditions (e.g. baseline, treatment). The data can be described as having a zero trend, an increasing trend, or a decreasing trend. Trend can be determined via a regression equation or simply drawing a line that best fits the data. Trend informs us of the nature and degree of ongoing behavior change. It provides information about both direction and the degree of change (slope). Level of data can be determined via the mean, median and/ or range of a data set or data subset within each condition. Once the data set of interest has been identified, a horizontal line can be used to display the mean or median of that data set. This provides a simple way to see the summary of the data. It also provides a gross measure of change from one condition to another (e.g., from baseline to treatment).

Finally, inspecting the variability of the data is useful in determining the amount of experimental control the researcher has achieved during the study. High variability, in which the data points are scattered, tells the researcher that there is lack of experimental control. Rather, it suggests control by variables extraneous to the experiment. High variability also indicates that more data points are needed to establish stability and to determine what the influencing variables may be (Cooper et al., 2007). Changes in variability may also indicate a shift from behavioral acquisition to stability – an important feature in the decision process for implementing treatment with the next participant.

Once the within-condition analyses are complete, comparisons can be made across conditions to determine the overall efficacy of the treatment. Direct comparisons across individuals are made only to establish of generality and reliability of the treatment (Cooper et al., 2007).

CHAPTER IV

RESULTS

Peer Trainers: BST Training

Figure 1 depicts the AB design graph used to assess the peer trainers. Each data point represents the score the trainer received for a specific trial. The number of trials required for each peer trainer to meet criteria to qualify to train a learner varied. A score of 4 (correct use of all 4 BST components) on 2 consecutive trials was required. Mary only required two independent attempts using BST to meet the criteria as seen in Figure 1. Jane required 5 independent attempts. Jane displayed a score of 2 on the first two independent attempts, respectively. However, after a booster session with the lead researcher, Jane obtained a perfect score of 4 on the next two consecutive independent attempts, meeting criteria to be able to train a learner.

Student Learners: Baseline

Figure 2 shows the multiple baseline design for the two learners. As anticipated, both learners scored low during the initial baseline assessment, indicating both children did not possess the appropriate behaviors needed to seek help when lost. Deena scored a 1 (alternative method for seeking help) on each of the baseline trials indicating that the child only engaged in alternative help-seeking behaviors and not in the approved behaviors. Marshall scored 0 on each of 3 baseline trials indicating the child made no attempt to seek help.

Student Learners: Peer-Trainer Directed Training

Immediately after receiving BST training from the peer trainers, both Deena and Marshall met criteria (a score of 3 – using all of the required help-seeking behaviors). However, during the subsequent test phase, the learners' performances differed greatly. While Marshall continued to display the correct behaviors meeting the mastery criteria by obtaining a perfect score of 3 on the first two consecutive test trials, Deena struggled with the task during testing. As Figure 2 indicates, on the first testing session, Deena's behavior returned to original baseline levels (using only alternative methods of seeking help) - sufficient to obtain a score of 1. This occurred for two consecutive trials. As indicated in the procedure, this low performance warranted a booster session with the original peer trainer. Upon displaying the appropriate behavior chain in the presence of the peer trainer and scoring a 3, Deena was again returned to the test phase. During the post-booster test session, Deena's behavior again returned to baseline levels with a score of 1. Deena was dismissed after only one booster session due a prior family commitment.

Due to the approaching end of the academic school year, it became difficult to arrange for additional children to participate in the study. Therefore, the study was terminated after only two participants.

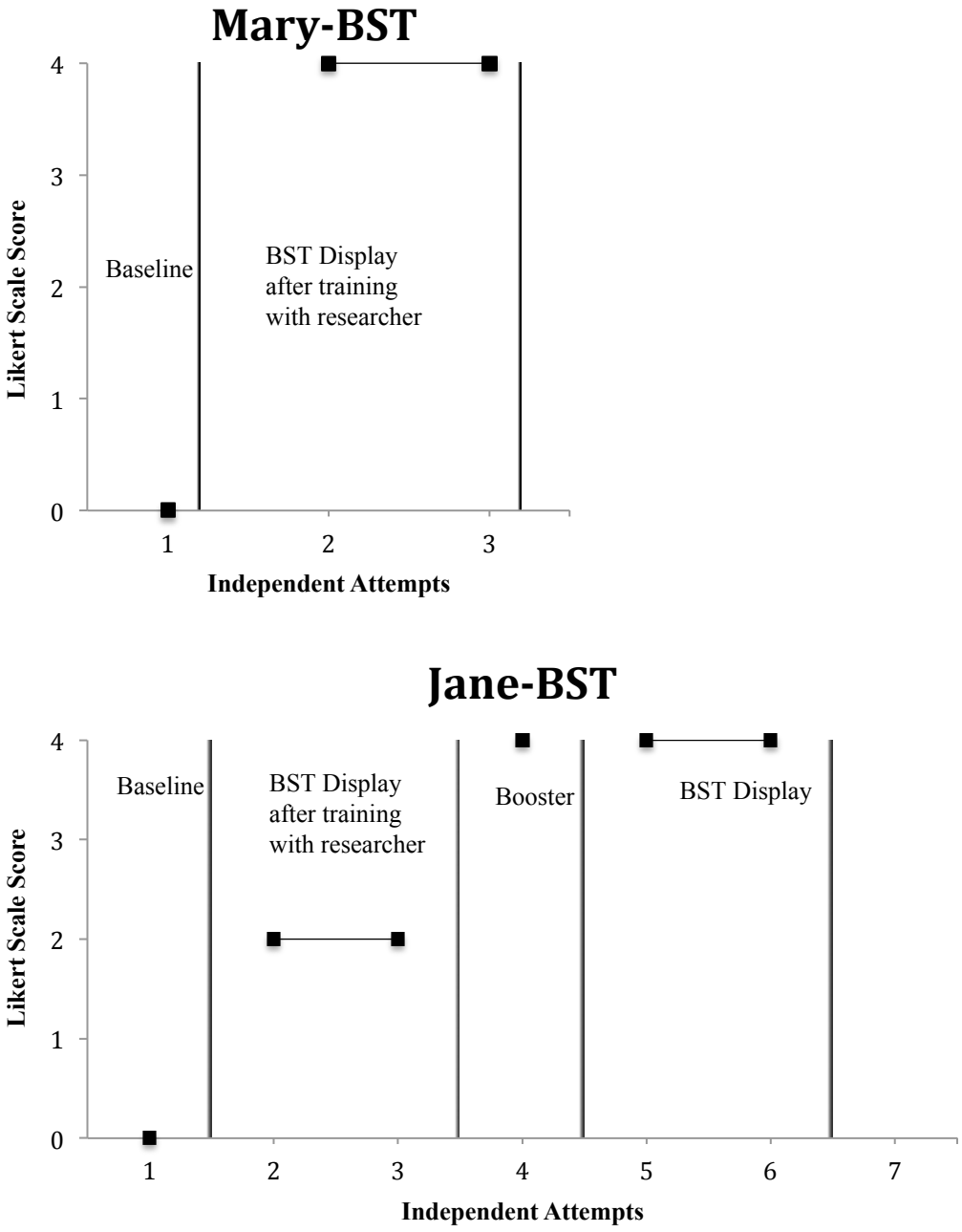

Figure 1. Scores for the independent attempts by each peer trainer.

