An Elementary School-Based Prevention Program Targeting Modifiable Antecedents of Youth Delinquency and Violence:
Linking the Interests of Families and Teachers (LIFT)

J. MARK EDDY, JOHN B. REID, AND REBECCA A. FETROW

Linking the Interests of Families and Teachers (LIFT), a prevention program designed for delivery to children and parents within the elementary school setting, is described. The LIFT targets for change those child and parent behaviors thought to be most relevant to the development of adolescent delinquent and violent behaviors, namely child oppositional, defiant, and socially inept behavior and parent discipline and monitoring. The three major components of the LIFT are (a) classroom-based child social and problem skills training, (b) playground-based behavior modification, and (c) group-delivered parent training. The results of a randomized controlled evaluation of the LIFT are reviewed. To date, the program has positively impacted the targeted antecedents. Most importantly, during the 3 years following the program, the LIFT delayed the time that participants first became involved with antisocial peers during middle school, as well as the time to first patterned alcohol use, to first marijuana use, and to first police arrest.

DELINQUENCY HAS BEEN A SERIOUS problem in the major cities of the eastern United States since the beginning of the Industrial Revolution (Eddy & Swanson Gribskov, 1997). In these locales, policymakers and laypeople in each successive generation have spoken out against the increasing dangerousness of youth and the pressing need for solutions. Despite the plethora of “preventive” measures that have followed, delinquency has persisted and spread and is now a topic of debate not only in cities and towns throughout the United States but in many rural areas as well. Even criminal gang activity, which was once the sole province of the most densely populated cities, was a phenomenon reported by police departments in over 750 locales in 1992 (Klein, 1995).

HISTORICAL BACKGROUND

Through most of the history of the United States, prevention meant incarceration as early as possible in the life of a child perceived to be “delinquent.” The actual commission of a delinquent act was not a requirement for delinquency classification. Thus, during the nineteenth century, many incarcerated children were from impoverished, immigrant families who were considered “unfit” to properly raise a child. After the creation of the juvenile court at the turn of the twentieth century, psychological techniques began to be used to assess youth brought before the court. These techniques, as well as various forms of psychological intervention, were disseminated throughout the country via a burgeoning network of child guidance clinics. Not until the 1930s did preventive attempts begin to incorporate some of the techniques that are popular today. For example, the use of community boards in the development of interventions was pioneered in Chicago neighborhoods (Sechrest, 1970) and a multimodal preventive intervention program began to be employed in “high risk” neighborhoods in Boston (McCord, 1992).

Early studies of the effectiveness of these interventions suggested that they were less than promising. For example, youth who received services in child
guidance clinics appeared to be unaffected in terms of their delinquent behavior (Glueck & Glueck, 1934). A large-scale randomized controlled study of Boston-area prevention efforts (i.e., a casework mentoring program) found that the program not only failed to have an impact (Powers & Witmer, 1951), but may have increased the likelihood that participants displayed problem behaviors (McCord, 1981).

Although concerns about delinquency were eclipsed during World War II, in the years following the war, police arrests of youth due to their antisocial behavior rose at an astounding rate. By the end of the 1950s, public concern was so intense that the federal government and several private foundations began to finance a new generation of delinquency prevention efforts. Unfortunately, the impact of most of these programs was as unclear as that of those that preceded them. Most simply failed to make a difference (Berleman & Steinburn, 1969).

During this same period of time, psychological researchers throughout the country began to use and study the effect of a new set of intervention techniques based on behavioral principles. These researchers moved away from the individual and clinic-based treatments that were popular at the time and instead intervened directly in the classroom, in the home, or both (e.g., Hops & Walker, 1988; Meichenbaum & Goodman, 1971; Patterson, 1974; Schweinhart & Weikart, 1988; Shure, Spivack, & Jaeger, 1971; Walker, Hops, & Greenwood, 1993).

The promise of these new intervention strategies helped inaugurate a new wave of preventive efforts. By the late 1970s, researchers such as Hawkins and colleagues (Hawkins, Von Cleve, & Catalano, 1991) were implementing elementary school-based preventive programs that targeted child aggression and antisocial behavior through the use of a variety of techniques in multiple settings. A plethora of studies on the effectiveness of similar multimodal prevention programs have followed (e.g., Conduct Problems Prevention Research Group, 1992; Kellam et al., 1991; Tremblay, Pagani-Kurtz, Masse, Vitaro, & Pihl, 1995). At a minimum, most of these new programs combined parent training and child social skills training.

One of the programs developed during this most recent round of preventive activity was the Linking the Interests of Families and Teachers (LIFT), a multimodal prevention program targeting the antecedents of youth delinquency and violence and designed for use in elementary school settings. The LIFT comprised three components: (a) a classroom-based child social and problem skills training component, (b) a playground-based behavior modification component, and (c) a group-delivered parent training component. In this article, we describe the LIFT in detail, overview our findings on the efficacy of the program, and conclude with a set of recommendations for practice.

