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# The Evaluation of a Commercially-Available Abduction Prevention Program

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The Evaluation of a Commercially-Available Abduction Prevention Program

by

Kimberly V. Beck

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts in Applied Behavior Analysis  
College of Graduate School  
University of South Florida

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Keywords: safety skills, in situ training, behavioral skills training, stranger, children

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## Dedication

I would like to dedicate this text to my husband and to my parents; without their unlimited support and patience, I would not be where I am today. I would also like to dedicate this to my faculty advisor, Dr. Raymond Miltenberger. The guidance, knowledge, and opportunity that he has provided me are invaluable and I am grateful.

## Acknowledgements

I would like to thank my huge team of dedicated research assistants who conducted numerous assessments in order to collect all of the necessary data. Because of their flexibility, dedication, and willingness to act as confederates, I was able to collect all of the necessary data for my investigation. I would also like to thank my committee members for their encouragement and support. In particular, I would like to thank my committee member, Stacie Neff for all of her participation and guidance and for monitoring all of my thesis documents when necessary.

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## The Evaluation of a Commercially-Available Abduction Prevention Program

Kimberly V. Beck

### ABSTRACT

Child abduction is a serious problem in the U.S.; therefore, it is essential that researchers evaluate the efficacy of currently available abduction prevention programs. This study evaluated the efficacy of a commercially-available abduction prevention program, The Safe Side. The participants included six 6-8-year old children with no prior abduction prevention training. A non-concurrent multiple baseline across participants design was used to evaluate the effects of the training. The participants' safety responses were assessed using in situ assessments within two different situations (responding to a knock on the door of the participant's home and interaction by a stranger in public) and scored numerically. Any participant who failed to perform the appropriate safety skills following the post video training assessment received in situ training implemented by the parent. Additional assessments were subsequently conducted until each participant demonstrated the desired safety skills to criterion (three consecutive correct scores). In situ training was continually conducted as necessary.



## Introduction

Child abduction is one of many safety threats to children in the U.S. Although it is unlikely that most children will ever experience an abduction situation, there are serious consequences of abduction, including sexual abuse and death. Most child abductions are committed by family members of the victim; however, studies conducted by the U.S. Department of Justice reveal that approximately 58,200 children were abducted in 1999 by nonfamily perpetrators. Nonfamily abductions is defined by Finkelhor, Hammer, and Sedlak (2002) as “an episode in which a nonfamily perpetrator takes a child by the use of physical force or threat of bodily harm or detains the child for a substantial period of time (at least one hour) in an isolated place by the use of physical force or threat of bodily harm (p. 2).” In a nonfamily abduction, perpetrators may also use lures to entice a child under the age of 15 to voluntarily go with them. Some of the most common lures include offering incentives to entice the child and using authority to convince the child that the perpetrator has appropriate permission to take them. Within the category of nonfamily abductions, there exists a more serious category referred to as stereotypical kidnapping. Stereotypical kidnapping differs from nonfamily abduction in that the “child is detained overnight, transported at least 50 miles, held for ransom, abducted with the intent to keep the child permanently, or killed (p. 2).” Stereotypical kidnappings are rare occurrences, accounting for only 115 of the 58,200 total nonfamily abductions in 1999 (Finkelhor et al., 2002).

Despite the common belief that physical force or threat is most often used to abduct children, earlier studies suggest that in only 10% to 17% of cases, perpetrators used physical force to abduct their victims (Poche, Brouwer, & Swearington, 1981). Research on child abduction reveals that most perpetrators engage in a friendly interaction to establish rapport with their victims and use lures to entice the child to leave with them (Poche et al., 1981). Furthermore, investigators have found that children often will leave willingly with an abductor after being presented with a lure (Holcombe, Wolery, & Katzenmeyer, 1995; Marchand-Martella, Huber, Martella, & Wood, 1996; Poche et al., 1981; Poche, Yoder, & Miltenberger, 1988).

There are four types of lures that are commonly used to abduct children. The first is the simple lure wherein the abductor merely provides a request to the child to leave with him (“him” will be used throughout this paper as research reveals that most child abductors are males). In the authority lure, the perpetrator says that someone of authority (i.e. teacher/parent) gave the child permission to go with him. The incentive lure is used when the perpetrator presents an attractive offer to the child in order to entice the child to go with him (Poche et al., 1981). Lastly, the assistance lure is described as the perpetrator requesting the child’s aid for something (Holcombe et al., 1995).

Although legislation and prevention efforts by parents attempt to eliminate many threats to children’s safety, preventing these life-threatening incidents from occurring is not always possible. Despite best efforts to watch children closely, a number of children are being abducted annually. Nearly a quarter of the nonfamily abductions that occurred in 1999 took place in the home or yard of the victim. The remaining 77% took place in the community such as streets and parks (Finkelhor et al., 2002).

Because research has shown that most child abductions occur when an adult engages in a friendly interaction with the child and then entices the child to leave willingly by delivering an abduction lure, researchers began evaluating training programs to address this safety threat. Poche et al. (1981) conducted the first study to evaluate the efficacy of behavioral skills training for teaching abduction prevention skills. Behavioral skills training (BST) which includes instructions, modeling, rehearsal in simulated and/or naturalistic settings, and feedback/praise, is the method found to be most effective for teaching a variety of prevention skills (Carroll-Rowan & Miltenberger, 1994; Himle & Miltenberger, 2004; Marchand-Martella et al., 1996; Olsen-Woods et al., 1998; Poche et al., 1981: 1988). The participants included three preschool children ages 3 to 5 years of normal intelligence and social skills. In response to an abduction lure, the children were trained to say “No”, leave the proximity of the abductor within 3 seconds, and report the incident to a trusted adult. A multiple baseline across subjects design revealed that children’s scores greatly improved from baseline to post-treatment. All of the participants achieved criterion in response to all three lures presented by the “abductor”; however, not all participants maintained the safety skills during the follow-up assessments.

Marchand-Martella et al. (1996) replicated the behavioral skills training used by Poche et al. (1981) to teach abduction prevention skills to children. The researchers assessed long-term maintenance and like previous research, found that despite the participants’ acquisition of the safety skills, the skills did not always maintain over time. Additional studies focused on group training and found that following BST, most children learned the skills; however, a percentage of participants did not (Carroll-Rowan

& Miltenberger, 1994; Olsen-Woods, Miltenberger, & Foreman, 1998; Poche et al., 1988).

