Teaching Safety Skills to Children

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What Safety Threats Do Children Face?
(What can hurt or kill a child?)
What Can Hurt or Kill a Child?

- Poisoning (4)
- Fire (5)
- Abduction
- Firearm injury
- Drowning (2)
- Sexual abuse
- Bullying
- Auto accidents (1)
- Pedestrian accidents
- Falls (6)

Types of Safety Threats

- Low incidence but life threatening situations
  - One opportunity to use safety skills successfully

- Infrequent but often re-occurring situations
  - One or more opportunities to use safety skills

- Frequently re-occurring situations
  - Repeated opportunities to practice safe behavior (use seat belts, bike helmets, pedestrian skills, etc)
The focus of my research -

- Low incidence but life threatening situations
  - Firearm injury
  - Abduction
  - Poisons

- Infrequent but often re-occurring situations
  - Sexual abuse

**Why is it hard to teach these safety skills?**

Important to Consider the Source of the Safety Threat

- Dangers in the physical environment
  - Accessible firearms, poisons, matches/lighters, swimming pools, etc.

- Dangers in the social environment – the behavior of others
  - Abduction or sexual abuse lures, bullying, etc.
Two Approaches to Prevention

- Remove the safety threat
  - Always the first approach – Always!
  - Adults are responsible for child safety
  - But, not always possible
- Teach safety skills to kids
  - Is it fair to put this responsibility on children?
  - Are we absolving adults of responsibility?
  - For whom is this relevant?

Teaching Safety Skills to Kids

1. Identify and describe the safety threat situations (all of the SDs for the target safety skill)
2. Identify and describe the safety skills for the safety threat
3. Conduct in situ assessment
4. Conduct behavioral skills training
5. Conduct further in situ assessment
6. Conduct in situ training as needed
7. Add contingencies if needed
8. Conduct follow-up assessments and booster sessions
Describe Safety Threat Situations

Physical threats

- Accessible firearms
  - Loaded firearm, no safety device, not locked up
  - Where? In the house, in the garage, in the car, in the yard, in a purse in a shopping cart in a store

- Accessible poisons
  - Household chemicals, cleaning supplies, or medications in accessible locations

- Why do kids engage in unsafe behavior?

Describe Safety Threat Situations

Social threats

- Abduction (stereotypical kidnapping)
- Sexual abuse

**How are these threats different?**
Describe Safety Threat Situations

Social threats

- Abduction (stereotypical kidnapping)
  - Unknown or not well known individual
  - Positive inducement (simple, incentive, helping, or authority lures) versus the use of force
- Sexual abuse
  - Known individual
  - Gradual process of gaining compliance (grooming), repeated occurrences
- Why do kids engage in unsafe behavior?

When is a child at risk?

- Child is alone
  and
- Safety threat is present
  and
- Child does not discriminate the safety threat
  or
- Child has not learned the safety skills
  or
- Child does not use the safety skills
Three Core Safety Skills

1. Discriminate the presence of the safety threat and avoid contact with it
2. Escape from the threat situation
3. Inform a trusted adult about the safety threat (so the adult can remove it)

Safety Skills for Different Threat Situations

- Physical threats (guns, poisons)
  - Discriminate the threat situation (e.g., unattended gun)
  - Don’t touch, get away (or yell for an adult), and tell an adult
- Social threats (abduction, sexual abuse)
  - Discriminate the threat situation (e.g., abduction lure, inappropriate touch or request)
  - Say “no,” get away, and tell an adult
Assessment of Safety Skills

- Knowledge (self-report) assessment
- Skills (role play) assessment
- Generalization (in situ) assessment

- Lack of correspondence among assessments
- In situ assessment is the only valid form of assessment

Assessment - Conclusions

- Lack of correspondence among self-report, role play, and in situ assessments
- Cannot rely on self-report for assessment (although many programs do)
- Role plays assess skill acquisition but not use of the skills
- In situ assessment is the only valid assessment of safety skills
In Situ Assessment is the Only Valid Assessment of Safety Skills

Conducting in an situ assessment

- Safety threat is simulated
- Occurs in the natural environment
- No adult is present*
- Safety threat seems real to the child
- Child has no knowledge of the assessment
  - The circumstances are natural
  - Assessment should not be predicable
  - The set up should not be an errand
- Child is never at any risk
Teaching safety skills – lessons learned

- Just telling kids what to do doesn’t work
- Behavioral skills training works (sometimes)
- In situ training works (most of the time)
- Added contingencies may be needed
- You don’t know in advance what will work
- Effective interventions are not easy nor accessible

Behavioral Skills Training

- Instructions and modeling
- Rehearsal in response to a simulated safety threat
- Positive and corrective feedback
- Repeat until correct
- Promote generalization
  - Repeat with multiple exemplars
  - Use common stimuli
BST – the details

Instructions
- Describe the safety threat and why it is dangerous
- Describe the safety skills in context
- Include props (common stimuli) with instructions
- Have the child verbalize the safety skills
- Provide multiple exemplars

Modeling – live or video
- Use a role play to show the safety threat and the safety skills
- Include common stimuli
- Show positive consequences for using the safety skills
- Have the learner say what the model did right
- Show multiple exemplars

BST – the details

Rehearsal & feedback
- Conducted immediately following instructions and modeling
- Describe a role play scenario in detail
- Present simulated safety threat in a role play and ask the child to “show me what you should do.”
- Provide immediate feedback
  - Praise for correct performance
  - Further instruction for improvement
- Repeat until correct