**Theoretical Background**

The major difference between recent and earlier preventive efforts is the degree to which the new programs have been informed by basic scientific research on the development of delinquency. During the past several decades, a variety of parent and child behaviors during early and middle childhood have been consistently linked to delinquent behaviors during adolescence (see Stoff, Breiling, & Maser, 1997). One of the most promising theories based on this research, and the theory upon which the LIFT is based, is coercion theory (Patterson, 1982; Patterson, Reid, & Dishion, 1992).

In coercion theory, the key mechanism hypothesized to drive the development of child problem behaviors is negative reinforcement. "Negative reinforcement" is the association of certain behaviors with the termination or delay of aversive situations, such as a person hitting the "snooze" button when his or her alarm rings in the morning. In contrast, the more familiar "positive reinforcement" or reward paradigm is the association of certain behaviors with a preferred occurrence or situation, such as a child receiving a piece of candy with lunch because he did not fight with his sister in the car on the way to school. In either reinforcement situation, over time, the behaviors that are most effective at leading to the desired outcome in a given situation become the most likely to occur when that situation occurs (e.g., alarm rings → button pressed → alarm off).

Negative reinforcement is a particularly common learning paradigm in family interaction. For example, a father asks his son to clean up his room immediately because company is coming over for dinner. The child complains and dawdles, and the parent feels frustrated. The parent then asks again, and the child continues to delay. The parent now feels angry and yells at the child to "get moving." The child yells back and says, "Leave me alone" and runs outside to play with his friends. The parent, now distraught and exhausted, quickly picks up his son's room and then begins to cook dinner.

The final outcome of a scenario such as this is that child refusal to cooperate is inadvertently reinforced by parent acceptance of the refusal. In effect, the child's refusal is rewarded. If repeated again and again, this type of seemingly innocuous social interaction is hypothesized to serve a major role in the genesis and maintenance of child behavior problems. If aversive behavior effectively ends undesirable situations with parents, children are likely to display the same type of behavior when they encounter undesirable circumstances in other relationships (i.e., child–peer, child–teacher). Insidiously, most instances of such negative behavior are probably not the result of a conscious act by the child, but rather are the display of an acquired relationship skill. The more frequently these interactions end in the reinforcement of child misbehavior, the more likely the child will continue to behave in similar ways in the future.

The consequences of this pattern of child behavior are severe. Children who display frequent defiance and opposition to those around them are likely to be disliked and shunned. As adults and peers alike withdraw from contact with a child, he or she is less likely to receive reinforcement for the positive behaviors that are displayed. A lack of adult engagement places a child at risk for exposure to other rejected peers who are willing to
engage the child. It is often through relationships with these “deviant peers” that a youth with a history of troubled relationships begins to commit criminal behaviors. Youth who commit many delinquent behaviors are likely to commit a variety of different kinds of offenses, including violent acts. Notably, the best predictor of violence during adolescence is prior frequent antisocial behavior (Caldwell & Patterson, 1996).

**Practical Considerations**

The LIFT targets for change those child and parent behaviors thought to be the most relevant to the development of adolescent delinquent and violent behaviors, namely opposition, defiance, and social ineptitude on the part of the child and disciplining and monitoring on the part of the parent (see Stoff et al., 1997). Antecedents to problems in each of these areas have been identified before birth (see Reid & Eddy, 1997), and interventions that target maternal behaviors during the prenatal period have been shown to impact later delinquency (Olds, Hill, Mihalic, & O’Brien, 1998). Targeting the antecedents of problem behaviors as early as possible in the lifespan is highly appealing given the correlation between child age and problem complexity. Interventions have been developed for children (see Taylor, Eddy, & Biglan, in press) and for parents (Reid & Eddy, 1997) that appear to positively impact child problem behaviors and parent discipline and monitoring. While these can be delivered to families on a clinical basis during early childhood, it is difficult to provide such programs on a broad, preventative scale in the United States due to the dispersion of young children and parents across numerous service systems.

Elementary school is the first point in the lifespan when the majority of children enter a service system that includes a broad cross-section of the population. In some states, such as Oregon, virtually the entire school-age population attends public elementary school (Oregon Department of Education, 1999). Because of this depth of access, the public school system is an ideal setting for providing a population-level intervention relevant to children.

This type of access is important when targeting delinquency and violence because it is difficult to predict exactly who will become delinquent and/or violent during adolescence (Offord, 1997). While a general group of children can be identified from which the most problematic youth are most likely to arise, providing more intensive individualized services to all such at-risk children would be prohibitive within most states (see Albee & Gullotta, 1997). On the other hand, we hypothesized that a less intensive, theory-based program available to an entire population could decrease the prevalence of delinquency and violence at a cost that most states could afford. Such a program could serve as a useful complement to the existing mental health and juvenile justice systems through decreasing the total number of children in need of the services provided by those systems. In turn, a portion of the cost savings to these systems could be used to fund such a preventative program.

