



CHILD SEXUAL ABUSE PREVENTION PROGRAMS FOR CHILDREN

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CHILD SEXUAL ABUSE PREVENTION: PROGRAMS FOR CHILDREN

BUILDING AN EVIDENCE-INFORMED APPROACH

A person sexually abuses a child when he or she exposes the child to sexual acts or behavior. Child sexual abuse is an abuse of trust, power, and authority that may cause serious short-term and long-term problems for a child (Briere & Elliot, 2003). About one in three girls and one in seven boys will be sexually abused during childhood (Finkelhor, Hammer, & Sedlak, 2008). Many of these children will never tell anyone about what happened to them, often as a result of threats or manipulation by the perpetrator (Finkelhor, Hammer, & Sedlak, 2008). As a result, most cases are never reported to the police. Child sexual abuse is a serious violation that requires a community-wide response.

This guide is intended to inform people who wish to learn more about child sexual abuse prevention programs designed to educate children.¹ It is also intended to assist advocates and prevention educators in selecting or designing prevention programs, and to provide evidence to support prevention educators in their efforts to make the case for the benefits of these programs to funders, parents, or the community at large. Although child sexual abuse prevention programs

are available for a wide range of children, this guide primarily addresses programs for young children (i.e., children between the ages of 3 and 12). Programs for older children often include additional components, such as the prevention of teen dating violence that are outside of the scope of this guide.

Information on the types of programs that have been found to be most effective will be presented to aid in the creation of evidence-informed programs, while several evidence-based programs (i.e., programs that have been comprehensively evaluated in multiple peer-reviewed journal articles) will be highlighted.

¹ Although there has been a recent push for the implementation of evidence-based programming, it is important to balance this with the encouragement of innovations and grassroots efforts in prevention programming. It is equally important that innovative and grassroots efforts be evaluated.



Child sexual abuse prevention programs for children have been implemented across the United States for decades. Traditionally, these programs have applied a risk reduction approach – one that educates children about child sexual abuse and provides them with skills to repel and report abuse. While talking to children about risk and its reduction is important, the field of sexual violence prevention recognizes that risk reduction alone will not end sexual violence. A primary prevention approach – one that works to change the larger social conditions that enable abuse to occur – is necessary to stop the perpetration of child sexual abuse before it occurs. The programs contained within this guide follow a more risk reduction approach and can assist parents by providing accurate or developmentally appropriate information, which may help them in connecting children to important resource information. Research shows that not all parents talk to their children about child sexual abuse (Kenny, Capri, Thakkar-Kolar, Ryan, & Runyon, 2008), and many that do, may not have access to this type of information.

WHOSE RESPONSIBILITY IS CHILD SEXUAL ABUSE PREVENTION?

Prevention programs designed for children are an important part of a multifaceted strategy to build community efforts to prevent child sexual abuse. Traditional child sexual abuse prevention programs are of value because they provide information, support and empowerment. However, concerns have been raised that these programs target children and inappropriately place the burden of prevention on the child. Indeed, child sexual abuse occurs as a result of many factors working together, all of which are beyond the control of the child. Additionally, critics suggest that it may be unrealistic to expect a child to assert power over someone whom they may trust and who is in a position of authority, older and likely stronger than them (Hazzard, 1993). In the end, it is the responsibility of individuals to not violate children in any way and for communities to actively engage in the prevention of child sexual abuse and safeguard the well-being of children. Prevention programs designed for children are only one of many components of a successful community effort to prevent child sexual abuse. The burden of prevention should be distributed across community members, organizations, and social structures. Changing the behavior of adults and communities, rather than the behavior of children, is the ideal way to prevent child sexual abuse.²

PROGRAM GOALS

Generally, child sexual abuse prevention programs that target children have three main goals: to teach children to recognize child sexual abuse, to give them the skills to avoid abuse, and to encourage them to report abuse that they have

experienced, are experiencing, or may experience in the future (Kenny et al., 2008; Repucci & Herman, 1991; Topping & Barron, 2009).

