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PRELIMINARY EVALUATION OF A PARENT TRAINING PROGRAM TO PREVENT GUN PLAY

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Recent research has shown that behavioral skills training with in situ training is an effective strategy to teach children the safety skills needed if they ever encounter an unattended firearm. The current study evaluated the use of parents as trainers to increase the efficiency of training. The success of parent training on their children's safety skills was evaluated in a multiple baseline across participants design. The results showed that the training was effective for 3 of the 4 children.

DESCRIPTORS: behavioral skills training, firearm injury prevention

Unintended firearm injury and death of children is a problem that occurs too frequently in this country. More than 22,000 children 14 years of age and younger were injured by firearms, and more than 5,500 children were killed by firearms from 1993 to 2000 (Eber, Annest, Mercy, & Ryan, 2004).

Behavioral skills training (BST), which employs instructions, modeling, rehearsal, and feedback, has been evaluated for training safety skills to prevent gun play. Skills have been assessed through in situ assessments in which a child is placed in a naturalistic setting and finds an unattended firearm. Researchers have found mixed results; BST alone was effective for several children, but for other children the inclusion of in situ training was needed to promote generalization of the skills. In situ training is provided when a child does not engage in the correct safety skills during an in situ assessment. The child is caught engaging in inappropriate behavior and is immediately provided with a brief training session (Himle, Miltenberger, Flessner, & Gatheridge, 2004; Himle, Miltenberger, Gatheridge, & Flessner, 2004; Gatheridge et al., 2004; Miltenberger et al., 2004).

Miltenberger et al. (2005) evaluated BST with in situ training incorporated earlier in

This study was conducted as a masters thesis at North Dakota State University by the first author under the supervision of the second author. Amy Gross is now at Western Michigan University.

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training. All 10 of their participants learned the skills in just a few training sessions, and the skills generalized and were maintained at a 3-month follow-up. These results suggest that the inclusion of in situ training early in the training program may make BST more effective and more efficient.

The research conducted to date shows that BST (with added in situ training) is an effective method for teaching safety skills to children. However, the efficiency of BST is an area that needs to be studied further. In previous BST research, training was carried out by graduate students with one or a small number of children over a few training sessions. If BST is to be more widely adopted, it will need to be administered more efficiently or be available in programs that can be carried out by parents, teachers, or even peers. One way to improve efficiency would be to have parents train their children at home. Therefore, the purpose of the current study was to investigate the effectiveness of a training program for parents to teach their own children safety skills to prevent gun play.

METHOD

Participants and Settings

Four children, aged 4 to 7 years, participated in the study. Training took place in the homes of the children, and assessments took place in their homes, classrooms at their afterschool programs, or at a neighbor's home.

Materials

The materials included a training manual and training video for parents and two disabled firearms from the local police department. The training manual described BST specific to firearm safety skills. It provided detailed instructions on what to say and do during training sessions. A list of scenarios was also provided in the manual. Reading the manual took approximately 15 min. The training video depicted an actual training session with a parent and child. In situ training sessions were also shown in the video. In the first in situ training session, the video showed the child finding the gun and performing the safety responses correctly, followed by the parent providing praise. In the other in situ training session, the child did not engage in the safety skills. Therefore, the parent entered the room and implemented a training session. The video length was approximately 13 min.

Target Behaviors and Data Collection

Safety skills were assessed (in baseline and posttraining) using in situ assessments in which a child was sent to a room for a specific purpose (e.g., to get a snack) and found a gun; the child was unaware that the assessment was taking place (Miltenberger et al., 2004). A video camera was placed in the room in which the child found the gun, and the target behaviors were scored from the video. The child's responses were scored from 0 to 3 as follows: 0 = *the child touched the gun*; 1 = *the child did not touch the gun but did not leave the room or tell an adult*; 2 = *the child did not touch the gun and left the room but did not tell an adult*; and 3 = *the child did not touch the gun, left the room within 10 s, and told an adult*.

Interobserver Agreement

To assess interobserver agreement, 46% of the assessments were viewed by an independent observer. The percentage of agreement was calculated for each observation by dividing the number of agreements for the three target behaviors by agreements plus disagreements and multiplying by 100%. Interobserver agreement was 100%.

Treatment Integrity

Training sessions were videotaped by parents to allow later assessment of treatment integrity. Fifteen training behaviors were assessed for each session. Integrity was calculated by dividing the number of correct training behaviors used in a session by the total number of correct behaviors possible during that session.

Procedure

BST with in situ training (referred to hereafter as in situ training) was conducted in a multiple baseline across participants design. If participants did not meet criterion (three consecutive scores of 3), additional in situ training occurred.

Baseline. In situ assessments occurred in the participants' homes or at the afterschool program. Participants did not receive feedback on their performance during these assessments.

In situ training. Parents conducted two BST sessions with their child at home on consecutive evenings. Within 30 min of the second session, an in situ training session was conducted by setting up a situation in which the child found a gun in the home. If the child did not engage in the correct safety response, the parent walked into the room and caught the child, expressed concern, and provided additional training at that moment. If the child left the room and reported the gun, the parent provided copious descriptive praise.

Posttraining in situ assessments were conducted in the child's home, at the afterschool program, or at a neighbor's home. The posttraining assessments were complete when the child completed at least three consecutive assessments in which he or she achieved the criterion score of 3.