Although participants in previous research demonstrated acquisition of safety skills using BST, some participants failed to engage in the appropriate behavior when assessed during in situ assessments (Carroll-Rowan & Miltenberger, 1994; Himle, Miltenberger, Gatheridge, & Flessner, 2004; Miltenberger, Thiesse-Duffy, Suda, Kozak, & Bruellman, 1990). This failure to demonstrate skills when a seemingly real safety threat is presented in a naturalistic environment poses a serious problem, as the research findings suggest that these participants are less likely to demonstrate the skills necessary when faced with a real life-threatening situation. In an attempt to increase the probability of generalization after skills are acquired using BST, researchers have added in situ training (IST) to their training package and have found it to be effective (Gatheridge et al., 2004; Himle et al., 2004; Johnson et al., 2005: 2006; Miltenberger et al., 1999; Miltenberger et al., 2004).

In situ training is conducted when the participant fails to demonstrate the skills to criterion during the in situ assessment. Immediately upon failure to use the skills during the in situ assessment, the trainer appears in the environment and provides on-the-spot training. The trainer asks the participant what just happened (what did the confederate ask the participant, and what was the participant's response), provides the correct response, engages the participant in role play scenarios, and provides feedback. This training continues until the participant exhibits the correct response 3-5 consecutive times during the role play scenarios. In situ assessments are conducted again within days and IST is implemented again if necessary. This procedure continues until the participant

demonstrates the criterion skills during several consecutive assessments (Egemo-Helm et al., 2007; Gatheridge et al., 2004; Himle et al., 2004; Johnson et al., 2005: 2006; Miltenberger et al., 1999; Miltenberger et al., 2004: 2005).

Johnson and colleagues (2005) taught abduction prevention skills to 13 preschool children using BST. Following in situ assessments, IST was implemented for any participant who failed to demonstrate the appropriate skills. Post training and follow-up assessments results revealed that participants acquired and maintained the abduction prevention skills. In 2006, Johnson and colleagues took the research one step further to evaluate BST alone versus BST plus IST in a small group format. Both treatment groups performed significantly better than the control group. The 3 month follow-up is the only assessment wherein the two treatment groups differed significantly, as the BST plus IST group performed better than the BST-alone group (Johnson et al., 2006).

Although IST has been found to be the most effective at teaching prevention skills, the approach utilizes trained professionals, is time-consuming, and can be costly to arrange. BST and IST are most often implemented on a one-to-one basis and thus are not practical approaches for reaching the large numbers of children who could benefit from training. Efforts have been made to use BST and IST to reach more participants while using fewer resources. Poche et al. (1988) developed a videotape training program designed to teach abduction prevention skills to young children. Using a posttest only control group design, participants were randomly assigned to one of four groups: (1) videotape only, (2) videotape plus BST, (3) standard program, (4) no training-control group. The standard program was the training program that was available in the schools which was presented by one trainer. In the standard program, the two safety rules that

were described in the video were discussed, potential abduction scenarios were presented, and the children were asked how they would respond. The trainer praised the children for correct answers. A short video was also shown in this group. Results revealed that children in the two videotape groups performed significantly better than the children in the standard program or control group. The results suggested that videotape training may be one way to make safety skills training more efficient, although the videotape training was not effective for all children and was most effective when combined with rehearsal of the skills (Poche et al., 1988).

In addition to the evaluation of video as a way to make safety skills training more accessible to children, other researchers have evaluated commercially available safety skills training programs to see if they are effective (Gatheridge et al., 2004; Himle et al., 2004; Kelso, et al., 2007). Most of this research has focused on evaluating commercially available programs for teaching skills to children to prevent firearm injuries; this research has been evaluated with children of various ages. For example, the Eddie Eagle GunSafe program, available for purchase from the National Rifle Association, has been used with over 15 million children in the United States according to figures provided by the NRA. The researchers reasoned that if the Eddie Eagle program were found to be effective, it could potentially reach large numbers of children because it is commercially available and relatively inexpensive. Himle et al. (2004) found that the Eddie Eagle program was not effective with 4 and 5 year olds. Gatheridge et al. (2004) found results similar to those of Himle et al. (2004), revealing that 6 and 7 year olds in the Eddie Eagle group learned to verbalize the safety skills, but did not demonstrate the skills in naturalistic situations as the children in the BST group did. Gatheridge et al. (2004) and Kelso,

Miltenberger, Waters, Egemo-Helm, and Bagne (2007) showed that the use of in situ training following the use of the Eddie Eagle program increased the effectiveness of the program (almost all children in both the Eddie Eagle and the BST group demonstrated the skills following one in situ training).

A recent internet search on national child abduction prevention programs revealed several commercially available programs designed to teach children the skills to avoid abduction. One prevention program in particular is *The Safe Side*. *The Safe Side* program, which began in 2004, employs a video training approach with instructions and modeling of safety skills and provides several “hot tips” in order to teach abduction safety skills to children ages 5-10 years old. The developers behind the training video have attempted to make the video humorous at times, engaging, and developmentally appropriate for 5 to 10 year olds (The Safe Side, 2004). Similar to other safety skills programs shown to be effective (Poche et al., 1981; Johnson et al., 2005: 2006; Marchand-Martella, et al., 1996) the *Safe Side* program teaches children to engage in similar safety skills when presented with a potential abduction situation; say no, get away, and tell a parent or other safe adult.

*The Safe Side* website hosts a page of testimonials regarding the efficacy of the training program as well as lists the numerous awards the program has received (The Safe Side, 2004); however, like many other commercially available programs aimed to teach safety skills to children, there is no published scientific research examining the program’s efficacy. Although research has found strategies such as BST and IST to be effective, these approaches are largely inaccessible; therefore, it would be beneficial for research to examine the programs that are commercially available so that many more children can

receive effective training in less time and using fewer resources. Furthermore, by examining the efficacy of commercially available prevention programs, researchers can identify modifications that can be made to increase their effectiveness if necessary.