**Participants and Community Setting**

The LIFT was designed for delivery to a general population of elementary school-aged boys and girls and their parents. Two major sources informed the LIFT: (a) the scientific knowledge base that has accrued through cross-sectional and longitudinal studies on the development and treatment of antisocial behavior problems and (b) the clinical knowledge base that has accrued at our own and similar centers through outpatient and inpatient clinical work with youth displaying antisocial behavior problems and their families. These sources provided us with a vast amount of information to draw upon in the creation of the LIFT, but they do have their limitations. Each source contains an abundance of information about boys but relatively little of such information about girls. Each source contains scant information about ethnic minority families. We are currently investigating whether the LIFT is more efficacious with boys than girls, and to date, this does not appear to be the case. We are just beginning to explore whether adaptations of the LIFT will be acceptable to and efficacious in populations with different demographic characteristics.

The LIFT was developed within a moderately sized urban area in the Pacific Northwest (i.e., Eugene-Springfield, Oregon). Schools from each of the three major public school districts in the area participated in the program. In 1990, the local metropolitan area population was approximately 200,000, and 92% of residents were White. In that same year, 19% of families in the local area earned $15,000 or less per year, 58% earned from $15,000 to $50,000 per year, and 23% earned over $50,000. In the evaluation of the LIFT reported below, participating schools tended to be located in neighborhoods that were more likely than the metropolitan area at large to have residents with lower incomes (24% with incomes of $15,000 or less) or to have residents who were members of an ethnic minority (12%).

**Features and Implementation Procedures**

**Classroom Component**

LIFT classroom instructors meet with all the students in a classroom for 1 hour twice a week for 10 weeks. Each session follows the same general format: (a) brief lecture and role play on a specific set of social and problem-solving skills, (b) structured small- and large-group skills practice, (c) unstructured free play on the playground, and (d) skills review and presentation of daily rewards. The second weekly session also includes a formal class problem-solving session. The regular classroom teachers assist the LIFT instructors in role plays and group practice. The skills presented in the curriculum are similar for first and fifth graders (see the Appendix); however, the specific content of each lesson is tailored to address the development challenges typically met by the members of each
age group. In addition, the fifth-grade curriculum includes a study skills component relevant to academic work in middle school. The instructors who taught the LIFT in our evaluation study were members of our research center staff. However, the program can be taught by classroom teachers, school counselors or psychologists, or trained and experienced laypersons.

**Playground Component**

The playground component of LIFT takes place during the middle of the free play portion of the classroom component. A modification of the Good Behavior Game (GBG; Barrish, Saunders, & Wolfe, 1969; Dolan et al., 1993) is used to actively encourage positive peer relations on the playground. At the beginning of the program, children within each classroom are divided into small groups. The groups engage in various activities together throughout the program. Through (a) the demonstration of positive problem-solving skills and other prosocial behaviors and (b) the inhibition of negative behaviors while on the playground, group members earn rewards for themselves, their entire class, and their group.

Individual and class rewards are based on the display of positive behaviors. Individual rewards are given by regular playground staff and the LIFT instructor during the recess period. When a staff member observes a child acting in an overtly positive manner toward peers, the child is given an armband and verbally praised. At the end of recess, all armbands earned by class members are put into one class jar. When the jar is full, the entire class earns a special privilege.

In contrast, group rewards depend on the ability of group members to inhibit their negative interactions with peers. Throughout recess, each time a child is observed behaving in a negative manner, his or her behavior is noted in a class log book. At the end of recess, the total number of negative points earned by a group is subtracted from a preset number of “good faith” positive points each group receives at the beginning of recess. If a group manages to retain a predetermined percentage of their positive points, each member earns a sticker. When the group earns a certain number of total points after several recess periods, each member selects a small prize.

**Parent Component**

LIFT parent instructors meet with groups of 10 to 15 families once a week for 6 weeks. These sessions are held during the same 3-month period of time that children are participating in the classroom and playground components at school. Like the classroom sessions, each parent session follows a common format: (a) review of the results of the home practice from the previous week; (b) lecture, discussion, and role plays; and (c) presentation of the home practice activities for the following week and attendance drawing. Videotaped scenarios are used in several sessions to present and illustrate certain skills. The basic skills presented in the first- and fifth-grade parent curriculums are similar and linked to the corresponding classroom curricula (see the Appendix), but again the content is modified to address the challenges faced by parents with youth in the respective age groups. Specifically, parents of first graders are taught how to actively encourage positive play between their child and his or her friends, and parents of fifth graders are taught negotiation skills that have been found to be useful for families with adolescents for solving problems.

In the original evaluation of LIFT, the parent curriculum was taught by our center staff. To better represent those who would likely deliver such a program in the field, we deliberately employed instructional staff with a wide range of experiences and training. Our intervention team included experienced parent trainers without a college degree, recent doctoral-level clinical psychology graduates, and experienced psychologists. The curriculum was designed to accommodate such varying levels of clinical expertise.