Considerations
- Make the role play as real as possible
- Use common stimuli
- Provide multiple opportunities for rehearsal & feedback
Goal of BST

- To promote acquisition and generalization of the safety skills
- By providing multiple opportunities for:
  - the occurrence of the safety skills
  - to get reinforced
  - in the presence of the simulated safety threats
  - encompassing the full range of relevant SDs

BST in Groups

- Provide instructions and modeling to the group; have each individual rehearse with feedback
- Make sure all kids pay attention and participate
  - Answering questions
  - Providing feedback to others
- Benefits of BST in groups
  - Opportunity to observe others’ rehearsals - multiple models in multiple situations (multiple exemplars)
  - Opportunity to observe feedback received by others
  - Opportunity to evaluate others’ performance and provide feedback
- Limitation - less individual rehearsal and feedback
Post Training In Situ Assessment

- Assess in a different context than training
- Client comes into contact with the simulated safety threat, without trainer present
- Client is not cued to the assessment
- Assess until consistent performance occurs (once is not enough)
- Provide in situ training if client fails to use the safety skills (*BST doesn’t always work)

In Situ Training

- Trainer is present but out of sight during an in situ assessment
- If client fails to use the skills:
  - The trainer enters the assessment situation
  - Catches the client in the dangerous situation failing to use the skills
    - Expresses concern about the safety threat
    - Reviews the safety skills
  - Requires client to rehearse the skills a number of times
IST – the details

- IST is always conducted in the context of an in situ assessment
- Never let the child see you before the assessment
- Make sure the assessment is not predicable
- Catch the child in the situation and express concern with a serious tone of voice
- Require multiple rehearsals on the spot
  - Ignore complaints
  - Child has to “get it right” before you can be done
- End with an expectation statement
- Continue to conduct in situ assessments and IST as needed
- Add contingencies if needed (*IST doesn’t always work)

Add contingencies if needed

- Why do BST and IST work?
- Why might BST and IST not work?
- Possible contingencies to add
  - Positive reinforcement
    - Tangible reinforcer
    - Activity reinforcer
  - Negative punishment (time out)
  - Negative reinforcement
  - Extinction
Continued Assessment with Booster sessions

- In situ assessments continue
  - with in situ training or added contingencies as needed
  - until consistent performance of the safety skills
- Conduct long term follow-up assessments
- Conduct periodic booster sessions months after training

Examples from Safety Skills Training Research
Gatheridge et al. (2004)

- Evaluated Eddie Eagle *GunSafe Program* and BST
- 45 6- and 7-year olds
- Posttest only control group design
- Evaluated the effects of 1 in situ training session

### 6- and 7-year olds

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Control</th>
<th>EE</th>
<th>BST</th>
<th>Mean Safety Skill Score</th>
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<tr>
<td>Self-report</td>
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<td>2.5</td>
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<tr>
<td>Role-play</td>
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<tr>
<td>In situ</td>
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<td>2.5</td>
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<tr>
<td>2nd In situ</td>
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<td>2.5</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>
Miltenberger et al. (2012)

- Evaluated the Safe Side Stranger Safety DVD and IST
- 27 6- and 7-year olds
- Randomly assigned to Stranger Safety DVD or Control group
- One in situ training session provided by parents

![Bar chart showing average safety scores for Control and Treatment groups over two assessments. The chart indicates a higher average safety score for the Treatment group compared to the Control group.]
Himle, Miltenberger, Flessner, & Gatheridge (2004) and Miltenberger et al. (2004)

- Evaluated individual BST with booster sessions for teaching gun safety skills
- Evaluated in situ training (if needed)
- With 4- and 5-years olds and 6- and 7-year olds
What we know

- Informational approaches don’t work
  - Can’t just tell kids or show kids what to do
  - Saying is not doing
- Active learning approaches are needed
  - BST and IST
  - Added contingencies
How can we make effective training procedures more accessible?

- Peer training?
- Parent training?
- Simulation training?
- The use of technology?
- Other?

Jostad, Miltenberger, Egemo, & Knudson (2008)

- Evaluated the effects of peer training by 6- and 7-yr olds for teaching gun safety skills to 4- and 5-yr olds
- Multiple baseline across subjects
  - Baseline assessments
  - BST from peer trainers
  - Posttraining assessments
  - In situ training from peer trainers if needed
  - Follow-up assessments (up to 12 months)
Gross, Miltenberger, Knudson, Bosch, & Brower-Breitwieser (2007)

- Evaluated a training package (manual and video) for parents to teach safety skills to their own child
- 2 boys (age 7) and 2 girls (ages 4 and 7)
- Multiple baseline across subjects
  - Baseline
  - BST and IST conducted by parents
  - Posttraining assessment
Maxfield, Miltenberger, & Novotny (2017)

- Evaluated small-scale simulation training for teaching gun safety skills
- Four 3- to 5-year-old children
- Multiple probe design with in situ assessments
Active learning approaches work for teaching safety skills
BST works half the time - IST is often necessary
Added contingencies are sometimes necessary
Cannot tell in advance what procedure will be effective
Need in situ assessment to make data-based intervention decisions (cannot rely on self-report or role play performance)
More research is needed on:
- Parent and peer training
- Small scale simulation training
Developing and disseminating an effective training program may be difficult because:
- Amount of training needed to learn skills varies across kids
- Skills do not always generalize until in situ training is used
- In situ training requires substantial time and expertise