Teaching children to avoid child sexual abuse may involve teaching them:

- The concept of 'private zones' and what parts of the body are considered 'private'
- The different kinds of appropriate and inappropriate touching that a child can experience
- That it is possible that a person whom the child knows and likes may try to hurt them
- To trust their intuition about people and situations
- About healthy sexual development

Giving children the skills to repel child sexual abuse may involve teaching them:

- That they have the right to decide who can and who cannot touch their body
- That in a situation when someone touches them against their will or in a way that makes them uncomfortable, they can say "no" or leave/run away and tell a trusted adult

Encouraging children to report child sexual abuse may involve teaching them:

- That child sexual abuse is never the fault of the child
- That if someone touches them in a way that makes them uncomfortable, they should always tell a trusted adult
- They should not keep a secret about someone touching them
- To identify trusted adults
- That a child should keep telling an adult they

² Additional information can be found in the NSVRC "Child Sexual Abuse Prevention Guide for Adults"

SOMETIMES, CHILDREN'S
PARENTS ASSIST WITH
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PROGRAMS MAY BE
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PREVENTION AGENCIES,
SCHOOLS OR OTHER
ORGANIZATIONS.

trust about sexual abuse until the adult does something to protect the child

- That they will be believed and still be loved if they tell
- The correct names for body parts (e.g., penis, vagina, breasts, buttocks) so children may accurately report what has happened to them

PROGRAM DESIGN

Child sexual abuse prevention programs designed to educate children can take a number of forms. Some programs only have one session, while others have multiple sessions (Davis & Gidycz, 2000).

Programs may consist of many hours of activities or just a half-hour, which may be presented by the children's teachers, specialized prevention educators, religious leaders, school counselors, or victim advocates (deYoung, 1988). Sometimes, children's parents assist with prevention efforts. Programs may be implemented by rape crisis centers, child abuse prevention

agencies, schools or other organizations (Prevent Child Abuse North Carolina, 2002).

Since the majority of children spend a large part of their days in a school environment, school-based programs can easily access large numbers of children. Schools are often a safe setting for children to learn about child sexual abuse, and with proper training and skills, school personnel can be trusted adults to whom children can disclose abuse. However, very young children and children who are home-schooled may not have access to school-based programs. For these reasons, child focused programs can be implemented in other community settings, such as day cares, faith-based organizations, libraries, or community centers.

A number of challenges are present in designing an effective child sexual abuse prevention program that targets children. First, it is difficult to present complicated prevention concepts in a way that is understandable to children, especially when children are young (Finkelhor, 2007; Repucci & Herman, 1991).

Program implementation can be challenging as well, as there may be concern that some topics discussed are not appropriate topics to discuss with children. They may also feel that parents should be responsible for teaching their child about child sexual abuse. Also, because programs are often led by people who are not professional prevention educators, they may not have the understanding of child sexual abuse necessary to lead a prevention program (Topping & Barron, 2009). Constraints on money and time may limit prevention programming (Topping & Barron, 2009). Finally, linking programs that target children with corresponding programs that work with adults can be challenging if limited resources are available.

TEACHING TECHNIQUES

There are a number of teaching techniques that can make up a child sexual abuse prevention program for children (Davis & Gidycz, 2000; Topping & Barron, 2009). Some of these techniques involve children as active participants. In these techniques, the child is engaged in the learning process, either physically, verbally, or both:

- Skills practice/rehearsal or role-play, provide children a safe, non-threatening environment in which they may practice recognizing possible danger signals of abusive situations and how to respond. These are usually physically and verbally active techniques.
- Shaping and reinforcement are behavioral learning techniques that are typically used along with skills practice/rehearsal or role-play techniques. In child sexual abuse prevention programs, shaping involves rewarding

or encouraging (i.e., reinforcing) a child's response to a situation when it is appropriate, with the goal of eventually getting the child to act out the desired response. Shaping and reinforcement are usually physically and verbally active techniques.

- Discussion between presenter(s) and children. This is a verbally active technique.

In other techniques, children are passive participants. These techniques do not involve verbal or physical participation from the children:

- Modeling, in which the presenters act out a situation and demonstrate how to respond. Sometimes, this is presented in the form of a play or a puppet show.
- Films, comic books or children's books about child sexual abuse prevention.
- Lectures, in which the presenter speaks about child sexual abuse without encouraging the



children viewing the lecture to participate and engage in the discussion.