**Family Involvement**

As discussed previously, research and clinical information that has accrued during the past several decades was used in the creation of the LIFT program. Prior to developing the curriculum, we had worked with over 1,500 families in our various clinical and research studies. Over the years, the interactions between our staff and these families have shaped our intervention techniques, our intervention materials, and our assessment techniques. This shaping has been both informal, through our day-to-day clinical work, and formal, through research studies designed to investigate how therapists and families influence the behavior of each other (e.g., Patterson & Chamberlain, 1994). The first draft of the LIFT curriculum was, thus, strongly influenced by several decades of family involvement.

Prior to finalizing the LIFT curricula for the evaluation study discussed below, we spent 1 year piloting the entire program. The pilot was conducted in one first-grade class and one fifth-grade class within a rural school district located outside of our local metropolitan area. The majority of families in each class participated (84%), and formal feedback was solicited from parents and teachers at various points during the pilot year. A variety of changes to the first draft of the curriculum were made based on this feedback. For example, the first-grade parents wanted to spend more time focusing on fostering positive peer relationships, and the fifth-grade parents wanted to spend more time on discussion and home exercises related to preparing for adolescence. Both the instructional videotapes and the treatment manuals for the parent component were edited and refined based on such feedback. Edits for the classroom component were based on feedback from students, teachers, and parents.

The primary focus of the LIFT program is on parents and parenting behaviors. Parents are invited to attend six group training sessions at their child’s school. To encourage attendance, ses-
sessions are offered each weekday evening and one weekday afternoon, free child-care is provided, and a prize drawing is held at the completion of each session. If parents are unable to attend, individual sessions are offered in their home. If family commitments or circumstances make this option unworkable, parents are sent written materials. Additional parent sessions are arranged if necessary to discuss specific family problems and provide appropriate referrals.

Several means of communication are used to maximize the involvement of parents throughout the LIFT program. During the 10 weeks of the classroom component, parents receive weekly newsletters describing LIFT activities at school and providing suggestions for complimentary family activities. To provide more frequent information, a phone and answering machine are installed in each classroom. Teachers are encouraged to leave brief messages about class activities and homework assignments on the “LIFT Line” and to update these daily. Parents are encouraged to call for these messages and then to leave a message for the teacher. To ensure that each family has regular personal contact, parents are called once each week by the staff member leading their parent group. During the call, the staff member checks in on family progress on home exercises and addresses any specific questions or concerns. Each of these parent contacts is intended to assist in the integration of the home and school components of the LIFT. We view the family involvement aspects of the LIFT as bringing together the home, playground, and classroom components to “set the stage” for positive child development.

ILLUSTRATIVE CLASSROOM, PLAYGROUND, AND PARENT SESSIONS

Classroom/Playground Session

Lesson 15 of the first-grade classroom curriculum (Ramsey, Lathrop, Tharp, & Reid, 1994) focuses on dealing with teasing and criticism. At the beginning of the session, the classroom teacher and LIFT instructor use animal puppets (one of which is a turtle) to illustrate teasing situations that typically occur among first-grade students. Initially, one puppet teases, and the other responds negatively. The interaction escalates until both puppets are upset, angry, and sad. The instructor probes the class for alternative reactions to teasing. After several alternatives are given, the turtle puppet introduces her “turtle trick”:

The “Turtle Trick” is a trick you can use to help calm yourself down when someone is bothering you. We all get mad when people tease or call us names. When someone bothers you, just imagine you are a turtle and go into your shell. When a turtle is not upset its head is out. What does a turtle do if someone bugs it? It goes into its shell. When the turtle goes into its shell it is safe: no one can hurt it and it can’t hurt anybody else.

Children are then asked to imagine that they are a turtle who is being teased:

Now imagine someone is bugging you and you pull into your safe shell so you don’t do or say anything mean. Doesn’t it feel good to be in your shell? It’s nice and warm and safe. You can’t get into trouble and you have time to think about what you can do to keep from getting into trouble. (Ramsey et al., 1994)

Next, the class is divided into two groups, one led by the instructor and one by the classroom teacher. Students are asked to develop a list of situations at school when the “turtle trick” could be helpful. A pair of students is asked to role play a situation on the list, and the other students are asked to shout out “turtle trick!” at the moment when the provoked student might lose his or her temper. The group leader helps the provoked student imagine going into a shell. After the demonstration, all students within each group are asked to role play.

The groups are then brought back together, and the turtle trick is reviewed. Students are encouraged to use the trick not only when they need to calm down, but also when they are being bothered and don’t want to get upset. As they employ the trick, students are encouraged to think of solutions to the problem besides responding in negative ways.

The class is then prepared for recess. The list of playground rules is read, and students are reminded that positive behavior on the playground will be rewarded. Students are instructed to use the “turtle trick” on the playground if someone makes them angry. Small groups are reminded about the number of total points they have, the number they need to earn for a daily reward, and the number they need to earn a group reward.

After a 15-minute recess period during which the Good Behavior Game is employed, students reconvene in the classroom. Positive behaviors observed on the playground are reviewed. Students are asked to review their use of the “turtle trick.” Finally, observed negative behaviors are reviewed, group progress charts are filled out, and award incentives are given.