The purpose of this study is to evaluate the efficacy of the commercially available abduction prevention program, *The Safe Side*. Furthermore, given the success of in situ training following the Eddie Eagle program in previous research (Gatheridge et al., 2005; Kelso et al., 2007), this study will further evaluate in situ training as an added component for any children who do not demonstrate the skills following the evaluation of *The Safe Side* program. Various assessments will be conducted in different situations to examine the acquisition of skills following training. As this program has not received previous scientific evaluation, the following predictions will be made: (a) Following the viewing of the Safe Side Stranger Safety DVD, the participants will achieve scores higher than their baseline scores; however, they will not perform the skills to criterion; (b) In situ training will be effective for teaching abduction prevention skills to the participants in each of the situations.



## Method

### *Participants and Settings*

Participants were six children, 5 girls and one boy, ages 6 and 8 years living in a southern metropolitan area. A demographics questionnaire completed by the parents of each participant confirmed the absence of any known mental health disorders or developmental disabilities and the absence of any prior relevant abduction prevention training (See Table 1 for complete results from demographics questionnaire). All of the participants were recruited through a department-wide email to staff at a local university to request participation of their children within the age range of 6 to 8 years old.

Selection criteria included age, absence of any known mental health disorders/disabilities, absence of prior abduction prevention training, availability to participate in multiple assessments, and the receipt of written, informed parental consent. The study was reviewed and approved by the University Institutional Review Board.

Assessment and training took place in the children's homes and in the community. The community settings included places such as a public park or playground, a mall/department store or a big box store, (i.e. Wal-Mart). Researchers included thirteen (3 males and 10 females) trained graduate students enrolled in the university's Applied Behavior Analysis master's program. The graduate assistants received training on data collection from the investigator and acted as the confederates for the study in both situations.

### *Materials*

*The Safe Side* abduction prevention training DVD titled “Stranger Safety” was used in the study. The DVD is 42 minutes and provides several “hot tips” in order to teach abduction safety skills to children ages 5-10 years old. The objective of the video is to teach children, with instructions and modeling, to respond safely in various possible abduction situations. These responses included the safe way to respond to a knock on the door, abduction lures, and to adults who violate the child’s personal space.

### *Target Behaviors*

The target behaviors were the safety skills used in response to two different potential abduction situations that were addressed in the Safe Side DVD. The two situations included (1) *knock on the door* and (2) *the approach*. No situation was used more than once with any one participant during any of the assessments (i.e. the location was not repeated and/or the nature of the visit to the store was different). The scoring criteria for the safety skills for each measure were coded with the following numerical values described below.

*Knock on the door.* In response to a knock on the door when the parent is not present in the room, the target safety skill was to not answer the door and to go tell the parent that someone is at the door. The safety skill responses for knock on the door were coded on a 3-point scale including the following: 0= opens the door independently (without parental permission or parental assistance); 1= Does not open the door but does not tell parent/adult; 2= Does not open the door, and tells parent/adult that someone knocked on the door.

*The Approach.* The approach involves a scenario in which an adult violates a child's personal space by walking up to a child in a public place, standing close to the child, and talking to the child. The safety skills (gets away immediately and tells an adult) to be used when an adult violates the child's personal space were scored on a 3-point scale as follows: 0= stays in proximity of confederate (regardless of whether or not the child reports the incident); 1= gets away immediately but does not tell an adult; 2= gets away immediately and tells adult. Getting away immediately as stated above was defined as leaving the proximity of the confederate within 10 seconds of initiation of speech by confederate, and traveling a minimum of 5 feet away from the confederate in the direction of their parent (or reaching the parent).

A decision was made to use *the approach* instead of an abduction lure to measure abduction safety skills for two reasons; one was that *the approach* in which the adult engages the child in pleasant conversation is a precursor to the delivery of the abduction lure (Poche et al., 1981), so it is most safe for the child to respond before the lure is delivered. The second reason was that the child is less likely to be frightened when presented with this situation than when presented with an actual lure involving a request to leave with the adult. Although an adult might engage a solitary child in conversation without any intent to abduct the child, the most conservative response is for the child to respond to this potentially dangerous interaction by getting away and telling a parent.

#### *Assessment*

The safety skills relevant to each of the two potential abduction situations were assessed through in situ assessments. During an in situ assessment the child was at the home or taken to the prearranged community setting and was unaware that assessment

was taking place. The in situ assessments were conducted for each of the two situations in the setting described in each situation. Both the researcher and the parent independently recorded the participant's response.

During the *knock on the door* situation, the confederate approached the house and knocked loudly on the door using five consecutive raps (if there was a door bell, the confederate rang the door bell in conjunction with knocking on the door). The confederate waited ten seconds for the door to be answered before knocking again. The confederate waited another ten seconds if the door was not answered and knocked one final time totaling three knocks.

During the *approach* situation, the parent took the child to a community location for a legitimate purpose (e.g., shopping, playing in the park) and left the child's immediate vicinity. Once the parent was away from the child, a confederate approached the child and began speaking with the child by saying something relevant to what the child was doing (i.e. that's a good cereal; my daughter really likes lucky charms, do you? etc). If the child spoke and stayed in the confederate's proximity, the confederate responded with one brief statement. The confederate waited ten seconds for a response and then left (or excused him or herself if necessary). For both of the situations, if the child exhibited the correct safety skills according to the response definitions, which included reporting the incident to the parent, then the parent provided praise to the child for reporting the situation. A wide variety of community locations were used to ensure an adequate assessment of the generalized use of the safety skills. The community locations included the child's front/back yard, grocery stores, office stores, public parks, clothing department stores, a video store, a dollar store, a pharmacy, big box stores, a

sporting goods store, a bank, a public library, a fast food restaurant, and a dine-in restaurant.

Two participants (Meghan and Alyssa) in the study were siblings and therefore, the assessments were conducted independent of each other but usually during the same day. Both parents accompanied the participants to the community location and upon arriving, each parent took one daughter and went to a different location of the store. This was not unusual for the family as both parents reported that they typically completed an outing as a family by splitting up into pairs. During all phases of Meghan and Alyssa's assessments, the confederate assessed one child's skills and then called the other parent to assess the other child's skills in a different location a few minutes later. At no point did either child witness the assessment or training of her sibling.

