

University of Florida – Behavior Analysis Services Program
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From the Editor

Behavioral Safety Training

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Welcome to another edition of Behavioral Parenting Abstracts. We are excited to publish an installment in our “Tips for Parents” section from our close colleagues from the University of North Texas (UNT) behavior analysis program. Valori Berends and Anna Whaley Carr provide several tips on behavioral safety training for parents. We are pleased to have our UNT colleagues officially on board with this publication. We work closely with them as one of the few other programs relating behavior analysis to child welfare. (Petscher).

In addition, Erin S. Petscher, from the University of Florida, provides a review for professionals on the topic of behavior skills training (BST) as it relates to behavioral safety in particular. She includes pertinent references on the topic. Dr. Petscher has recently published some of her training research in the Journal of Applied Behavior Analysis, so we are thrilled to read her perspective on how such training relates to safety.

We selected behavioral safety as the featured topic for several reasons. One, our main goal is to keep children safe. Two, so much of safety relates back to human behavior. Were the correct precautions taken? Were independent safety skills taught? Three, the line of research, although not new, represents an exciting area that relates directly to child welfare. As we have done in recent issues, one article is geared toward parents (Berends & Whaley) and the second article is geared toward professionals looking for a synopsis of the literature.

Timothy R. Vollmer

We would like to hear from our readers! Please send your comments and suggestions to:
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Tips for Parents

Tips on Behavioral Safety Training

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Parents often worry about their children's safety. To help, behavior analysts can teach kids how to behave in safe ways. They call it Behavioral Safety Training or BST. Using BST means helping kids learn safety by instruction, showing, and practice. Parents can also use these three steps to teach their child safe behaviors. To do it, first, clearly tell the child the safe behavior you would like to see. Second, show what the safe behavior looks like. Finally, monitor the child's practice of the new, safe behavior until you can see that it is easy for them. Read on to learn more about using instruction, showing, and practice.

Instruction

- Choose a time free of distraction to instruct your child. You don't want the TV or a cell phone interrupting.
- Be specific about what you want the child to do. "I want you to hold your big sister's hand and look both ways before you cross the street," is more specific than, "I want you to be careful on the streets."

- If the safe behavior is difficult, break it down into a series of small steps. Make the steps short and specific for easy remembering.
- Provide 1 or 2 examples of how (and how not to!) perform the behavior.

Showing

- After you tell the child how-to, show how-to. Perform the steps the way you would like the child to perform them.
- Have an older sibling, spouse, or friend praise or reward you for the safe behavior. You want your child to see the praise and attention that will be provided when he or she learns and performs the safe behavior.
- Help your child focus on the important parts of the behavior you are teaching. Only use brief descriptions of the steps while you perform the behavior. Limit off-topic conversation.

Practice

- When the child has seen the correct behavior *and* the praise and attention awarded for it, tell the child to try.
- Enthusiastically praise the child for attempts to perform the behavior. Remember, they don't need to get it right the first time!
- After an attempt, tell the child specifically what s/he did correctly and incorrectly.

Place special emphasis on things done correctly.

- The child should repeat the performance until it is correct and easy to do. Continue to praise and tell the child what was correct and incorrect after each practice.

Sometimes parents have to tell their kids how to behave in safe ways, but there are also things parents can change in the home environment that will more directly help children to behave more safely. Listed below are ideas for making your home a safer place for kids (Lutzker & Bigelow, 2002).

- Purchase safety latches for cabinets you want your child to avoid.
- Search your home for long cords that could cause strangling. Cut cords short or otherwise remove them from your child's environment.
- Cover electrical sockets with safety plugs.
- Securely wrap frayed electrical cords with electrical tape.
- Place hazardous items out of reach. Consider cleaning products, lighters, alcohol, insecticides, paints, deodorizers, solvents, fertilizers, firearms, plastics, choking hazards (small objects), adhesives, and medications.
 - When placing items out of reach, take into account what is visible to your child. If the child can see it, could she climb to reach it?