Parent Session

Lesson 6 of the first-grade parent curriculum begins with a 20-minute discussion of parent experiences during the past week while using a daily homework/study time, time outs, and a home behavior contract. This discussion is then used to introduce a more formal overview and discussion of successful peer relations. Parents are taught skills for coaching children’s peer relationships, including techniques for creating peer situations where children are likely to be successful. Parents are asked to complete a questionnaire on their child’s skills with peers and their involvement with their child’s peer relationships. A few parents are asked about their specific responses, and the ensuing discussion is used to introduce a videotape on coaching peer relations.

In the videotape, three points important to helping children deal with peer conflict are emphasized:
Since the sixth session is the last in the program, the session closes with thanking parents for their participation, offering parents the option to call the instructor if help is needed in the future, encouraging the continued use of the LIFT Line, and conducting the final attendance drawing. After the session ends, the instructor sets up any final individual meetings to assist families in finding referrals should the problems they are facing require clinical services. In the evaluation study, such services were not provided by LIFT staff members.

**FUNDING**

The original development and testing of the LIFT was supported by a Prevention Intervention Research Center grant from the National Institutes of Mental Health (NIMH). Follow-ups of the original sample are being funded by additional grants from the NIMH. Examinations and extensions of the LIFT within new settings have been supported by a variety of sources, including the Wyoming Children’s Trust Fund, HMO Oregon, and Kaiser Permanente. Work relevant to a broader dissemination effort is currently underway via a grant from the McConnell Clark Foundation.

**EVALUATION**

In a randomized clinical trial involving more than 600 youth and their families, the LIFT program has been shown to decrease levels of antisocial and other problem behaviors. The trial contrasted the outcomes of participants who received the LIFT (i.e., the intervention group) versus those who did not (i.e., the control group). Complete details of the investigation are provided in Reid, Eddy, Fetrow, and Stoolmiller (1999).

**Targeted Schools**

All public elementary schools located in high juvenile crime neighborhoods within the Eugene-Springfield, Oregon, metropolitan area were eligible to participate in the study. A “high juvenile crime” neighborhood was defined as an elementary school catchment area having a higher than average number of households per year with at least one police contact due to juvenile misbehavior. At the beginning of the study, an average of 9% of households in the Eugene-Springfield area had such a contact in a given year.

**Research Design**

During each of 3 school years of the program phase of the study (1991–92, 1992–93, and 1993–94), four schools from high juvenile crime areas were randomly chosen as LIFT program schools, two as control schools (i.e., no prevention program but $2,000 provided in unrestricted funds), and two as alternatives should one of the assigned schools decline to participate. Over the course of the study, only three schools declined to participate, and two of those declined prior to randomization. Once a school was chosen, either the first or the fifth grade within the school was also randomly chosen to participate. The 12 schools randomly chosen for the study had an average neighborhood juvenile arrest rate of 13% of households, an average yearly student turnover rate of 43%, and an average free-lunch rate of 47% of students.

**Assessments**

To index the relative impact of the prevention program, all participants were assessed in the fall of the first year of the study, an intervention was conducted in prevention program schools during the winter, and all participants were again assessed in the spring. In subsequent years, all participants were assessed during the middle of the academic year. During each assessment, children, parents, and teachers were interviewed and completed a variety of paper-and-pencil questionnaires. Additionally, school and court records were collected, children were observed in the classroom and on the playground, and parents and child were observed during family problem-solving discussions at home or at our research center.
Participants
All students and their families within the chosen grade at each school were invited to participate in the study. Of the full-time students enrolled in the selected grades at the start of the LIFT program year, parents of 85% of students agreed to participate fully. An additional 3% of parents allowed their children to participate, but they themselves declined participation. The final sample comprised 671 students (51% female), with 382 participants attending intervention schools and 289 participants attending control schools at the beginning of the study. By the third year follow-up assessment, only 3% of participants dropped out of the study. As discussed previously, participants tended to be White and to have families earning lower to middle incomes. Participating parents tended to have completed high school or to have some college education. Approximately 25% of families were receiving some type of government assistance at the beginning of the study. On average, the characteristics of participants were similar to those of the school catchment areas in which they lived.

Program Implementation
Intervention fidelity (i.e., was the program delivered as planned), program utilization (i.e., did families participate), and participant satisfaction (i.e., were participants pleased with the services received) were high. In terms of fidelity, parent and classroom instructional staff were rated by independent observers on the actual content of prevention program sessions. In an average parent group or classroom, 95% of the planned program content was delivered. In terms of utilization, 93% of families received all parent training materials in some manner, either through the planned group sessions, through home visits, or through the mail (i.e., written materials and videotapes). In terms of satisfaction, 94% of families reported they would recommend LIFT to other parents, and 79% reported the program was either “quite helpful” or “very helpful.” The majority of teachers also felt extremely positive about the LIFT, especially first-grade teachers (e.g., 100% endorsed the highest ratings for “recommend program to other teachers” and “students acquired better social skills”). Likewise, from 50% to 70% of fifth-grade teachers gave their highest endorsement on these same items.