A four week follow-up was conducted to assess maintenance of the safety skills during the *approach* situation only. This assessment was identical to the in situ assessments conducted during the in situ training phase. If the child demonstrated the skills, the parents provided descriptive, enthusiastic praise. If the child did not demonstrate the appropriate skills, in situ training was implemented and one additional visit was scheduled within the week to assess the skills again.

#### *Observers and Interobserver Agreement*

The investigator or a trained research assistant acted as the confederate and he/she served as the primary observer for whether the child opened the door for the confederate, and/or got away immediately. The parent or another trained research assistant acted as the reliability observer in all of the components. In both situations, the parent of the child acted as the primary observer only for whether the child reported that someone was at the

door or that a stranger spoke to him/her in the community. These data were often reported to the confederate immediately after the assessment and then recorded by the confederate.

Interobserver agreement (IOA) was calculated by dividing the number of agreements by the number of agreements plus disagreements for each of the four targeted responses (get away and tell for the approach assessment, and open the door and tell for the knock on the door assessment). This number was then multiplied by 100%.

Agreement was reached when two observers recorded the same response for each response opportunity. For the knock on the door assessment, IOA for answering the door was obtained during 45% of all observations with a mean score of 94.4% agreement.

100% agreement was reached during 43% of the observations of whether or not the child reported that someone knocked. In the community, the two behaviors that were assessed were getting away from the proximity of the confederate and reporting to the parent that a stranger approached. A mean of 96.6% agreement was obtained during 52% of all observations of the 'get away' behavior. Agreement on 'telling' was assessed during 43% of all observations at a score of 100% agreement.

#### *Demographics Questionnaire*

A demographics questionnaire was completed prior to beginning training or assessments. The demographics questionnaire (see Appendix A) was used to acquire descriptive information on the participants, identify any prior abduction prevention training, and determine inclusion or exclusion into the study.

Table 1

*Demographics Questionnaire Results*

<i>Demographics Question</i>	<i>Alyssa</i>	<i>Caleb</i>	<i>Kaitlyn</i>	<i>Sandie</i>	<i>Meghan</i>	<i>Gillian</i>
Does the child have any mental health disorders or disabilities?	No	No	No	No	No	No
Parent age?	41-50	31-40	31-40	31-40	31-40	41-50
Child's age	6	6	7	7	7	8
Ethnic Background?	White/Caucasian	White/Caucasian	White/Caucasian	White/Caucasian	White/Caucasian	Multi-racial
Parental Marital Status?	Married	Married	Married	Married	Married	Married
How many siblings to the participant?	2	1	1	1	2	1
How many children <16 in the house?	2	2	2	2	2	2
Child's educational enrollment?	Public School	Private School	Public School	Private School	Public School	Public School
Household income?	100,000 or more	100,000 or more	100,000 or more	100,000 or more	100,000 or more	\$80,000-99,999
Prior abduction prevention training?		No	No	No	No	Yes*

*Note.* Gillian- prior training included “a one-time training via a video, instruction, and demonstration 2 years ago at elementary school for about two hours.” Parents reported to investigator that the training content included physically escaping from a perpetrator if a person were to attempt to grab and take the child out of the area.

### *Side Effects and Social Validity Questionnaire*

To assess any possible changes in behavior of each child following the training, a six-item questionnaire was administered to parents (Johnson et al., 2005). The questionnaire was also used to assess parental attitudes concerning the training. Following completion of the study, the questionnaire was e-mailed to the parents of children who completed the study (See Appendix B).

### *Experimental Design and Procedures*

A non-concurrent multiple baseline across participants design was used to evaluate the efficacy of the Safe Side Stranger Safety DVD and in situ training if needed. The participant's safety score for each assessment was plotted in each participant's graph for the relevant situation (knock on the door, the approach).

*Baseline.* Participants received two to five in situ assessments for each situation during baseline. No feedback was provided for their performance during assessments. The number of data points in baseline was determined by the stability of each participant's approach data. It was not possible to ensure stability in the knock data prior to intervention because intervention occurred for both behaviors simultaneously and the timing of implementation of intervention was based on the stability of the approach data.

*Safe Side Stranger Safety DVD.* Each participant viewed the Safe Side Stranger Safety DVD in his or her home. Within one week, following viewing of the video tape, another assessment for each situation was conducted. If the participant failed to demonstrate the appropriate safety skills during the in situ assessment, both the investigator (not the confederate for that assessment) and parent appeared immediately following the assessment and implemented in situ training.



*In situ training.* In situ training was conducted individually and was only provided upon failure to engage in the appropriate skills during the in situ assessments; if a participant demonstrated the safety skills during one situation and not the other, then in situ training was only provided for the one wherein the subject did not engage in the correct behavior. Upon failing to demonstrate the criterion skills, the parent appeared in the situation and the confederate immediately left the situation (during the approach situation only in order to remain a potential threat and not alert the child to the assessment). The parent identified the safety threat and the danger it posed, prompted the child to state the correct responses, modeled the appropriate skills for the child if necessary, and engaged the child in three consecutive role plays of the same scenario.

For the first community assessment following the viewing of the Safe Side video, the investigator was present in the situation and acted as if the meeting in the setting was coincidental. The parent introduced the investigator to the child as a friend or colleague, and requested the investigator act as the stranger in order to help them practice the scenarios. In all subsequent assessments wherein training was necessary, the parent followed the same procedure as listed above, but simulated the presence of a stranger. For example, the parent recreated the scene by sending the child back to the same task and saying to the child, “okay, you’re looking for cereal and I’m over here getting coffee. Someone you don’t know just spoke to you.” Then the parent would provide feedback for the child’s behavior. In one case, the parent had a friend play the confederate in the role play scenarios.

For the knock on the door situation, the parent followed the same protocol by providing praise for correct skills and/or implementing in situ training for any missed

steps. The in situ training in the knock situation differed from the approach situation only in that the confederate acted as someone that the parent knew and participated in the three practices each time. Three consecutive correct safety skill demonstrations were necessary to complete the training. The knock on the door assessment often took place on the same day as the approach assessment, however, a different confederate was used and the approach assessment always took place first.