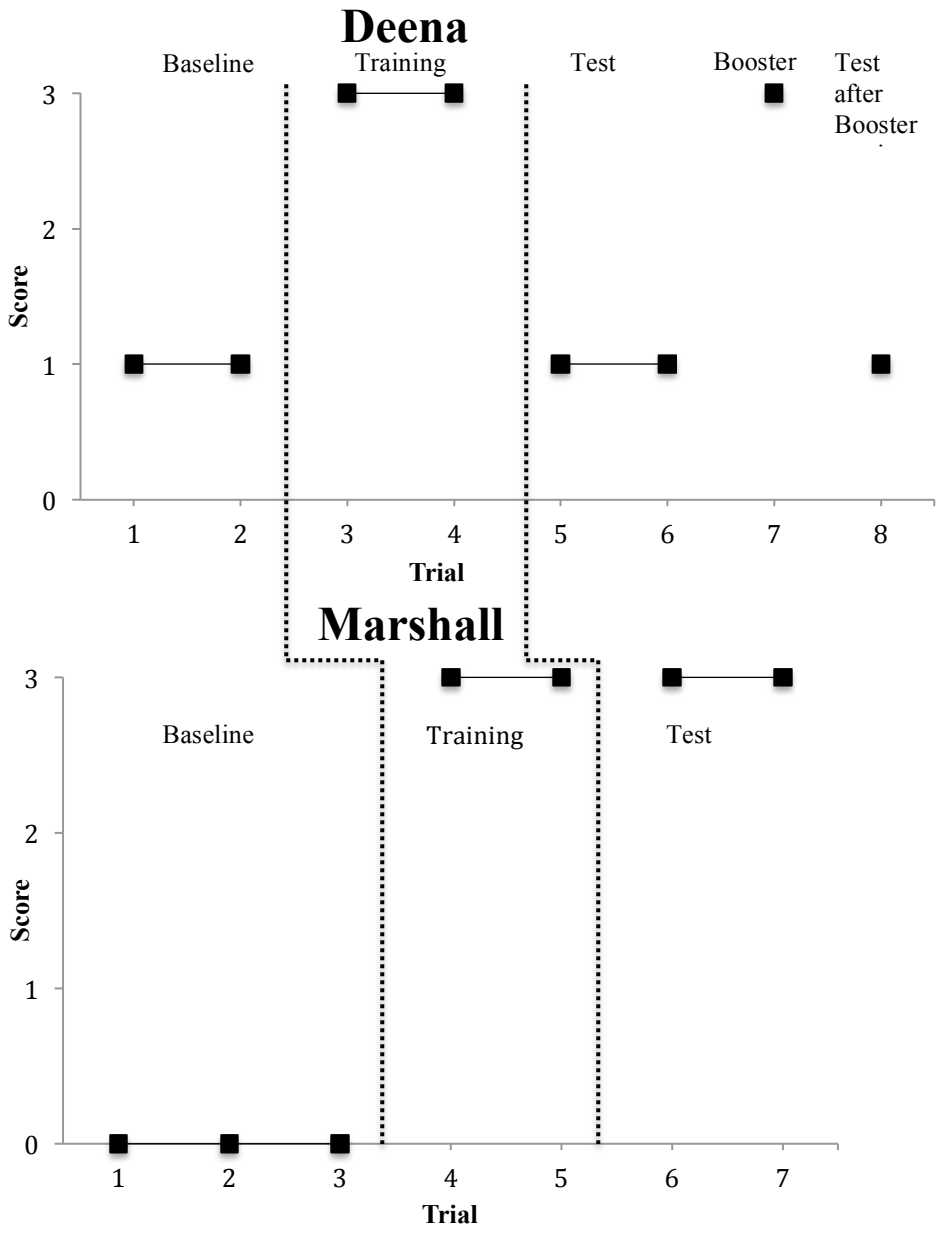

Figure 2. The multiple-baseline design across the two participants. Each data point represents the score each learner obtained for each specific test trial.

Chapter V

DISCUSSION

Previous studies targeting safety skills with the use of BST have shown successful results across a range of risky situations, including the prevention of gunplay (Himle et al., 2004; Miltenberger et al., 2005; Jostad et al, 2008), abduction prevention (Beck & Miltenberger, 2009; Johnson et al., 2005; Poche et al., 1981; Poche, et al., 1988), first-aid (Marchand-Martella et al., 1992), and seeking help when lost (Pan-Skadden et al., 2009).

Ponch et al. (1988) successfully taught abduction prevention to young learners through BST; similarly, Himle et al. (2004) taught gun-safety skills to young learners. However, unlike the current study where young peer trainers were used, the lead researchers in both studies directly trained the learners themselves. The current study attempted to extend BST training to include the use of elementary-aged peer trainers as the primary instructors for younger children.

The use of peer trainers has also been used to teach a variety of skills. Jostad et al. (2008) taught the components of BST to peers, who then taught others children to use proper safety skills when they encounter a gun in their environment. Gumpel and Frank (1999) used older socially isolated boys to teach social skills to younger socially isolated boys. Their results also provided evidence that teaching encourages learning by the trainers because the peer trainers all experienced improved social skills in the 5 components they taught. Although limited in terms of research, the use of peers to specifically teach safety skills using BST has been repeatedly suggested as a viable methodology.

The purpose of the current investigation was to determine whether peer trainers could successfully teach the skill of seeking help when lost to younger children through the use of BST. Specifically, it investigated whether upper elementary-aged peer-trainers can effectively teach younger school-aged children (kindergarteners) to appropriately seek help when lost in "a store" through the use of BST. The results of the study show limited support for the idea that upper elementary school-aged peer tutors can learn to successfully use BST to instruct younger peers on safety skills. Furthermore, whether kindergarten-aged children can learn to seek help when lost when taught by older elementary school aged children trained in the use of BST remains unclear. The results for the younger learners were less conclusive.