Complementing these figures, dropout from the prevention program was quite low (7%), due in part to the multiple modes of service delivery (i.e., group sessions, individual sessions, mailings) used to provide materials to parents who did not attend group meetings. However, while the vast majority of participants were exposed to all LIFT program materials, only 28% of parents actually attended all six group parent training sessions. For any given LIFT parent session, an average of 59% of families attended the scheduled group, 23% received information on the session in the mail, 13% accepted a home visit to cover the material, and 5% refused to participate.

Immediate Impact
Significant changes in child and parent behaviors due to the intervention were found (Reid et al., 1999). In accord with our development model of antisocial behavior, we hypothesized that the LIFT would have a significant impact within three domains relevant to future youth problem behavior: child physical aggression toward classmates on the school playground, parent aversive behavior during family problem-solving discussions, and teacher impressions of child positive behaviors with classmates. After controlling for the clustering of children by classrooms, we found statistically significant differences between the control and LIFT program groups on each of these variables. In the spring following the intervention, children in the LIFT group were less aggressive on the playground and were perceived as more positive by their teachers than children in the control group. Further, parents of children in the LIFT group behaved less aversively with their children during family problem-solving discussions.

Interestingly, the effects of the LIFT appeared to be strongest for children who had the highest level of behavior problems prior to the intervention. In this regard, the effect of the LIFT on playground behavior was particularly powerful. Although aggressive children in the control group were equally aggressive toward their peers during the fall and spring of the program year, aggressive children in the prevention program group drastically decreased their aggressive behaviors in the spring following the intervention (Stoolmiller, Eddy, & Reid, 2000).

Three-Year Impact
Because of developmental differences in the first- and fifth-grade samples, we hypothesized different preventive effects of LIFT. During middle school, the most powerful predictors of serious and chronic delinquency are association with deviant peers and police arrest. For fifth graders, we found that intervention participants were significantly delayed during the middle school years in time to first report by teachers that a youth was spending time with peers with various behavior problems and time to first police arrest (see Eddy, Reid, Stoolmiller, & Fetrow, 2000). Intervention participants were also significantly delayed in the exhibition of problem behaviors that often accompany deviant peer association, such as patterned alcohol abuse and marijuana use. Interestingly, these effects were found for youth regardless of how problematic their behavior was prior to the start of the intervention; even those youth who were behaving in more extreme antisocial ways prior to the start of the program appeared to have benefited.

During elementary school, increases in inattentive, impulsive, and hyperactive behaviors appear to be important markers for later delinquency and other conduct problems, particularly when they are noticed early in the school setting (Loeber, Green, Keenan, & Lahey, 1995). We found that over the 3 years following the intervention, LIFT first graders were significantly less likely
than control group children to show an increase in the severity of these types of behaviors as perceived by teachers. The effect size for this difference was 1.5 within group standard deviations, considered “very large” for a psychological intervention (Cohen & Cohen, 1983).

### Meaningfulness of the LIFT Program Effect

The statistically significant differences reported above translate into meaningful differences between the groups. For example, observed aggressive behavior on the LIFT playgrounds decreased dramatically following the intervention. Prior to the intervention, a child on an average LIFT control or intervention playground exhibited six aversive physical behaviors during a 30-minute recess period. Following the intervention, children in the intervention group averaged 4.8 aversive behaviors per day, and children in the control group averaged 6.6 per day. On an average playground, these seemingly trivial differences in behavior rates translate into a dramatic decrease in exposure: A youth on an intervention playground was exposed to 1,700 fewer physically aversive events during the spring following the intervention than a youth on a control playground.

In terms of long-term effects, within 3 years following the intervention, youth in the fifth-grade control group were 2.2 times more likely to affiliate with misbehaving peers than youth who received the LIFT program. Fifth-grade control youth were also 1.8 times more likely to be involved in patterned alcohol use and 1.5 times more likely to have tried marijuana than LIFT youth. Finally, fifth-grade control youth were 2.4 times more likely to be arrested during middle school than LIFT youth.

### Discussion

The LIFT program was designed to integrate theoretically sound and practically promising preventive intervention techniques into a package that could be easily and inexpensively integrated into the day-to-day activities of an elementary school. In our original evaluation of the program, the parent, classroom, and playground components were well-liked by both parents and teachers, intervention fidelity was maintained across a wide spectrum of staff training and experience, and high participation rates were achieved. Further, under the conditions of a tightly controlled randomized evaluation, the LIFT has been demonstrated to impact the antecedents of delinquent behavior during elementary school and delinquent and other problem behaviors during adolescence. This impact appears to be strongest on the children exhibiting the highest rates of problem behaviors.