Within one week following IST, an in situ assessment was conducted to assess the child's usage of the appropriate safety responses for the situation. If the child demonstrated the appropriate skills, the parent provided enthusiastic praise to the child. If the child failed to perform the appropriate skills for the situation, in situ training was implemented by the parent. If IST was necessary, the child was required to demonstrate the appropriate safety responses for the situation during three consecutive rehearsals. Further in situ assessments were conducted with additional in situ training sessions as needed until the child engaged in the desired safety skills in three consecutive in situ assessments.

*Booster Training Session.* A booster training session was provided by the researcher for two participants (Meghan and Alyssa) because they did not achieve criterion performance (3 consecutive scores of 2) after several in situ assessments following Safe Side and in situ trainings. The booster session followed a behavioral skills training format which included instructions, modeling, rehearsal and feedback. The training session was conducted at the home of the two participants (the participants were siblings) and included both participants and both parents.

Training began with a discussion with the participants (facilitated by the researcher) about what they should do if a stranger knocks on their door or approaches them in public and their parent is not next to them. The remainder of the training only pertained to the situation of a stranger approaching the child in the community. The researcher modeled the appropriate safety skills and then rehearsed several different scenarios, four times with each participant. During the rehearsal component, both participants were asked to identify a community location that they would visit with their parent(s) and a task that their parent may send them on. These scenarios were then used to role-play with each child. Some of the community settings selected by the child during the booster session included a pizza place, bowling alley, movie theatre (going to bathroom while parent orders candy), zoo, grocery store, big box store, swimming in the backyard (participants live on golf course), and a large pharmacy. The parents practiced providing descriptive, enthusiastic praise to each child as she demonstrated the appropriate skills. Both participants were present throughout the entire training, therefore role playing in front of each other.

Following the booster session, the investigator accompanied the participants to a community location. This arrangement was made in the presence of the two participants to appear as a coincidence (i.e. the parent said they were going to a certain store and the investigator said that she coincidentally had plans to head there also). Each parent paired off with a child and headed to separate sections of the store. The investigator remained with one of the pairs and a novel confederate approached the child in the setting while the parent and the investigator were approximately 15 feet away from the child. A few minutes later, this procedure was implemented for the other participant. Descriptive

praise was provided for correct steps by the parent and the investigator and in situ training was implemented as necessary by the investigator.

## Results

### *The Approach*

During baseline, the participants' scores varied from 0 to 1 (Figure 1). Four of the participants (Meghan, Caleb, Sandie, and Kaitlyn) left the confederate's proximity within 10 seconds of being approached at least once during baseline. None of the participants reported to their parent that they were approached and spoken to by a stranger at any point during baseline.

After viewing the Safe Side Stranger Safety DVD, all but one participant (Caleb), received a score of a zero. Caleb received a score of 1, as he left the area of the confederate, but failed to report to the parent. This score did not differ greatly from Caleb's baseline data as Caleb had achieved a score of a 1 for two out of three baseline data points (see Figure 1).