Some prevention programs choose one technique and use it exclusively. For example, a teacher may show a film about child sexual abuse to a class of students. Other programs incorporate a variety of different techniques.

For information on the effectiveness of these various techniques see the Evaluation section of this document.



GENERAL EVALUATION OF PREVENTION PROGRAMS

Many research studies have looked at the impact of child sexual abuse prevention programs as a whole, rather than looking at the effects of a specific prevention program. These studies have explored the effectiveness, costs, and benefits of prevention programs. Additional rigorous evaluations of child sexual abuse prevention programs are needed. These studies and the resources to support them are critical to informing the future of child sexual abuse prevention programming. In the interim, we can draw from the child sexual abuse prevention research that does exist, as well as the evaluations of bullying and drug use prevention programs for children, which have used similar tactics as child sexual abuse prevention programs and have been found to be effective (Finkelhor, 2007).

What makes an effective program?

According to studies of prevention programs, the most effective programs:

- Include children as physically active participants (Davis & Gidycz, 2000).
- Combine the techniques of modeling, group discussion, and role-playing/rehearsal (Davis & Gidycz, 2000; Topping & Barron, 2009).
- Tend to last for longer periods of time than less effective programs (Davis & Gidycz, 2000).
- Are broken into multiple sessions (Davis & Gidycz, 2000; Topping & Barron, 2009).
- Incorporate parents into prevention efforts (Kenny et al., 2008; Topping & Barron, 2009).

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PROGRAMS MUST BE DEVELOPMENTALLY APPROPRIATE
FOR THE TARGETED AGE GROUP.

What are the benefits of these programs?

Researchers have consistently found a number of benefits to child sexual abuse prevention programs:

- Increased knowledge about child sexual abuse (Davis & Gidycz, 2000; Repucci & Herman, 1991; Rispens, Aleman, & Goudena, 1997).
- Increased self-protective knowledge and skills, and increased use of these self-protective skills (Finkelhor, Asdigian, & Dzuiba-Leatherman, 1995a, 1995b; Rispens et al., 1997, Topping & Barron, 2009).
- Earlier disclosure of abuse, which could prevent further abuse from occurring and allow the child to be treated for the abuse (Gibson & Leitenberg, 2000).
- Shorter duration of abuse (Gibson & Leitenberg, 2000).
- Increased positive feelings about self and decreased negative feelings about self (Topping & Barron, 2009).

How long do these benefits last?

Knowledge gains from prevention programs usually last for several months, and may last as long as a year (Topping & Barron, 2009). Because of this, it is important to reinforce the skill and knowledge gains through continued

prevention efforts throughout childhood. Indeed, additional program sessions have been found to help children maintain and increase their knowledge and skills about child sexual abuse prevention (Topping & Barron, 2009). This can make a case for ongoing prevention programs which are integrated into a systems-wide approach, like a comprehensive school curriculum, rather than one-time-only or time-limited approaches.

Are young children able to benefit from these programs?

The effectiveness of a program depends on its structure and the way it is presented. Programs must be developmentally appropriate for the targeted age group. Suggestions for presenting a program that is developmentally appropriate to very young children include (Sarno & Wurtele, 1997):

- Do not use abstract concepts.
- Provide many chances to practice skills.
- Teach important concepts multiple times.
- Teach the program over several days.
- Present the program in a way that is engaging to the children.

EVALUATION OF PREVENTION PROGRAM CURRICULA

The prevention program curricula discussed in this section focus primarily on preventing child sexual abuse and have been evaluated in multiple peer-reviewed research articles since 1990. Prevention efforts are stronger when community needs are assessed and programs are tailored to the needs and values of the community. This is not a comprehensive list of evaluated or commonly used child sexual abuse prevention program curricula.³

“Body Safety Training”⁴

Age range: 3-7 years

Techniques used: Modeling, rehearsal, reinforcement and feedback

Main topics: Identifying private parts, safe versus unsafe touching, reporting child sexual abuse

Duration: 10 lessons

Findings in children who participated in this program:

- Increased knowledge about child sexual abuse (Currier & Wurtele, 1996; Sarno & Wurtele, 1997; Wurtele, Kast, & Melzer, 1992; Wurtele & Owens, 1997).
- Increased awareness that child sexual abuse is not the fault of the child (Sarno & Wurtele, 1997; Wurtele & Owens, 1997).
- Increased self-protective knowledge and skills (Currier & Wurtele, 1996; Wurtele & Owens, 1997).
- More likely to say they would tell someone

³ For more information about various child sexual abuse prevention programs, visit the NSVRC website at <http://www.nsvrc.org>.