Both of the peer trainers were able to meet mastery criteria (a score of 4 on two consecutive trials) to use BST methods to teach the young learners. However, one required a booster session before meeting the criteria. Jostad et al. (2008) successfully used peers to teach gun safety and found that not only did all the trainees pass the final tests, but all of the peer-tutors also passed a final test, as a result of the residual effects of training. Unfortunately, the current study was not expressly designed to investigate whether or not the peer trainers could display the correct behaviors they were teaching to the learners. The AB training method for the peer trainers was insufficient to provide a comprehensive and fair test of such a hypothesis. Anecdotally however, the performance of the peer trainers in the current study was consistent with Jostad et al. (2008).

In terms of the younger learners performance, only one learner (Marshall) was able to meet mastery criteria, a score of 3 on two consecutive trials, during the testing phase. The other learner (Deena) was able to meet mastery requirements during training in the presence of the peer trainer, but failed to maintain mastery level performance at testing, despite additional instruction in a booster session.

Previous research studies have displayed support that BST can be used to teach safety skills, specifically seeking help when lost in the community, to disabled learners. Bergstrom et al. (2012), and Taylor et al. (2005) used BST and displayed success in teaching learners with disabilities how to seek help when lost using BST. In the current study, Marshall's results suggest that the use of BST by peer trainers may be a viable option for teaching safety skills. The training data recorded for Marshall are also consistent with the previous research. Unfortunately, a single successful testing (AB design) demonstration with only one participant is not sufficient to meet the requirements for rejection of the null hypothesis in the current investigation. Therefore, the question remains and warrants further study.

Limitations

Participation Constraints. The limited number of learners that participated had an effect on the outcome of this study. Although the lead researcher attempted to recruit both trainers and learners at the same time, there were significant delays in the return of permission slips between the groups. Despite initial interest by several parents, scheduling conflicts across participant families ultimately led to unexpected participant attrition. Once enough permission slips had been returned, a number of the early

responders either could not make the scheduled meeting, failed to show up, or did not return the lead researchers' phone calls. Other variables may have contributed to the low participation. For example, training sessions were scheduled for a Saturday to avoid late after-school sessions. In retrospect, seeking permission to conduct the session directly on the elementary school campus either during or after school may have been more effective. Furthermore, because the schools were not directly involved in the study, parents may have been hesitant to allow their child to be involved without a familiar teacher present during the study. Additionally, it is possible that parents may have not wanted to admit that they had not already taught the safety skill themselves, or they may have assumed that they could simply teach their child the safety skill without having to be a part of this study. Future studies should consider better ways to recruit and encourage more parents to allow their children to participate.

Stimulus Control Failure. For Deena, the experimental situation may have failed to provide sufficient stimulus control over her behavior during testing. During training, Deen was able to meet the required 3 criteria on two separate occasions. However, in the follow-up test, no trainers were present; only the lead investigator and research assistants were present to collect data and pose as "store employees" and shoppers. At this time, Deena's behavior returned to baseline levels across both testing trials. During the subsequent booster session, the peer trainer returned to re-instruct Deena on all three required steps. The peer trainer then left during the subsequent test trial. It is possible that the peer trainer's presence may have been a critical factor in establishing stimulus control over Deena's help-seeking behavior. It is also possible that there were competing

contingencies because of the insertion of the research assistants into the environment. During the test there was more attention to be gained from the new people inside the room compared to the training. As such, her ability to seek help when lost may have been contingent on the presence of the trainers. Pan-Skadden et al. (2009) had similar problems with loss of stimulus control in the in situ assessment condition, where the trainer was not present. Recall that Deena was not able to complete a second booster session when her mother requested that they leave due to a prior commitment.

Future Research

The success of Marshall in the current study is encouraging, and warrants replication. The current peer trainers were able to establish good control over the help-seeking behavior with this one child using the BST methods that they had mastered. It is important to empirically establish the degree to which the use of BST-trained peer trainers can be used to effectively teach young children critical safety skills. Changes to the current methodology that would allow for simultaneous assessment of skill acquisition (help-seeking behavior) by learners and peer trainers are warranted.

In addition to replicating the current study, it may prove promising to investigate peer-mediated BST methods for teaching a wider range of safety and social skills behaviors in the public schools, including abduction avoidance, bullying intervention and safe use of technology (cell phones, internet) As part of such investigations, questions related to finding the ideal age gap between the learners and trainers may warrant attention. If the use of BST-trained peer trainers can be shown to be effective with younger children, researchers may also want to investigate the possibility of using

pyramidal training of peer teachers to answer the question: Can experienced peer trainers be taught to train other peer trainers?

The current study provided a glimpse into the possibilities that can be investigated using school-aged children and BST as a means of peer teaching. Reliance on traditional "Train and Hope" methods to teach young children safety skills is unsatisfactory and unproven. School districts need effective teaching methods for teaching safety skills that are reliable and cost effective. The question remains: Can upper elementary-aged children serve as BST-trained peer tutors to help younger children acquire safety skills? The current investigation serves as a valuable pilot study in forwarding this experimental agenda.

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APPENDIXES
APPENDIX A

Learner Recruitment Flyer

"I'm lost! What do I do?"

Over 90% of parents say that they have lost their child in a public place (U.S. Department of Justice, 2002). Behavior Skills Training (BST) can be used to teach children how to stay safe, seek help, and be reunited with you quickly.

Your child is invited to participate in a research study to determine whether peer tutoring can be used to teach young children to seek help when lost. We need approximately 12-16 elementary-aged children to serve as peer trainers or learners

Conducted by Dr. Wendy A. Williams, and Mr. Andrew Arellano, a graduate student in the Psychology Department at Central Washington University as part of his Master's Thesis.

Central Washington University
Learner Recruitment Flyer

Research Title: Peer Tutoring to Teach Children to Seek Help When Lost

Investigators: Andrew Arellano, Graduate Student Psychology Department
Phone: 510-427-8502 Email: arellana@cwu.edu
Faculty Sponsors: Wendy Williams, PhD. Psychology Department
Phone: 509-963-3679 Email: williamw@cwu.edu

Dear Parent/Guardian,

Your child has been invited to interview for a study being conducted by Mr. Andrew Arellano, a graduate student at Central Washington University involving the use of peer tutoring to teach young children to seek help when lost. Your child has been identified as a good candidate as a learner for this study. Mr. Arellano is looking for 4-8 kindergarten students to serve as learners in this study.