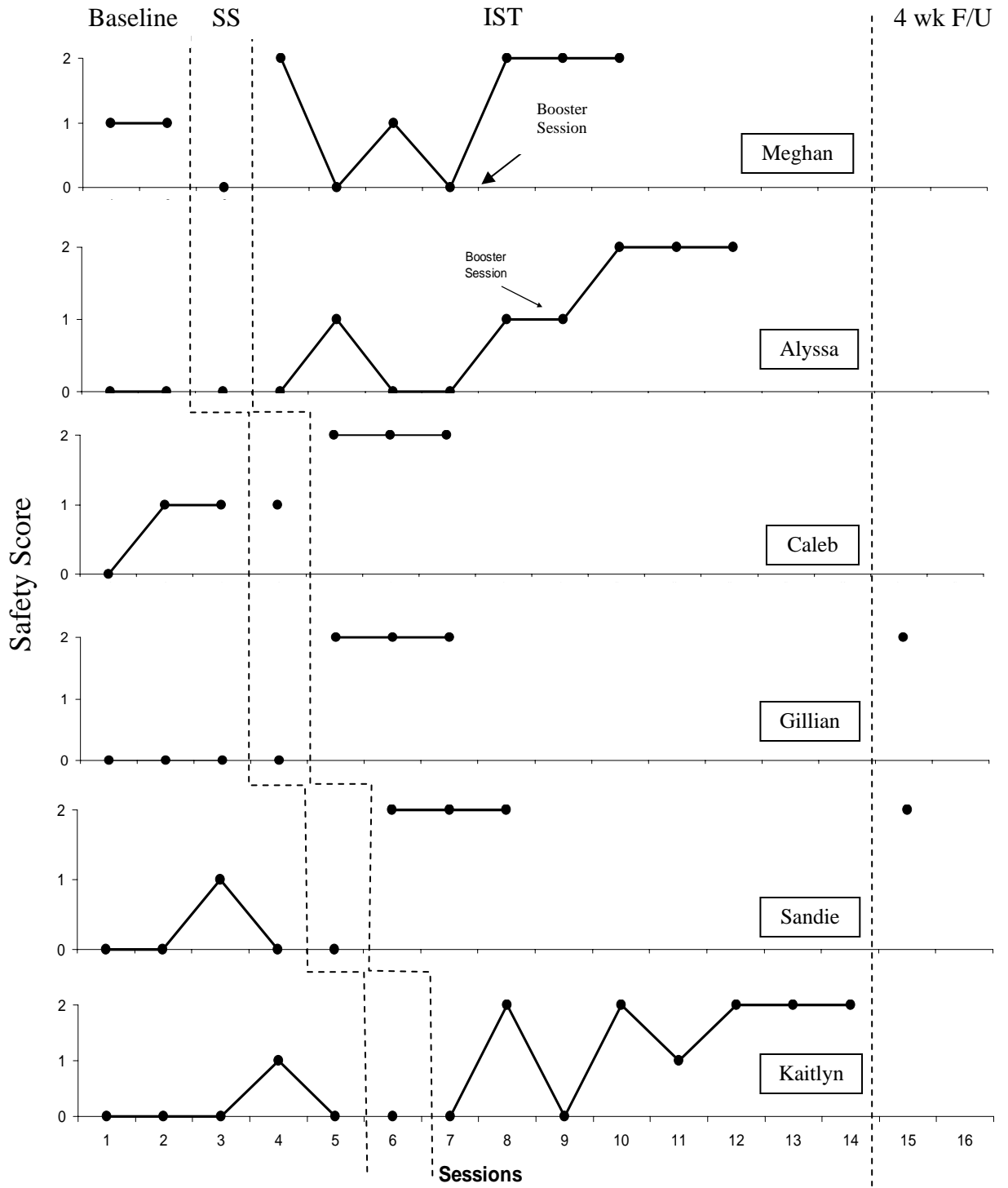


Figure 1. The Approach

In situ training was implemented for all of the participants following the Safe Side training. Following in situ training, four participants (Caleb, Gillian, Kaitlyn, and Sandie) achieved criterion performance (three consecutive scores of 2). Three of the participants achieved immediate criterion performance, while one participant (Kaitlyn) achieved criterion performance more gradually. Two participants (Alyssa and Meghan) did not achieve three consecutive scores of 2 following in situ training, even after 4 or 5 in situ assessments. For these individuals, a booster session using behavioral skills training was implemented by the researcher. Following the booster session, additional approach assessments were conducted and both participants rapidly achieved criterion.

Maintenance was assessed for two out of six participants (Sandie and Gillian) during the approach situation. Due to scheduling, Sandie and Gillian were the only participants available for follow-up assessments. The maintenance probes took place four weeks after each participant's completion in the study. Both participants got away from the confederate and reported to their parent, thus demonstrating maintenance of the safety skills during the four week follow-up.

### *The Knock*

Four of six participants (Caleb, Gillian, Sandie, and Kaitlyn) demonstrated the appropriate safety skills during baseline (Figure 2). Following the viewing of the Safe Side Stranger Safety DVD, the four participants maintained their performance throughout the remainder of the assessments. The two remaining participants (Meghan and Alyssa) both scored 0 during all baseline assessments and following the viewing of the Safe Side DVD. Meghan and Alyssa both received in situ training and they immediately achieved

criterion performance during the next assessment. Alyssa and Meghan maintained the skills for three consecutive assessments.

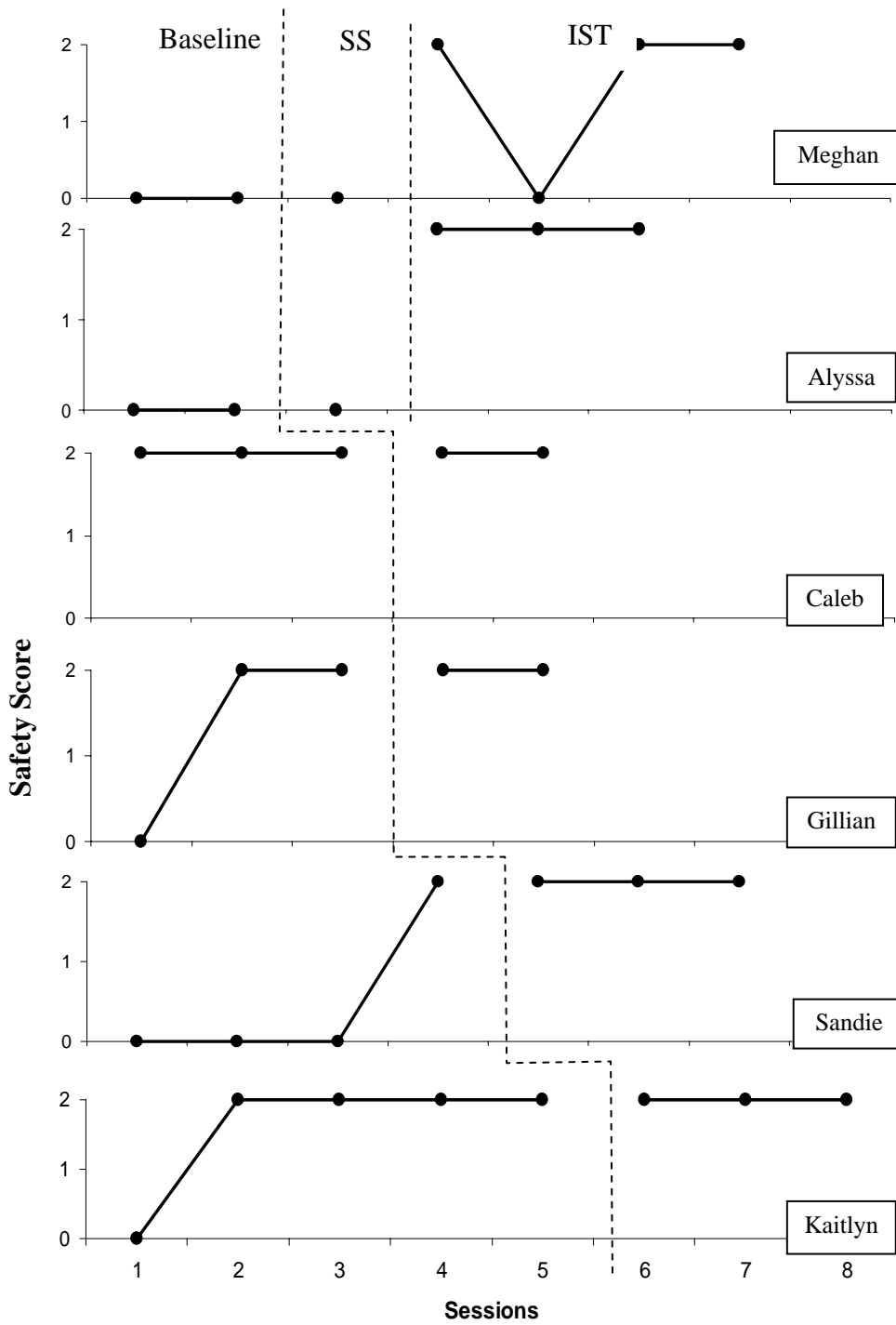


Figure 2. Knock on the Door



### *Social Validity*

The parents of all six participants filled out the social validity/side effects questionnaire. Three out of six reported no change in their child's behavior, two reported moderate changes, and one reported substantial change. Five parents who completed the survey reported that they were very pleased (the remaining parent reported she was pleased) with their child's participation in the study. Actual responses for each item are reported in Appendix B.