- Use baby gates at the top and bottom of stairs and to doorways leading to areas containing hazards.
- Never leave your infant or small child unattended near water. Pools as shallow as an inch can be dangerous.
- Lock or screen all windows and doors.
- Keep coffee and end tables clean of breakable trinkets and décor.
- Cover trash receptacles or place behind latched cabinets.
- Always strap your young ones into high chairs and other child seats.
- When cooking on the stove, turn pot handles inward.
- Keep hot drinks such as cocoa, tea, or coffee away from table edges.

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Literature Review

Behavioral Safety Training A Brief Literature Review

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Behavioral skills training (BST) is helpful in teaching safety skills to those at risk for engaging in unsafe behaviors. The program involves a combination of instructions, modeling, rehearsal, praise, and corrective feedback (Miltenberger & Olson, 1996). It has consistently demonstrated utility in teaching self-protective behaviors to children (Himle & Miltenberger, 2004). In fact, BST is the most effective program in abduction prevention research. It has yielded impressive results in both individual and group training for children between 3 and 7 years of age as well as adults with mental retardation (Miltenberger & Olson, 1996).

Although it is commonly believed that persons are abducted by force, most often they are actually enticed by their abductor and leave willingly (Holcombe, Wolery, & Katzenmeyer, 1995; Poche, Brouwer, & Swearingen, 1981). During baseline and assessments, most children agree to leave with a stranger without any threat of force (Holcombe, Wolery, & Katzenmeyer, 1995, Poche et al., 1981; Poche, Yoder, & Miltenberger, 1988). Before behavior analysts began publishing options on abduction prevention, several published abduction safety programs were commonly available in schools for training (e.g. Arnold, 1978; B.F.A., 1977; Davis, 1972, 1975, 1977). However, well controlled studies in 1988 indicated that these safety programs did not actually improve abduction prevention skills, particularly

when compared to a videotape with behavior rehearsal (Miltenberger & Thiesse-Duffy; Poche, Yoder, & Miltenberger). More recent research by Carroll-Rowan and Miltenberger (1994) compared three groups of children who did not demonstrate abduction prevention prior to the study. A no-treatment control was compared to a group with a videotape condition and one with a teacher's manual that included the same content as the videotape. BST was taught as part of both treatment conditions, and these conditions revealed significantly better behavior than the control group. The results of the teacher's manual condition were slightly better than those of the videotape condition although there was no significant difference within naturalistic probes. The manual group's participants significantly improved their responses to scenarios that were described to them in a self-report situation, but this did not correlate to how well they actually performed the behaviors in reality. Both treatments in this study utilized BST through different means and were significantly more effective than the no-treatment control condition.

BST has not just been useful in improving abduction prevention skills, it has also addressed gun play prevention, which is a serious problem with few alternative solutions. Gun play has been commonly identified as a factor leading to unintentional firearm injury and death. A variety of factors play a part in these unfortunate incidents, including parents' beliefs about their children's understanding of guns, and the availability of the guns within a home. These risk factors have been addressed in

the past through parent education announcements and training, however it is the BST programs addressing child behaviors with BST that have produced the impressive advances (Himle & Miltenberger, 2004; Himle, Miltenberger, Gatheridge & Flessner, 2004).

A BST protocol usually teaches participants to engage in three target behaviors. Abduction prevention strategies normally include a verbal response, motor response, and reporting response. Specifically, the verbal response is to tell the potential abductor, "no". The motor response involves walking or running away, and the reporting response is to immediately tell a safe adult about the dangerous person (Miltenberger & Olson, 1996). In gun play studies, participants are taught three similar steps: do not touch the gun, immediately get away from the gun, and tell an adult about the gun right away (Himle & Miltenberger, 2004).

BST is comprised of several key components, including instructions, modeling, rehearsal, and feedback. Some studies have added in situ training or assessment and maintenance techniques to ensure the highest quality of results.