Mr. Andrew Arellano has a bachelor's degree in psychology and has completed graduate classes in applied behavior analysis. He has worked with children with autism for over 3 years. His work includes teaching various skills such as safety skills both in home and in the community. This study will serve as his Master's Thesis, as part of his master's degree training.

Why is this research being done? This study is being done to see if older children (fourth and fifth graders) are able to teach kindergarteners (like your son or daughter) how to seek help when lost. We will be using a well-studied teaching method called Behavior Skills Training. This training consists of four parts: instruction of the skills, modeling the skills, rehearsal of the skills, and feedback about the performed skills.

Behavioral Skills Training (BST) has been implemented successfully to teach a variety of safety skills including gun safety, abduction-prevention and seeking help when lost with both typically developing children as well as teenagers with developmental disabilities.

What will happen if you allow your child to be interviewed for this study? The initial phase of the study involves a short teacher lead interview with your child where s/he will asked whether they have ever been lost in a store, and to describe their experience (e.g. what did they do?). We will be looking for children who do not clearly articulate the specific steps that we will be teaching. In order to test our program, we need new learners. Later, with your consent and your child's assent we will be teaching the children how to seek help when lost. However, not all of the children being interviewed will be invited to participate. If we identify more children than we need, they

will be selected randomly. If your child is not selected, it does not mean that s/he would not make a good learner. Rather, it may due to the random selection process, it may reflect reluctance on the child's part to participate, or your child may already know how to use the steps we will be teaching.

What if my child is invited to participate as a learner in this study? If your child is invited to participate, you will be notified in a flyer sent home with your child, and by telephone. We will call you to discuss the study in detail and you will be able to ask questions. Times, dates and the on-campus location for the training sessions will be outlined in the flyer. You will receive detailed information about the training and the option to agree or decline to participate before the training begins. During the session, trained fourth and fifth grade students will use Behavioral Skills Training (BST) to teach your child how to seek help when lost. Your child will never be left alone; at least two trained research assistants will be present at all times.

Once your child shows that s/he can correctly and reliably seek help when lost, an assessment test with no peer trainer present will be conducted in a simulated store (a classroom set up like a store). When your child passes the initial assessment, we will schedule a real world test at a later date that we will arrange with you (this assessment is optional). In a very controlled situation, you will purposely separate yourself form your child (a research assistant will be in the same aisle to ensure your child's safety), your child will then have the chance to use his/her new skills in a real store. This final test will tell us if our program is effective.

Are there any risks or discomforts of the study? At this point, we are simply interviewing potential peer learners. There are no risks or discomforts associated with the interview process.

What if I don't want my child to participate in the study? Participating in this interview is completely voluntary. If you do not wish your child to participate, simply do not return this form. If you decide now to allow your child to be interviewed and change your mind later, you can end your child's participation at any time.

Who should you contact if you have questions?
If you have questions about the study, call Mr. Arellano at 510-427-8502, or Dr. Williams at 509-963-3679. If you leave a message, be sure to give your phone number so we can call you back.

If you are concerned about your rights or your child's rights as a participant in research, you may call the ***CWU Human Protections Administrator*** at 509-963-3115.

Parent's Statement:

☐ Yes ☐ No I agree to allow my child:_____
to be interviewed by Mr. Andrew Arellano and/or by his research assistants in order to be considered as a learner for his study: **Peer Tutoring to Teach Children to Seek Help**

When Lost. I understand that my child may or may not be selected as a learner. My signature here does not reflect informed consent for participation beyond the brief interview. I understand that a more detailed informational session and my further consent will be required before my child's participation in peer tutor training begins.

_____

Parent's signature Printed name Date Phone number

Please tear off above, sign and return this form to your child's teacher

APPENDIX B
Peer Trainer Recruitment Flyer

"I'm lost! What do I do?"

Over 90% of parents say that they have lost their child in a public place (U.S. Department of Justice, 2002). Behavior Skills Training (BST) can be used to teach children how to stay safe, seek help, and be reunited with you quickly.

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Conducted by Dr. Wendy A. Williams, and Mr. Andrew Arellano, a graduate student in the Psychology Department at Central Washington University as part of his Master's Thesis.

Central Washington University
Peer-Trainer Recruitment Flyer

Research Title: Peer Tutoring to Teach Children to Seek Help When Lost

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Phone: 510-427-8502 Email: arellana@cwu.edu
Faculty Sponsors: Wendy Williams, PhD. Psychology Department
Phone: 509-963-3679 Email: williamw@cwu.edu

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Your child has been invited to interview for a study being conducted by Mr. Andrew Arellano, a graduate student at Central Washington University involving the use of peer tutoring to teach young children to seek help when lost. Your child has been identified as a good candidate as a learner for this study. Mr. Arellano is looking for 4-8 kindergarten students to serve as learners in this study.

Mr. Andrew Arellano has a bachelor's degree in psychology and has completed graduate classes in applied behavior analysis. He has worked with children with autism for over 3 years. His work includes teaching various skills such as safety skills both in home and in the community. This study will serve as his Master's Thesis, as part of his master's degree training.

Why is this research being done? This study is being done to see if older children (fourth and fifth graders) are able to teach kindergarteners how to seek help when lost. We will be using a well-studied teaching method called Behavior Skills Training. This training consists of four parts: instruction of the skills, modeling the skills, rehearsal of the skills, and feedback about the performed skills.

Behavioral Skills Training (BST) has been implemented successfully to teach a variety of safety skills including gun safety, abduction-prevention and seeking help when lost with both typically developing children as well as teenagers with developmental disabilities.

What will happen if you allow your child to be interviewed for this study? The initial phase of the study involves a short teacher lead interview with your child where s/he will asked whether they have ever been lost in a store, and to describe their experience (e.g. what did they do?) and if they may be interested in teaching kindergarteners. Later, with your consent and your child's assent we will be teaching the children how to seek help when lost. However, not all of the children being interviewed will be invited to participate. If we identify more children than we need, they will be selected randomly. If your child is not selected, it does not mean that s/he would not make a good Trainer. Rather, it may due to the random selection process, it may reflect

reluctance on the child's part to participate, or your child may already know how to use the steps we will be teaching.

What if my child is invited to participate as a Trainer in this study? If your child is invited to participate, you will be notified in a flyer sent home with your child, and by telephone. We will call you to discuss the study in detail and you will be able to ask questions. Times, dates and the on-campus location for the training sessions will be outlined in the flyer. You will receive detailed information about the training and the option to agree or decline to participate before the training begins. During the session, trained fourth and fifth grade students will use Behavioral Skills Training (BST) to teach kindergarteners how to seek help when lost. Your child will never be left alone; at least two trained research assistants will be present at all times.