## Discussion

The current study evaluated the efficacy of the Safe Side DVD in teaching abduction prevention skills to children. The results of this study suggest that the Safe Side DVD is not effective in teaching children to engage in abduction prevention skills when approached by a stranger in the community. The investigators measured the two skills addressed in the Safe Side video (responding to an approach by a stranger in public and responding to a knock on the door). None of the children demonstrated the appropriate safety skills for responding to a stranger's approach following the viewing of the video; in fact, all of the participants except one scored a 0 when approached by a stranger following the Safe Side training video. Furthermore, for the two children who did not already possess the skills of responding safely to a knock on the door, the Safe Side DVD did not result in the use of the skills.

These results are important because they showed that a commercially available prevention program alone failed to teach safety skills to children. This information should be publicized so that parents are aware that their children will likely not learn the skills necessary to avoid abduction as a result of the Safe Side video training. These results are not surprising as the training is information-based and does not employ the active learning approach which research supports as effective at teaching skills (Miltenberger, in press). The current findings are similar to those of Himle et al. (2004) and Gatheridge et al. (2004) where the efficacy of an information-based gun safety program (the Eddie Eagle Program) was evaluated. In both of these previous studies, the

investigators found that the Eddie Eagle GunSafe Program was not effective at teaching the necessary skills to avoid firearm injuries.

A noteworthy aspect of the present study is the use of a wide variety of community locations to assess the generalized use of the safety skills. We used a variety of community settings, changed the nature of the community visit in each assessment, and also arranged for different scenarios at home. Some of the settings that the children were assessed in include: the child's front/back yard, grocery stores, office stores, public parks, clothing department stores, a video store, a dollar store, a pharmacy, big box stores, a sporting goods store, a bank, a public library, a fast food restaurant, and a dine-in restaurant.

The results of the present study further support the growing research indicating that in situ training is effective in teaching safety skills to children. The children in the current study lacked the skills prior to the in situ training phase. With a training procedure that employed rehearsal and feedback in the natural setting, all of the participants were successful at demonstrating the appropriate safety skills in a variety of community settings.

Although the literature validating in situ training is plentiful, there is little research which supports the efficacy of in situ training being implemented by persons other than highly trained researchers. Only one other study (Gross et al., 2007) suggests that in situ training can be implemented by parents. Gross and colleagues showed that parents can successfully implement in situ training when teaching gun safety skills to children. This finding is significant because of the time and cost that in situ training can require. It would be beneficial if parents and teachers could be trained to implement

training so as to reduce cost as well as to potentially teach more than one child at a time. In the present study did show that two of the six parents had difficulty with the fidelity and integrity of implementing the training. In response, the researcher conducted a booster session and accompanied the parent on one assessment to conduct in situ training. A possible explanation for the lack of integrity is that parents did not receive adequate training to conduct in situ training. Parents were given a protocol to follow and had discussions with the researcher, but did not receive behavioral skills training to learn to conduct in situ training. Future research should include a parent training component which includes rehearsal and feedback to ensure that the parents learn the skills necessary to implement in situ training properly.

Another noteworthy finding is that this study is the first to assess abduction prevention skills in response to a situation in which an unknown adult approaches and talks to a child in public but does not deliver an abduction lure. The findings suggest that children can learn the safety skills without an obvious lure being presented. Previous studies (Johnson et al., 2005) have experienced participant drop-outs due to repeated assessments with abduction lures. In the present study, we experienced no attrition due to the presentation of abduction lures. In fact, only one participant began and did not continue the study due to scheduling conflicts. By eliminating the presentation of the lure, we were able to assess and teach the same skills without the same degree of risk for participant drop-out. Furthermore, the present findings suggest that children may get away from the perpetrator prior to the delivery of a lure, thus suggesting that they may be safer in that situation.

The researchers issued a questionnaire to assess any side effects of the study regarding child behavior change or increase in fear responses. The questionnaire also assessed parental satisfaction with their child's participation. It is noteworthy that while one participant was reported to be much more scared after the study, the parent remained extremely satisfied with her child's participation.

Another difference between this study and prior research is that prior abduction prevention research has included a verbal response, such as saying "no" to the potential perpetrator. When considering whether or not to include a verbal refusal as part of the safety skills, the investigators decided that it would be irrelevant to have the children provide a refusal statement because the confederates were not actually asking them to leave with them. In addition, although the investigators considered including a verbal response (or refraining from speaking) as part of the safety skills, many of the parents in the study stated that they wanted their children to be polite by responding briefly if someone addresses him/her (as long as it is not a request for information). This raises the question of whether or not the participants' responding with friendly conversation (which many did) caused them to also remain in the area for longer than 10 seconds.

#### *Limitations and Future Suggestions*

The present study contributes to the growing literature on safety skills training for children, providing a further replication of the effectiveness of in situ training and further documenting that an informational approach does not work. There are also some limitations that we believe necessitate discussion in order to benefit future research.

The assessments for most participants took place within a few days following in situ training sessions. We believe the scheduling of the assessments within days of

training sessions contributed to the positive results. However, due to some scheduling conflicts, it was difficult for the community assessments for Alyssa and Meghan (who are siblings) to closely follow the in situ training. For example, several community assessments took place two to three weeks after in situ training or a previous community assessment. Both participants achieved variable scores and never achieved a score of a 2 during this time period. The time between assessments may have affected the participants' demonstration of skills. One possible explanation for the lack of criterion performance is the absence of consistent positive reinforcement for demonstrating the correct safety skills. A possible contributor to the efficacy of in situ training is the descriptive praise that is provided upon the display of correct skills. If the child went three weeks before the next assessment (and thus the next possibility of positive reinforcement for engaging in the correct skills), then it is possible that the efficacy in situ training was compromised.