⁴ This program was formerly known as Behavioral Skills Training.



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about the abuse (Currier & Wurtele, 1996; Wurtele & Owens, 1997).

- No negative effects, but rather possible positive effects on children's attitudes about normal sexuality and appropriate touches (Currier & Wurtele, 1996; Sarno & Wurtele, 1997; Wurtele et al., 1992).
- Knowledge and skills were still present when children were evaluated a year after program participation (Hensley & Soled, 1993).

"Talking About Touching"

Age range: 4-8 years

Techniques used: Photo-lesson cards, take home letters for parents, posters, videos and song/story books

Main topics: Rules to keep children safe, assertiveness, safe versus unsafe touching, safety rules about touching

Duration: 15 lessons, 15-30 minutes each

Findings in children who participated in this program:

- Increased knowledge about child sexual abuse (Jacobs, Hashima, & Kenning, 1995; Madak & Berg, 1992; Sylvester, 1997).

- Increased self-protective knowledge and skills (Jacobs et al., 1995; Sylvester, 1997).
- More able to tell difference between safe and unsafe situations (Jacobs et al., 1995).
- No negative effects on children found (Jacobs et al., 1995; Sylvester, 1997).
- Most parents and teachers liked the program (Madak & Berg, 1992; Sylvester, 1997).
- Knowledge and skills were still present when children were evaluated two months after program participation (Jacobs et al., 1995).

"Feeling Yes, Feeling No"

Age range: 6-12 years

Techniques used: Videos, group discussion and role-playing

Main topics: Responses to being touched, seeking help if touched, protecting self from child sexual abuse, names of genitals, self-confidence

Duration: 15-18 hours in classroom

Findings in children who participated in this program:

- Increased overall knowledge about child sexual abuse (Hazzard et al., 1991).
- Both treatment and control group children were able to identify two of three correct preventive actions (say no, leave, tell an adult) (Hazzard, 1993; Hazzard et al., 1991).
- More able to tell difference between safe and unsafe situations (Hazzard, 1993; Hazzard et al., 1991).
- Child sexual abuse knowledge had increased when children were reevaluated a year after they went through the program (Hazzard et al., 1991).
- No negative effects on children found; in fact,

PEOPLE PLANNING PREVENTION PROGRAMS ARE ENCOURAGED TO TAKE THE RESEARCH REGARDING THE EFFECTIVENESS OF PROGRAMS INTO CONSIDERATION AND ADAPT THE PROGRAM TO THE NEEDS OF THEIR COMMUNITY.

children felt safer and less worried after program (Hazzard, 1993; Hazzard et al., 1991; Pohl & Hazzard, 1990).

- Most parents and teachers liked the program (Hazzard et al., 1991; Pohl & Hazzard, 1990).

“Who Do You Tell?”

Age range: 6-12 years

Techniques used: Stories, song, videos and role-playing

Main topics: What child sexual abuse is, names of private parts, assertiveness, identifying trusted adults to tell, self-protection skills

Duration: Two 60-minute sessions

Findings in children who participated in this program:

- Increased overall knowledge about child sexual abuse (Tutty, 2000).
- Follow-up or booster sessions helped to reinforce knowledge (Tutty, 1997).
- More able to tell difference between safe and unsafe touches (Tutty, 2000).
- Most parents liked the program (Tutty, 1997).
- Negative effects on children – such as worry and saying no more often to parental requests – were very rare and mild (Tutty, 1997).
- Positive effects on children included children talking with their parents about the program and asking questions about sexuality, opening the door to future discussions (Tutty, 1997).