Instructions. The developmental level of the participant is important when delivering instructions. The trainer explains the dangers of the risky behaviors the participant may engage in, and identifies the protocol that should be performed instead. The safety protocols all end with reporting the problem to an adult, so at this point the participant is assured that adults will not penalize the participant for interrupting and will in fact be appreciative. (Himle & Miltenberger, 2004).

Modeling. The trainer shows the participant how the safety steps should be performed. Confederates play the part of strangers during abduction and gun play prevention training, and real but professionally disabled guns are used when guns are involved. During the

modeling procedure, the trainer performs the correct responses and provides praise for behaving correctly (Himle & Miltenberger, 2004; Miltenberger et al., 2004).

Rehearsal. The participant is given a scenario that is similar to one that may actually occur, and is asked to perform the steps that were modeled. This continues until he has completed all steps successfully for a pre-determined number of trials. This may be performed in small groups, but each participant will always practice the actual procedure until the criterion is met. (Himle & Miltenberger, 2004).

Praise and Corrective Feedback. During BST training, praise is delivered for successful protocol performance, and corrective feedback follows mistakes. When corrective feedback is delivered, the participant is asked to perform the steps again. All the feedback is specific to the individual's protocol performance. Trainers provide lavish praise for correct behavior to overcome the potentially high reinforcing value of the unsafe behaviors.

In Situ Training and Assessment. This is not always performed but is very effective. In situ training is the behavior probe in which participants are unaware that they are being observed, and are introduced to the unsafe scenario. The probe occurs in a different setting and with different stimuli than the other BST training sessions. Observers are unobtrusive but will deliver corrective feedback. In situ assessment is performed as described above, but without the feedback. In situ assessments are extremely helpful because there is low correspondence between what participants say they will do and what they actually do (Carroll-Rowan & Miltenberger, 1994; Miltenberger et al., 1990). Therefore, asking participants to self-report how they would respond or observing them in rehearsal is not as telling as providing in situ assessments for them.

Though not always performed, in situ training is an important addition to most BST programs, and has been shown to be quite effective. Two studies offered BST to children and found that about half of them were successful without in situ training, whereas the other half needed the in situ component to ensure the improvements (Himle, Miltenberger, Flessner, & Gatheridge, 2004; Miltenberger et al., 2004). Miltenberger et al., (2005) focused on adding in situ training to the rest of the BST program from the beginning and these were conducted until the children each performed the skills appropriately. They found that the results maintained after a three-month break from training.

Maintenance and Generalization.

Generalization training and maintenance assessment are not always part of BST; however, training for the future use of the protocol may be a key to its occurrence in a real emergency. Himle, Miltenberger, Gatheridge and Flessner (2004) found that despite advances in gun safety behavior during the intervention, the results did not generalize to other stimuli outside of training. Therefore, a variety of settings and scenarios are trained to increase the chance that the protocols are performed consistently in a variety of situations. Miltenberger et al. (2005) assessed the maintenance of gun play prevention skills at a three-month follow up and created dyads of trained participants to measure the generalization of the skills in a different situation. Both of these measures demonstrated positive results.

While BST has been successful at improving gun play and abduction prevention skills, it has also been utilized with other types of clients and behaviors. It was used to train social skills to a child with Asperger's disorder (Stewart, Carr, & LeBlanc, 2007), help staff to improve performance of discrete trial training (Sarakoff & Sturmey, 2004), and for sexual abuse prevention (Egemo-Helm et

al., 2007; Lee & Tang, 1998; Miltenberger et al., 1999). The safe behaviors BST addresses are less reinforcing than the unsafe responses they are meant to overcome. Despite this uphill battle, BST has been successful in teaching safety skills to children and adults with a range of mental retardation. It has been compared to a variety of other methods (Himle & Miltenberger, 2004), yet BST is still considered the most effective approach. It has contributed to the field of behavior analysis by providing a method of reinforcing low rate behaviors. The skills it trains are incredibly important to society and are likely to improve the quality of life for the participants and their families. Social validity questionnaires and side effect monitoring have consistently produced few, if any, negative findings.

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