Another limitation as previously mentioned is the problem with the fidelity of in situ training. On two occasions, Alyssa did not receive in situ training by her parent when she failed to demonstrate the skills in the community. On one occasion each, Meghan and Kaitlyn also went without in situ training by their parent when it was necessary. This inconsistent use of in situ training may have decreased the likelihood that the participants would learn and demonstrate the skills. The data reflect the variability in the safety scores achieved by each of these three participants (Alyssa, Meghan, and Kaitlyn). Future research in this area should use a training package employing instructions, rehearsal and feedback to teach parents to use in situ training in order to promote better fidelity of the training implementation.

A third possible limitation was the parent's proximity to the participant when the skills were being assessed in the community. The parent was told to send their child to complete a task and therefore, the child was away from his/her "safe side" adult. This was challenging to accomplish as the parents were not comfortable with their child being out of sight and therefore, most of the parents remained in the same aisle or in close proximity to the child. The proximity of the parent during assessments could have influenced the data in several ways. First, it may potentially account for why several of the children did not get away from the confederate following training; the child could have decided that the safety skills were not necessary as his/her parent was nearby and thus he/she was safe. Following training, parental proximity could have also contributed to the child's correct demonstration of the skills given the history of rehearsal which may have potentially been viewed as aversive.

Future studies may also benefit from investigating whether a person's history of compliance could be a potential influence on the acquisition and demonstration of skills. Caleb, Gillian, and Sandie all achieved criterion performance immediately following in situ training and also maintained the skills during the four week maintenance probe. A reasonable question to ask is whether assessment of factors such as the child's history of compliance would help predict the outcomes of training. Additionally, could the child's correct demonstration of skills be influenced by any previous encounter with an abduction situation or knowing someone who has been involved in an abduction? Would this familiarity with abduction lead the family to have discussed it more often and in more detail than a family without that type of experience? It would perhaps be beneficial

to include an item on the demographics questionnaire addressing any previous encounter with abduction by the child, parent, or someone they know.

Consistent with previous research showing that an informational approach to teaching safety skills is not effective (Gatheridge et al., 2004; Himle, Miltenberger, Gatheridge, et al., 2004), this study showed that children did not demonstrate the correct safety skills following the viewing of the Safe Side video. Also consistent with previous research demonstrating the effectiveness of in situ training (e.g., Himle, Miltenberger, Flessner, et al., 2004; Miltenberger et al., 2004; 2005), the present findings showed that in situ training is effective in teaching children appropriate safety skills.



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## Appendices

## Appendix A: Demographics Questionnaire

The information in this questionnaire will be used to describe participants in the study. The information will be summarized and no individual information will be disclosed.

Please select the responses to each item which best describes you. For any questions that pertain to a child, please refer to the child participating in this study.

1. What is your relationship to the participant in the study?

- Mother
- Father
- Grandmother
- Grandfather
- Legal Guardian (but not biological parent or grandparent)

2. Does your child have any diagnosable mental health disorders or disabilities? Please check all that apply

- Learning Disability
- Developmental Disability
- Autism Spectrum Disorder
- Mental Retardation
- Bi-Polar
- AD/HD
- Other: (Please specify) \_\_\_\_\_
- No known mental health disabilities

3. What is your age?

- 0-20
- 21-30
- 31-40
- 41-50
- 51-60
- 61-70
- 71-80
- 81+

4. What is your gender?

- Male
- Female

5. Please select one of the following which best describes your ethnic background.

- Caucasian/White
- African American
- Indigenous or Aboriginal Person
- Asian/Pacific Islander
- Hispanic
- Latino
- Multiracial
- Other: \_\_\_\_\_

6. Please select one of the following which best describes your current marital status.

- Single
- Married

- Married, but separated
- Divorced
- Widowed
- Living with another but not married

7. What is the number of siblings of the child participating in the study?

- 0
- 1
- 2
- 3
- 4
- 5 or more

8. How many children under the age of 16 live in your household?

- 0
- 1
- 2
- 3
- 4
- 5 or more

9. Please select one of the following which best describes your child's current educational enrollment.

- Currently enrolled in public school
- Currently enrolled in private school
- Currently enrolled in home school



Not currently enrolled in any school

10. Please indicate your current **household** income in U.S. Dollars.

Under \$10,000

\$10,000-\$29,999

\$30,000-\$49,999

\$50,000-\$79,999

\$80,000-\$99,999

\$100,000 or more

11. Has your child ever participated in a training program aimed to teach abduction prevention skills?

No

Yes

If you answered yes to the last question, please describe the program that your child participated in (including the number of programs participated in, name of the program, and any other information you are willing to share about the training program)?

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Thank you! 😊

Appendix B: Side Effects Questionnaire Items

Please put a check mark next to the item that reflects your response.

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

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

much more scared (Caleb)

a little more scared (Kaitlyn and Sandie)

no change (Alyssa, Meghan, and Gillian)

less scared

much less scared

b. If a change occurred, please describe briefly: \_\_\_\_\_

\_\_\_\_\_

c. cautious: hesitant to go outside or be alone

much more cautious

a little more cautious (Kaitlyn and Sandie)

no change (Alyssa, Caleb, Meghan, and Gillian)

less cautious

much less cautious

If a change, occurred, please describe briefly: \_\_\_\_\_

\_\_\_\_\_

d. upset: concerned about the issues of strangers, personal safety, etc.

much more upset (Caleb)-this child had a nightmare

a little more upset (Kaitlyn and Sandie)

no change (Alyssa, Meghan, and Gillian)

less upset

much less upset

2. Other changes I noted in my child's behavior are: somewhat more observant of strangers (Alyssa and Meghan); when parent asks child to sit alone, child says to mom "but what if someone tried to talk to me?" (Kaitlyn)

Please describe or mark N/A if no change was observed.

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

very pleased (Alyssa, Caleb, Sandie, Meghan, and Gillian)

pleased (Kaitlyn)

neutral

disappointed

very disappointed

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

very satisfied (Alyssa, Caleb, Kaitlyn, Sandie, Meghan, and

Gillian-ALL)

satisfied

neutral

unsatisfied

very satisfied

5. Did you terminate your child's participation in the study? Yes or No (Alyssa, Caleb, Kaitlyn, Sandie, Meghan, and Gillian-ALL)

If yes, please explain

why. \_\_\_\_\_

\_\_\_\_\_

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

Difficulty learning the behavior; parent expected participant to respond quicker