To prevent child sexual abuse, a primary prevention approach is necessary – one that engages entire communities in a multi-level, multidisciplinary strategy in which adults take responsibility and action in preventing child sexual abuse. Therefore, it is not surprising that the research to date has not consistently shown that risk reduction programs that target children ultimately prevent child sexual abuse.

Existing evaluations of prevention program curricula designed for children have been found to be insightful in providing a foundation on which later education about healthy sexuality and relationships, assertiveness and self-esteem, and sexual violence prevention can build. Future funding and resources to support the rigorous evaluation of child sexual abuse risk reduction and primary prevention strategies are critical.

People planning prevention programs are encouraged to take the research regarding the effectiveness of programs into consideration and adapt the program to the needs of their community. Collaborations with local rape crisis

centers, local chapters of Prevent Child Abuse America, parents' organizations, and community groups may be another way to ensure that the program chosen is appropriate for a particular area.

Prevention programmers may be best served by striving for a balance between replicating evidence-based programs and encouraging multi-level, multidisciplinary, creative, community-based approaches, which may often be more responsive to the special needs of a given community.

For more information or resources, call NSVRC at (877) 739-3895, email resources@nsvrc.org or visit www.nsvrc.org.

About the Authors – Hallie Martyniuk and Emily Dworkin

Hallie Martyniuk is an instructional designer specializing in the development of curricula and resource materials for state and national criminal justice and victim service programs. Her work includes *Strengthening Military-Civilian Community Partnerships to Respond to Sexual Assault*, *the Pennsylvania Prison Rape Elimination Act (PREA) Toolkit*, *Advocate’s Manual for Working with Incarcerated Victims of Sexual Assault*, and *Masculinity and Violence*.

Emily Dworkin is a doctoral student in Clinical-Community Psychology at the University of Illinois at Urbana-Champaign. Broadly, her research examines narratives of survivors in relation to identity formation, as well as individual- and ecological-level predictors of mental health consequences of sexual assault. Formerly, she worked as the Resource Development Specialist at the National Sexual Violence Resource Center.

National Sexual Violence Resource Center

The National Sexual Violence Resource Center (NSVRC), founded by the Pennsylvania Coalition Against Rape in July 2000, is the nation’s principle source for information regarding all aspects of sexual violence. We are committed to assisting the field through Collaboration • Prevention • Resources.

REFERENCES

- Briere, J., & Eliot, D.M. (2003). Prevalence and psychological sequelae of self-reported childhood physical and sexual abuse in general population. *Child Abuse & Neglect*, 27, 1205-1222. doi:10.1016/j.chiabu.2003.09.008
- Currier, L., & Wurtele, S. (1996). A pilot study of previously abused and non-sexually abused children’s responses to a personal safety program. *Journal of Child Sexual Abuse*, 5, 71-87. doi:10.1300/J070v05n01_04
- Davis, M. K., & Gidycz, C. A. (2000). Child sexual abuse prevention programs: A meta-analysis. *Journal of Clinical Child & Adolescent Psychology*, 29, 257-265. doi:10.1207/S15374424jccp2902_11
- deYoung, M. (1988). The good touch/bad touch dilemma. *Child Welfare*, 67, 60-68.
- Finkelhor, D. (2007). Prevention of sexual abuse through educational programs directed toward children. *Pediatrics*, 120, 640-645. doi:10.1542/peds.2007-0754
- Finkelhor, D., Asdigian, N., & Dzuiba-Leatherman, J. (1995a). The effectiveness of victimization prevention instruction: An evaluation of children’s responses to actual threats and assaults. *Child Abuse and Neglect*, 19(2), 142-153. doi:10.1016/0145-2134(94)00112-8
- Finkelhor, D., Asdigian, N., & Dzuiba-Leatherman, J. (1995b). Victimization prevention programs for children: A follow-up. *American Journal of Public Health*, 85(12), 1684-1689. doi:10.2105/AJPH.85.12.1684