Once the learners show that they can correctly and reliably seek help when lost, the Trainer will be thanked and dismissed.

Are there any risks or discomforts of the study? At this point, we are simply interviewing potential peer trainers. There are no risks or discomforts associated with the interview process.

What if I don't want my child to participate in the study? Participating in this interview is completely voluntary. If you do not wish your child to participate, simply do not return this form. If you decide now to allow your child to be interviewed and change your mind later, you can end your child's participation at any time.

Who should you contact if you have questions?
If you have questions about the study, call Mr. Arellano at 510-427-8502, or Dr. Williams at 509-963-3679. If you leave a message, be sure to give your phone number so we can call you back.

If you are concerned about your rights or your child's rights as a participant in research, you may call the ***CWU Human Protections Administrator*** at 509-963-3115.

Parent's Statement:

☐ Yes ☐ No I agree to allow my child:_____
to be interviewed by Mr. Andrew Arellano and/or by his research assistants in order to be considered as a learner for his study: **Peer Tutoring to Teach Children to Seek Help When Lost.** I understand that my child may or may not be selected as a learner. My signature here does not reflect informed consent for participation beyond the brief interview. I understand that a more detailed informational session and my further consent will be required before my child's participation in peer tutor training begins.

_____

Parent's signature Printed name Date Phone number

Please tear off above, sign and return this form to your child's teacher.

APPENDIX C

Interview Script for Learners

1. Ask the child if they know their full name and age?
2. What are your favorite things to do?
3. Do you like going to the store with your mom and dad?
4. Has there been a time where you could not find your mom or dad? Was that scary? Do you remember what you did to find them?
5. Thanks for talking with me.

APPENDIX D

Interview Script for Peer Trainers

1. Have you ever been lost in public before?

2. If so how did it make you feel?

3. Has anybody taught you what do when you are lost in a store?

4. Would you be interested in teaching young kids on what to do when you are lost in a store?

APPENDIX E

INVITATION TO PARTICIPATE-LEARNERS

Peer Tutoring to Teach Children to Seek Help When Lost

Dear Parent/Guardian,

Thank you for allowing your child to interview as a potential learner for a master's thesis project at Central Washington University. Your child has been selected to participate as a Learner in the research study to teach children how to seek help when lost. We would like to invite you and your child to attend the training session for the Behavioral Skills Training (BST). At this meeting we will discuss the study procedures in more detail, your role, your child's role and complete the informed consent process. We will answer any questions that you might have.

The BST training and an initial assessment of what they learned should take about 1to 2 hours. Please bring a snack for your child.

We will be meeting on:

_____

Day Date Location
Time

As a parent of a Learner in this study, you have an important role. Your help is needed with this study by keeping the following in mind:

1) Showing up for all scheduled training sessions on time.

Makeup Sessions. We understand that there may be unexpected situations that could lead to a missed training. If this happens, it may be possible to arrange a make-up time, but we cannot guarantee this. Training sessions require making arrangement for quite a few people (adults and children). If a rescheduled time cannot be arranged, you will be given the necessary information about how to teach your child the safety skills, but unfortunately your child may not be able to continue with the study.

2) No teaching allowed.

The critical part of our study is to try and determine if the methods we are using can be TAUGHT EFFECTIVELY BY OLDER CHILDREN. Please do not help your child learn to seek help in a store before the training session and assessments have been completed. Your child may become confused with information coming from different sources. Do not help your child practice or review the training that they learned until after their participation in the study is complete. We will provide you with all of the training

information at the end of the study so you can practice with your child. We just ask that you wait until we have completed all of our tests.

3) Child and Parent comfort.

Participation in this study is voluntary. During the BST training, we will ask your child periodically if they want to continue. If you or your child expresses any discomfort, we can stop the training at any time.

Please feel free to call me if you have any questions or concerns. We look forward to meeting you at the first training session.

Sincerely,
Andrew Arellano, Graduate Student
Psychology Department, Central Washington University
Phone: 510-427-8502; Email: ArellanA@cwu.edu

APPENDIX F

INVITATION TO PARTICIPATE FOR PEER TRAINERS

Peer Tutoring to Teach Children to Seek Help When Lost

Dear Parent/Guardian,

Thank you for allowing your child to interview as a potential peer trainer for a master's thesis project at Central Washington University. Your child has been selected to participate as a Peer Trainer in the research study to teach children how to seek help when lost. We would like to invite you and your child to attend the first training session for the Behavioral Skills Training (BST). At this meeting we will discuss the study procedures in more detail, your role, your child's role and complete the informed consent process. We will answer any questions that you might have.

As a peer trainer, your child may participate in two BST training sessions that will take about 1 to 2 hours each. Please bring a snack for your child to each session.

We will be meeting for the first training session on:

_____

Day Date Location
Time

As a parent of a Peer Trainer, you have an important role. Please keep the following in mind:

1) Showing up for all scheduled training sessions on time.

Makeup Sessions. We understand that there may be unexpected situations that could lead to a missed training. If this happens, it may be possible to arrange a make-up time, but we cannot guarantee this. Training sessions require making arrangement for quite a few people (adults and children).

If a rescheduled time cannot be arranged, you will be given the necessary information about how to teach your child the safety skills, but unfortunately your child may not be able to continue with the study.

2) Child and Parent Comfort.

Participation in this study is voluntary. During the BST training, we will ask your child periodically if they want to continue. If you or your child expresses any discomfort, we can stop the training at any time.

Thank you again for letting your child interview to be a participant in this study. Let me know if you have any questions. We look forward to meeting you at the first training session.

Sincerely,

Andrew Arellano, Graduate Student
Psychology Department, Central Washington University
Phone: 510-427-8502; Email: ArellanA@cwu.edu

APPENDIX G
PARENT PACKET

“I’m lost! What do I do?”

How to teach your child to seek help when lost using Behavioral Skills Training

Basic Skills Training

The label "Behavioral Skills Training" or BST may be intimidating. I assure you there is no need to worry at all. It is a very easy teaching method. There are 4 basic components to BST: Instruction, Modeling, Rehearsal, and Feedback.

Instruction: This is nothing more than *explaining* what you want your child to do when they are lost in a store. Instructions can be used alone, but they have been shown to be much more effective when used together with the other BST components. This brings us to modeling.