As clinical researchers, we are quite aware of the difficulties in changing antisocial behavior patterns. In fact, this awareness was one of the reasons that we, as a research group, began to be more interested not only in preventive work (Bank, Marlowe, Reid, Patterson, & Weimrott, 1991), but also in intensive individualized residential interventions such as Multidimensional Treatment Foster Care (Chamberlain & Reid, 1998).

From this base of experience, the impact of the LIFT on high-rate children has been quite surprising to us. On reflection, several possible reasons are noted for this effect. First, children with extreme behavior problems tend to live in a social world that provides a rich array of reinforcers for their antisocial behaviors and few reinforcers for their positive behaviors. In targeting an entire school class in the LIFT, rather than individual children within a class, the density of reinforcement for positive behaviors for each of the individuals within the class becomes much higher. In turn, this behavioral milieu provides children with the highest level of problems the opportunity to develop a new set of behaviors. This opportunity would simply not be possible unless the majority of children and adults in a child’s world were “on board” and working together to create a mutually beneficial positive environment. In effect, each of the individuals within the class becomes a treatment agent.

Second, the children with the highest level of problems may simply be more vulnerable to any stimuli in their environment. For these individuals, chaotic environments are particularly damaging (S. Kellam, personal communication, April 18, 1999). The structure that was imposed by the LIFT was apparently enough to assist some of these children in better managing their behaviors. For example, the slight changes in rates of aversive physical behavior on the playground actually led to rather large changes in overall exposure to risk (i.e., 1,700 less physically aversive events on the playground during the spring term). This lessening of cumulative exposure to noxious social interactions may have the largest payoffs for the most behaviorally vulnerable children.

Our findings on the LIFT parallel the recent findings of other researchers using similar techniques. For example, in a randomized controlled investigation of Second Step, a classroom-based skills training program that addresses many of the same issues addressed in the LIFT classroom component, Grossman et al. (1997) found that elementary school students in the prevention program group displayed significantly fewer physically aggressive behaviors at school following the completion of the program. Notably, however, this effect lasted less than 6 months after the program was completed.

More similar to the LIFT, a recent study by Webster-Stratton and Hammond (1997) investigated the joint impact of parent training and child social and problem-solving skills training. In contrast to the school-based LIFT and Second Step investigations, Webster-Stratton and Hammond conducted their investigation in a child clinic, and participants were 4- to 7-year-old children referred for conduct problems and their parents. The researchers contrasted the impact of a well-validated parent training intervention (Webster-Stratton, Kolpacoff, & Hollinsworth, 1988) with combined parent and child training. At 1-year follow-up, the combined intervention resulted in greater reductions in child problem behavior in the home than the parent.
training intervention alone. Unfortunately, neither of the intervention conditions had an appreciable effect on problem behaviors at school.

These examples illustrate the central shortcoming of many of the more popular “preventive” interventions of today: the bounding of an intervention within a time (e.g., a portion of a school year) or place (e.g., a mental health clinic) that has little relevance to a child soon after the intervention ends. If such interventions were powerful enough to cause fundamental changes within an individual, this bounding would be acceptable, at least in terms of changing the behaviors of the targeted individuals. However, we propose that interventions such as the Good Behavior Game or even child problem-solving and social skills training have their most powerful effects on a given social milieu as a whole, which in turn has effects on individuals within the milieu, rather than vice versa. When the individuals comprising the milieu change, new sets of social relationships and interactional patterns are established that may not provide support for positive behaviors, and the brief intervention that was done with some members of the new group becomes irrelevant. Unfortunately, if some of the new children who enter the milieu have well-developed repertoires of problem behaviors, the new pattern that is developed may be ruled by negative reinforcement patterns such as those discussed earlier. This is especially true in less structured settings such as the playground.

Certainly, an intact social group can carry forward the effects of an intervention (e.g., the families in Webster-Stratton and Hammond’s [1997] study). However, we posit that intact social groups are sparse within many school settings. It is not uncommon for many of the classmates of a child and certainly his or her teacher to change on a yearly basis. Some of these changes are attributable to school planning efforts and others simply to the high mobility rate of the U.S. population at large.

For example, from the 12 original at-risk schools in the evaluation reported here, participants had dispersed into more than 70 schools by the beginning of the next school year. Two years later, participants had dispersed into more than 100 schools. Three years later, participants were dispersed into 150 schools. Clearly, many students in LIFT were in completely different peer social environments 1, 2, and 3 years after the intervention than they were during the intervention; thus, we would not expect the classroom and playground interventions to have much relevance in their day-to-day lives any longer. On the other hand, since parents were also involved in the LIFT, we hypothesized that overall we would find a lasting impact of the intervention on children, such as lower rates of involvement with deviant peers and lower arrest rates. To date, we have found support for this hypothesis. Whether the LIFT ultimately impacts the total frequency and content of delinquent behavior, including violence, throughout adolescence remains under investigation. Within the next 3 years, all participants in the fifth-grade cohort of the ongoing evaluation will reach the age of 19 years, so information on this important issue is forthcoming.