- Finkelhor, D., Hammer, H., & Sedlak, A.J. (2008). Sexually assaulted children: National estimates and characteristics. *National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children*, 7, 1-12. Retrieved from <http://www.ncjrs.gov/pdffiles1/ojjdp/214383.pdf>
- Gibson, L. E., & Leitenberg, H. (2000). Child sexual abuse prevention programs: Do they decrease the occurrence of child sexual abuse? *Child Abuse & Neglect*, 24, 1115-1125. doi:10.1016/S0145-2134(00)00179-4
- Hazzard, A. (1993). Psychoeducational groups to teach children sexual abuse prevention skills. *Journal of Child and Adolescent Group Therapy*, 3, 13-23. doi:10.1007/BF00973640
- Hazzard, A., Webb, C., Kleemeier, C., Angert, L., & Pohl, J. (1991). Child sexual abuse prevention: Evaluation and one-year follow-up. *Child Abuse & Neglect*, 15, 123-138. doi:10.1016/0145-2134(91)90097-W
- Hensley, B. H., & Soled, S.W. (1993). *Retention of second graders' knowledge and skills one year after a brief primary sexual abuse prevention program*. Cincinnati, OH: University of Cincinnati, College of Education.
- Jacobs, J.E., Hashima, P.Y., & Kenning, M. (1995). Children's perceptions of the risk of sexual abuse. *Child Abuse and Neglect*, 19, 1443-1456. doi:10.1016/0145-2134(95)00092-5
- Kenny, M. C., Capri, V., Thakkar-Kolar, R. R., Ryan, E. E., & Runyon, M. K. (2008). Child sexual abuse: From prevention to self-protection. *Child Sexual Abuse Review*, 17, 36-54. doi:10.1002/car.1012
- Madak, P.R., & Berg, D.H. (1992). The prevention of sexual abuse: An evaluation of "Talking About Touching." *Canadian Journal of Counselling*, 26(1), 29-40. Retrieved from <http://www.eric.ed.gov/PDFS/EJ449631.pdf>
- Pohl, J. D., & Hazzard, A. (1990). Reactions of children, parents and teachers to child sexual abuse prevention programs. *Education*, 110(3), 337-344.
- Prevent Child Abuse North Carolina. (2002). Advice to professionals on child sexual abuse prevention programs for preschoolers and elementary-aged children. *Program Advisory Services*, 1, 1-19.
- Repucci, N. D., & Herman, J. (1991). Sexuality education and child sexual abuse prevention programs in the schools. *Review of Research in Education*, 17, 127-166. doi:10.2307/1167331
- Rispens, J., Aleman, A., & Goudena, P. P. (1997). Prevention of child sexual abuse victimization: A meta-analysis of school programs. *Child Abuse and Neglect*, 21(10), 975-987. doi:10.1016/S0145-2134(97)00058-6
- Sarno, J. A., & Wurtele, S. K. (1997). Effects of a personal safety program on preschoolers' knowledge, skills, and perceptions of child sexual abuse. *Child Maltreatment*, 2, 35-45. doi:10.1177/1077559597002001004
- Sylvester, L. (1997). *Talking About Touching: Personal safety curricula (1996 Editions) Preschool to grade 3. Curriculum Evaluation Summary*. Committee for Children, Seattle, WA.
- Topping, K. J., & Barron, I. G. (2009). School-based child sexual abuse prevention programs: A review of effectiveness. *Review of Educational Research*, 79, 431-463. doi:10.3102/0034654308325582
- Tutty, L. (1997). Child sexual abuse prevention programs: Evaluating "Who Do You Tell." *Child Abuse and Neglect*, 21, 869-881. doi:10.1016/S0145-2134(97)00048-3
- Tutty, L. M. (2000). What children learn from sexual abuse prevention programs: Difficult concepts and developmental issues. *Research on Social Work Practice*, 10, 275-300.
- Wurtele, S. K., Kast, L. C., & Melzer, A. M. (1992). Sexual abuse prevention education for young children: A comparison of teachers and parents as instructors. *Child Abuse & Neglect*, 16, 865-876. doi:10.1016/0145-2134(92)90088-9
- Wurtele, S. K., & Owens, J. S. (1997). Teaching personal safety skills to young children: An investigation of age and gender across five studies. *Child Abuse and Neglect*, 21, 805-814. doi:10.1016/S0145-2134(97)00040-9



123 North Enola Drive, Enola, PA 17025
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