Modeling: Modeling means that you act out the behaviors that you want your child to do if they ever get lost in a store. It's like role playing. You pretend to be the lost child. Then you do the correct behaviors to seek help. Modeling the behaviors for your child gives them the chance to see what it looks like to seek help when lost in a store.

Rehearsal. Rehearsal gives your child a chance to practice what they have learned. Don't worry if your child does not do all the behaviors in the correct order. This is a complicated set of behaviors for young children . Instead, each practice trial gives you a chance to provide feedback, and hopefully, help your child gradually master these behaviors.

Feedback: Feedback is the last step. This is the point where you can tell your child what s/he has done well, and where s/he can improve. It is very important to begin your feedback by pointing out what your child has done well – even if you have to begin with comments like "Really good try" or "I really like how you paid attention". It is recommended that something positive be said before something corrective. ALWAYS have something good to say on every trial. Then you can make suggestions on how to improve. This should be a fun activity. If you like you can even give gold stars for each step in the series when they master it.

Additional tips:

1) You should have your child engage in repeated trials in a single session but keep the sessions short. Watch to see if your child is getting tired or bored. Shorter sessions over a few days may be more effective that one long session.

2) You can trade roles where you are the child and your child is the teacher. Be silly and make little mistakes for your child to catch. Keep it fun. Teaching is an excellent way of learning.

Directions for Seeking Help when lost

Step One: When you see that mommy (or daddy) is not with you, you should stop where you are. Look around you. Maybe you just missed her. Can you see her? If not, go to step two.

Step Two: Walk up the aisle toward the front of the store. The front of the store is where the checkout stand is. There is a cashier there who will help you. The cashier will be wearing a special shirt or nametag with the name of the store on it.

Step Three: Find the cashier at the front of the store.

Step Four: Tell the cashier that you are lost. Tell the cashier your name. Tell the cashier your mommy's (or daddy's) name. She will call for me on the store speakers. I will come to you right away. You will not be in trouble if you tell the cashier that you are lost.

Tips:

1) It is important that your child really understand that s/he will not be in trouble if they get lost in a public place. Tell them very clearly that you just want to get back to them as much as they want to get back to you. And this procedure is how we do that.
2) Tell your child that you will be really proud of them if they can learn this.
3) Practice! In fact, "perfect practice make perfect." Practice these skills until your child can do it in his/her sleep. The more you practice, the more confident you can be that it will work when the time comes.
4) Try having your child perform his/her new skills in a real store, but please make sure your child is safe and always keep an eye on your child. You can plan a practice session in the store where your child KNOWS what you are doing. That way you can watch your child and make sure each step is performed, or you can step in to do a quick booster session right there in the store.

Basic Skills Training can be adapted to teach any new skill. Please use it and appreciate your new skills of using BST to teach your children to be safe.

Contact information: Please email Arellana@cwu.edu, if you have any questions or suggestions

Central Washington University

RESEARCH PARTICIPANT INFORMED CONSENT/PARENT PERMISSION

Peer Trainers and Learners

Research Title: **Peer Tutoring to Teach Children to Seek Help When Lost**

Principal Investigator: Andrew Arellano, Graduate Student, Psychology Department
Phone: 510-427-8502, Email: arellana@cwu.edu

Faculty Sponsor: Wendy Williams, PhD., Psychology Department
Phone: 509-963-3679, Email: williamw@cwu.edu

1. What you should know about this study:

- You are being asked to give permission for your child to participate in a research study
- This consent form explains the research study, and you and your child's parts in the study.
- Please read it carefully and take as much time as you need.
- Ask questions about anything you do not understand now, or when you think of them later.
- It is important for you to know that you and your children are volunteering. This means that if you and your child decide to join the study, you both may quit at any time without question or fear of any penalties.
- While you are both in this study, the study team will keep you informed of any changes that may affect your participation.

2. Why is this research being done?

This study is being done to see if older children are able to teach younger peers how to seek help when lost. We will be using a well-studied teaching method called Behavior Skills Training. This training consists of four parts: instruction of the skills, modeling the skills, rehearsal of the skills, and feedback about the performed skills.

3. Who will take part in this study?

- Anywhere from 7 to 16 children will participate in this study.
- The peer trainer children will be older children, 4th and 5th graders
- The learners will be younger children, kindergarteners.

4. What will happen if you join this study?

Peer Trainers:

Your child may be participating as a peer trainer or teacher. He/she will attend a training session lead by the primary researcher. During the training session, the primary researcher will teach your child how to use a technique called Behavioral Skills Training (BST) to teach younger children how to seek help when lost. There are four steps to this training: ***instruction*** of the skills, ***modeling*** the skills, ***rehearsal*** of the skills and ***feedback*** about the performed skills. Once your child shows he/she can use BST correctly, your child may be chosen to teach younger children how to seek help when lost using BST methods. These younger children will then be assessed to see if they learned the skills or not. Once the peer-led training is over, you and your child will be debriefed about the study. You will also receive a parent packet on the BST and the steps on how to seek help when lost.

It is important to mention that not all children who are trained to be peer trainers will get to teach the younger children. We may not have enough young children participating to ensure that all of the trainers get to teach. We will select the peer trainers based on BST skill and by random selection, if necessary. If your child is not chosen, it does not mean that he/she was not a good peer-trainer. All peer trainers will receive a certificate of participation.

Training sessions will take about 1 hour. If your child is selected to be a peer trainer, the total study participation time will be approximately 2 hours.

Leaners:

Baseline

Before Behavior Skills Training begins and in a room that looks like a grocery store, your child will be asked to show what he/she would do if they could not find you in a store. If your child does not know what to do, then they will begin the peer-led training.

Peer-led Training

With two researchers present, fourth and fifth grade peer trainers (ages 10-12) will teach the kindergartner Learners how to seek help when lost. The peer trainers will use the Behavior Skills Training methods to teach the targeted skills to the Learners. The four steps include: 1) how to recognize that they are lost, 2) locate the front of a store, 3) approach a cashier and 4) say an appropriate help statement. They will also be taught not to approach unknown strangers other than the store cashier. After the learners shows that s/he can correctly seek help when lost on two consecutive attempts, they will immediately take an initial assessment.

Initial Assessment
The initial assessment will take place in a simulated store with no peer trainers and no feedback. Your child will be given a prompt like, "Your mom asks you to get an item at the end of the aisle. When you turn around your mom is not there. What do you do?" Once they show the desired behavior on two consecutive attempts, they will be scheduled for a one-month follow-up test. If they are not successful, then they will return to the training for more training with the peer trainer.