If a child did not perform the skills correctly in the home during a posttraining assessment, the parent provided additional in situ training. If the child did not perform the skills during a posttraining assessment at the afterschool program, a researcher conducted in situ training.

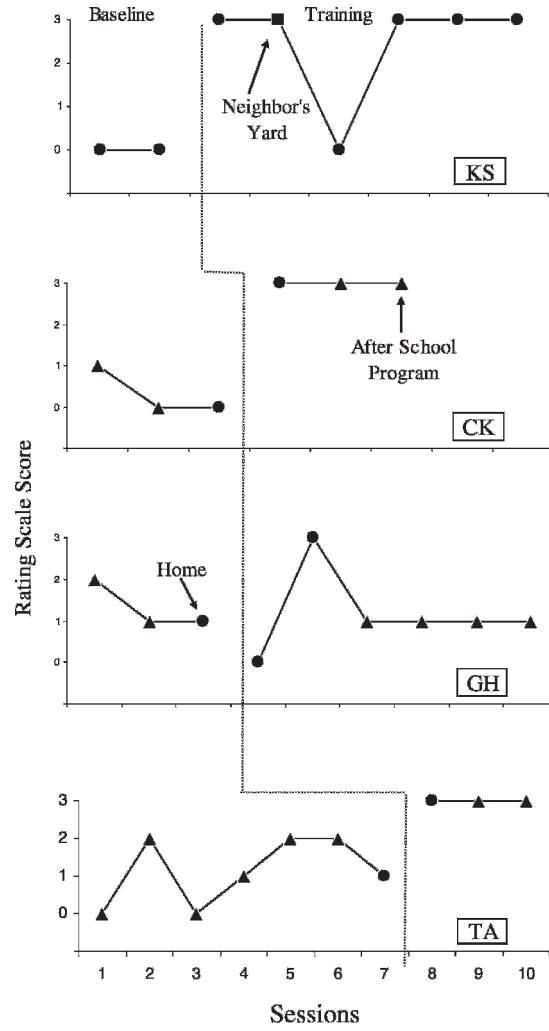

Figure 1. Safety skills were assessed for 4 children in baseline and treatment. The circles represent assessments conducted in the child's home, the triangles represent afterschool assessments, and the square represents an assessment at the neighbor's home.

RESULTS AND DISCUSSION

The results are shown in Figure 1. During baseline, no participants performed all the safety skills (a score of 3) on any assessment, and 3 of the 4 children touched the firearm at least once. Following in situ training, KS scored a 3 in her first two assessments. She then scored a 0 due to stepping on the firearm that was placed on the floor. She received in situ training and then achieved criterion scores for her three following assessments. CK and TA achieved criterion scores on three assessments following training. GH required additional in situ training following her first assessment in the home, but then performed the safety skills when assessed again at home. When she was assessed at the afterschool program, she did not perform the skills correctly and was provided with in situ training from researchers on four occasions.

The parents of KS, CK, and TA taped all of their training sessions and completed 100% of the training behaviors. The parent of GH taped only a portion of Session 2 but engaged in 100% of the remaining behaviors in Session 2. In the in situ training session she completed only 7 of the 15 training behaviors.

All parents rated their satisfaction with the training and the ease of implementation on a 5-point Likert-type scale (1 = *poor* and 5 = *best*). Three parents rated their satisfaction as 5, and 1 parent rated it as 4. One parent rated the ease of implementation at 5, and the other parents rated it as 4.

The results of this study show that the training program was effective for 3 of 4 participants and that it was implemented with fidelity by 3 of the 4 parents. Furthermore, the parents indicated that the program was easy to implement and that they were satisfied with the program.

One of the participants (GH) failed to exhibit the skills consistently following training. Unfortunately, it is unclear whether the skills failed to generalize for GH or whether she simply refused to perform them. When provided with in situ training by researchers, GH performed the skills immediately without the need for assistance. This finding suggests that she was capable of performing the skills but chose to not engage in the behaviors. Further evidence that her failure to use the skills was a matter of noncompliance was that during in situ training conducted by her father, she refused to participate in four of the five planned role plays and he allowed her to escape from the training activities, suggesting a history of noncompliance. Finally, it is unclear how well the training manual was followed for GH, because her father did not videotape all sessions and performed only 7 of the 15 training behaviors during in situ training.

The current study addressed the need for a more efficient training program to teach children safety skills to prevent gun play. Training sessions were completed in less than 12 min each by all parents without any assistance from staff. Total training time, including parents' preparation time, was less than 1 hr. These results suggest that training could be conducted with few resources.

One limitation of this study was that we were able to recruit and keep only 4 participants, because parents were reluctant to participate due to projected time constraints. It is possible that this recruitment problem could be eliminated or minimized if researchers informed parents specifically how little time was required for training. Another limitation of the study is that long-term follow-up data were not collected. Future studies should collect data for an extended period of time following parent training. A third limitation is the limited amount of data collected in baseline. Although baselines were short to minimize participants' exposure to the guns, there were three different baseline lengths consistent with the logic of the multiple baseline design.

Further investigations are also needed to evaluate more efficient methods for training groups of children rather than training one child at a time. Future research should evaluate the use of this program in schools, afterschool programs, day-care settings, or other community programs. If teachers or agency staff could train effectively after reading a manual and watching a video, then the training program could be disseminated more widely and reach more children.

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