One-Month Follow-up Test. One month after the initial training and assessment, you will bring your child to a different room in a different building at CWU that will be set up to look like a grocery store. You and your child will be greeted by two different, but trained research assistants. Your child will be reminded about study. We will lead your child into the mock grocery store. Then your child will be given one prompt similar to the initial assessment. This test should take only a few minutes. Once the assessment is over, you and your child will be given feedback and debriefed about the study. You will also receive a parent packet on the BST and the steps on how to seek help when lost.

It is important to mention, if your child displays the desired skills in baseline, then they will not continue through the training and assessments. Some children who are trained by the peer trainers may not get to complete the one-month follow-up test because they may not sufficiently master the skills needed to seek help when lost in one training session. Some children may choose to stop participating; others may need to be terminated for reasons we have yet to identify. If your child is not chosen or does not complete the study, it does not necessarily mean that he/she is not a good learner. All learners who complete the BST training will receive a certificate of participation.

Training sessions may take about 1 hour. If your child participates in the training session and the one-month follow-up test, the total study participation time will be approximately 1 to 2 hours.

5. What are the risks or discomforts of the study?
Peer Trainers:
If your child is selected as one of the peer trainers, there are no foreseeable risks or discomforts. They may feel frustrated while learning the BST. They not feel confident while training the learners to use the BST. However, there will always be at least two adults present to assist your child with any concerns. We will leave the door to the training room open, if you would like to watch briefly. We do not want to interrupt the training session but we want you and your child to feel safe and comfortable.

Learners:

During the initial BST training, there are no foreseeable risks or discomforts that the children might face. They may feel frustrated or uncomfortable learning something new, like the BST. However, the children will be trained in a classroom setting with other kindergarten children, with their peer trainer(s) and with at least two supervising adults who are familiar with the BST procedures. There will always be at least two adults present to assist your child with any concerns. We will leave the door to the training room open, if you would like to watch briefly. We do not want to interrupt the training session, but we want you and your child to feel safe and comfortable.

After your child successfully completes all stages of the BST training, the final follow-up test will take place in another location on campus. During the final follow-up test, our goal is to determine whether your child will remember to use the skills they learned the previous month except in a different location. At no time will your child actually be left alone. At least two research assistants will be present to observe and record data. It is a short (3-minutes or less) test. However, this could be a stressful situation for some children who are trying to remember what to do. If there is any sign of discomfort (crying, whining, tantrums), the assessment will be terminated.

6. Are there benefits to being in this study?

First, we hope that at the end of the study you and your child will both gain confidence that, if a situation in which you become separated from one another in a store, your child will be able to perform the necessary behaviors in order to be reunited. Second, your child will have learned a valuable method for helping others learn many things. BST can be used whenever your child is asked to help another learn something new.

7. What are your options if you do not want to be in the study?
Participating in this study is completely voluntary. If you decide to allow your child to join the study now and change your mind later, you can terminate your child's participation at any time.

It is important to us that the children (Peer Trainers and Learners) want to participate so we will periodically ask if they want to continue. Any child may stop participating at any time.

8. What information about you will be kept private and what information may be given out?
Your name and signature on this consent form will be kept confidential. All contact information will be kept separate and confidential. All participants will be assigned a coded number/name. The files with personal identifiers will be kept on a password-

protected computer in the researcher's office. Only the primary researcher and faculty sponsor will have access to them. The information collected through your child's participation will be published in a master's thesis in the CWU library. Individual data will be presented; however, no personal identifiers will be mentioned in the thesis. The information collected through your participation may also be published in a professional journal, and/or presented at a professional meeting. If this happens, any identifying information that would link the data to you or your child will not be included. When the study is completed, all of the identifiers will be destroyed.

9. What other things should you know about this research study?
This study has been reviewed and approved by the Human Subject Review Council (HSRC). If you have any questions or concerns about your child's rights as a participant in this study, contact the Human Protections Administrator at 509-963-3115 or hsrc@cwu.edu.

The lead researcher has a bachelor's degree in psychology and has completed graduate classes in applied behavior analysis. He has worked with children with autism for over 3 years. His work includes teaching various skills such as safety skills both in home and in the community. This study will serve as his Master's Thesis, as part of his master's degree training.

The use of Behavioral Skills Training (BST) has been implemented successfully to teach a variety of safety skills including gun safety, abduction-prevention and seeking help when lost with both typically developing children and teenagers with developmental disabilities.

If you have any questions, please ask now or later as they arise. The primary researcher and the faculty sponsor will always be available to answer any questions or address any concerns. You can find our contact information at the top of this form.

10. What does your signature on this consent form mean?
By signing this consent form, you are not giving up any legal rights. Your signature means that you understand the study plan, have been able to ask questions about the information given to you in this form, and you are willing to participate under the conditions we have described. If you sign the consent form now, you may terminate your child's participation at any time.
A copy of the form will be given to you.

Child's Name (print): _____

Parent's Name (print): _____

Parent's Signature:_____ Date:_____

Signature of Investigator: _____ Date:_____

APPENDIX I

DEBRIEFING FORM FOR PARENTS

PEER TUTORING TO TEACH CHILDREN
TO SEEK HELP WHEN LOST

Thank you for allowing your child to participate in this study! The general purpose of this study is to determine if older peer tutors (4th & 5th graders) can train young learners (kindergarteners) to seek help when lost using Behavioral Skills Training (BST).

We invited 4th and 5th graders to be the peer tutors, and kindergarten students to be the learners. Your child participated in a training session to learn a) the four steps for seeking help when lost, b) how to use BST. Then your child became a peer tutor for several kindergarteners. The leaners your child tutored got to practice these new skills in a simulated store and were later tested to see if they had learned the skills well.

As a learner, you child was trained by an older peer on how to seek help when lost in a store. Once your child passed their classroom assessment, you and your child were given an optional opportunity to have their new learned skills further in a real life situation.

Peer training has been shown to be an effective teaching technique. Behavior Skills Training has been used to train for a variety of safety skills. This is the first time the BST has been used with peer tutors to teach the skills of seeking help when lost. The data from this study may determine whether younger children can learn from older children who have been trained to use the behavioral skills training method.

Thank you for allowing your child to participate in this study. If you have further questions about the study, please contact Andrew Arellano, (510) 427-8502. In addition, if you have any concerns about any aspect of the study, you may contact Dr. Wendy Williams, (509) 963-3679. If you have any concerns about the rights of your child as a participant in this study, you can call the Human Protections Administrator at Central Washington University's Human Subjects Review Council at 509-963-3115.

PEER TUTORING TO TEACH CHILDREN
TO SEEK HELP WHEN LOST
Debriefing Form children

Thank you for your help with this research study. You were a big help.

This study was to see if older kids could teach younger kids on how to get help if you cannot find you parents in the store. The older kids you the trainers and the younger kids were the leaners.

I really appreciate you help and it was very nice to meet you. It is important to remember that you can always talk to your parents about what you learned and how you can talk to me if you have any questions.

You can ask your parents to contact Andrew Arellano (510) 427-8502 or contact Dr. Williams (509) 963-3679

Thanks Again!

APPENDIX J
Letter of Cooperation

School Letterhead

To Whom It May Concern:

This letter is to grant permission to Andrew Arellano, CWU graduate student, to recruit participants from _____ (name of school) as part of his thesis research entitled "Peer Tutoring to Teach Children to Seek Help When Lost".

For this study, children will be assessed on whether or not they know how to seek out help when lost in a store. These children will be trained on what to do by an older peer prior to the assessment in the store. The researcher, assistant and the child's parent will be present to observe the child, to collect data, and/or ensure the safety of the child. If any dangerous situation should arise such as the child being approached by a stranger the assistant will immediately signal the caregiver to come back to their child and, if necessary, step in to ensure the child's safety.

Initially the researcher will ask teachers to screen students for possible participation due to time restrictions of this study; a brief screening template will follow

We have received detailed outline along with a timeline for the process of the study. (attached, along with instructions how to return this letter of cooperation)

Sincerely,

(position and name of school)

APPENDIX K

ASSENT SCRIPT FOR MINORS

Learners

***This will be asked each time the researcher sees the learner. At the beginning and ending of each interaction. ***

Beginning:

Researcher:
"Hi, kiddo. Thanks for coming. Do you know why you are here? Do you know what we are going to be doing for the next hour?

[Prompt and/or provide additional information if child can't articulate why they are here or what they are going to be doing.]

We are going to this room next door and your parents are going to wait here for you. The door will stay open and your parents can check in on you from the door at any time.

I want you to know that at any time you don't feel like doing this, including now, you can tell me and we will stop. You don't have to be in this study, if you don't want to. If you decide that you do not want to do this, no one will be mad at you. You will not get in trouble. Do you want to keeping going?"

Ending
Researcher:
"Wow, thanks for doing that. You did so well. I want to remind you that if you don't feel like doing this any more, you can tell me and you will not get in trouble. Do you want to keep going?"

APPENDIX L
ASSENT FORM FOR MINORS-PEER TRAINERS
Central Washington University

RESEARCH PARTICIPANT INFORMED ASSENT

Peer Trainers

Research Title: **Peer Tutoring to Teach Children to Seek Help When Lost**

Investigators: Andrew Arellano, Graduate Student Psychology Department
Phone: 510-427-8502 Email: arellana@cwu.edu
Faculty Sponsor: Wendy Williams, PhD. Psychology Department
Phone: 509-963-3679 Email: williamw@cwu.edu

What you should know:

- We are scientists studying how kids learn.
- You can choose to be in our study, or not.
- You can ask questions now, or later.
- You can decide about being in the study after your questions are answered.

Why is this research being done?
I want to know more about how students learn can learn from each other. I want to see if older student can teach younger students how to find help when lost in a store. I hope our research helps us find better ways to learn.

What will happen if you join this study?
You will be taught about Behavior Skills Training. This training can be used to teach many different skills. After you learn how to find help when lost using the Behavioral Skills Training, you get a chance to practice all the steps. There are 4 steps. The training and practice will take about an hour.

After you show the researchers that you can do all four steps, you may get a chance to train younger students on what to do when lost in a store using the Behavioral Skills Training. You will not be alone; researchers will always be there to watch. You will be able to follow a checklist. After you train younger students, you will be all done.

If you ever feel uncomfortable, you can stop at any time. No one will be mad at you.

What other things should you know?
You can choose to be in this study, or not. Your parents gave me permission to ask you if you want to be in this study. I will keep your information private. I will not use your name when I write my report.

What does it mean if you sign this paper?
Signing this form means you understand the study, have been able to ask questions and you want to be in it. You can ask more questions if you think of them later. You will mark your choices about being in the study, but you can change your mind later.

Choose Yes or No:

☐ Yes, I want to be in this study, learn how to find help when lost and teach others to find help when lost.

☐ No, I do not want to be in this study.

_____

Signature Printed name Date

_____

Principal Investigator (signature)

BEHAVIOR SKILLS TRAINING CHECKLIST

>Checklist for Peer trainers

Introduction:

- Introduce yourself
- Talk about why they are here and how it is important to learn.
- How to be safe.
- Tell a story about being lost in a store (what it means to be lost).

Instruction:

(Talk about)

____ Say what it means to be lost

>Means you can't find mom or dad when you look around

____Step 1: Looking up and down the food aisle for your parents

>Sometimes your mom or dad could just be at the end of the aisle, if not you should go find help.

____Step 2: Walking towards the front of the store

> You will be able to find people who work at the store.

> Do not leave the store

> Go to the cashier,

> We shouldn't talk to strangers because they may be bad

____Step 3: Find a cashier and ask for help, where groceries are bought

>Store cashiers work behind counters, wears uniforms, and wears name tags

>Tell the cashier, who you were with (mom or dad) "I was with my mom/dad, I'm lost, I need help"

> Cashiers can use the loudspeaker to get everyone's attention. People like your mom or dad will hear that you are ok and come get you.

Modeling:

(Show and say each step as you perform)

_____ Show what it looks like to be lost and unable to find your mom or dad

>Looking up and down the aisle (looking around)

_____Show walking to the front and finding a cashier

> Point as if you see a cashier and walk that Direction

> Do this step wrong, Run the opposite way

> Perform it correctly again

_____Show how to say lost statement: "I'm lost; I was with my Mom"

>After you talk to the cashier, wait there for your parents

> Give a wrong statement, "my dogs name is ___, I live in Ellensburg"

> give correct statement

_____ Show all the steps without stopping

Rehearsal **(peer trainers give feedback on each step)**

_____Kid's turn to show what it means to be lost

_____Kid's turn to find and walk towards the front of the store

_____Kid's turn to say, "I was with my _____" and wait for mom or dad

_____Kid's turn to do the whole thing

Feedback

(On the entire set of skills)

____ Positive behavior-specific feedback on each step (first)

_____Corrective behavior-specific feedback, if needed