**Recommendations**

**Establish and Maintain Preventive Interventions in Key Settings**

Programs like the LIFT could be incorporated into school settings with relatively little difficulty. Many schools already provide some type of child problem-solving training within the regular curricula, and many school districts provide parents at least some opportunity during the year to attend parent education classes. All schools provide some type of monitoring of playground behavior and activities, and telephones are becoming increasingly common in classrooms. Through integration of these activities and resources in a standardized program such as LIFT, schools could prevent at least some students on the pathway to delinquency from escalating to more extreme forms of antisocial behavior. The emotional and financial toll saved through the prevention of even a seemingly small percentage of criminal acts can be quite substantial (see Greenwood, Model, & Rydell, 1996).

Such positive effects seem most likely if an entire school district, or a geographically associated set of school districts, provides LIFT-type services (i.e., yearly parent education, yearly child social and problem skills training, and daily playground monitoring, as well as one telephone/answering machine in each class) to students throughout the elementary school years. Given that many family moves are local (within a metropolitan area, a county, or a state), widening the reach of programs in such a manner would ensure that despite relocations, most children and families would receive the intervention. Youth delinquency and violence are behaviors that develop within and are maintained by a dynamic social context. Interventions that fail to attend to context on an ongoing basis are unlikely to have a lasting effect.

**Intervene Simply with Theory in Mind**

Interventions such as the LIFT are low-cost, simple, straightforward, and theoretically sound solutions to a complex and devastating problem. Certainly, a vast array of such solutions will be needed to address the overwhelming difficulties that youth face in the United States today. In concert, however, we believe that these types of efforts can make a difference. We close with an example that illustrates the importance of theoretically based simplicity.

Anybody who has experienced or studied bullies knows there are three types of participants in the process: the bully, the victim, and the observing nonparticipants. The latter are the ones who typically watch and laugh or who escalate arguments into fistfights with comments like, “Don’t let him talk about your mother that way.” These nonparticipants, who rarely get in trouble, can turn cowardly, hurtful, and despicable behavior into high theater.

---

**JOURNAL OF EMOTIONAL AND BEHAVIORAL DISORDERS, FALL 2000, VOL. 8, NO. 3**

173
We once met a police chief in the city of London who described a problem he was having in his precinct. A number of adolescents were hanging out on a busy street corner, smoking, using offensive and sometimes threatening language, and refusing to make way for walkers, forcing them to step into the street in order to pass. Although this situation was frightening to neighborhood residents, and particularly to the elderly, the teenagers were technically within their rights as U.K. citizens to congregate wherever they liked. The police felt frustrated and had no legal power to deal with the problem. As the youngsters became more hostile to the police, the police found themselves tempted to escalate the situation in order to goad the leaders in the group into an illegal act that would justify arrest. Finally, an incident occurred, and a story accusing the police of misconduct appeared in the newspaper. The stalemate continued, and the frustration level of the police increased, as did the number of complaints by residents.

After some talking, we came up with the following plan. Although citizens can congregate where they please without any interference from police, the police have the right to ask anyone for identification, at any time. The officers were instructed to gather the names and addresses of the youth and the residents each time a problem was witnessed or reported. The police officers simply turned in the list of youngsters’ names at the end of the shift. A form letter was sent to the home of each youngster, addressed to “The Parent(s) of __________.” It was a cordial letter explaining that the youngster had done nothing illegal but that his or her behavior, and that of the group, was frightening to the elderly residents. The parents were asked if they could have a talk with the youngster to explain how the innocent behavior might make older folks uncomfortable.

Over a year later, we saw the officer at a conference, and he told us that the intervention was a complete success. Shortly after the first wave of letters, the corner gang disappeared. At first glance, it is not obvious why the intervention would have any effects at all on the most antisocial members of the group. Although it is clear from the research literature that parental influence and supervision are powerful deterrents of adolescent delinquency and association with antisocial peers, it is also the case that the most severely delinquent teenagers are usually out of parental control. They spend most of their time and have their most meaningful relationships with kids who do not go to school and enjoy talking about delinquent activities. It is unlikely that the letters directly impacted these youth through their own parents.

However, the most delinquent youth do spend some of their time with less antisocial children, who to a greater or lesser degree might be classified as “wannabes.” One could see how the younger and less antisocial kids (i.e., those whose parents still have influence on them) would respond to a strong parental demand to abandon the street corner and to stop harassing people. When the parents of the wannabes keep them home, the hard-core delinquent loses his street corner support system. And, the street corner support system is absolutely vital to the hardcore delinquent.

Chronic delinquents are probably best thought of as generals; take away the young recruits, and it is hard to have a war—or even a drill, for that matter. Thus, by working directly with those in the initial stages of antisocial development, we really are working on those youth who are further up the pipeline, not only by diverting children away from deviant peer involvement but also by decreasing the followers of those who have moved further down the line. Interventions like the LIFT appear to be one way to begin the process of successful diversion.

About the Authors

J. MARK EDDY, PhD, is a research scientist at the NIMH-funded Oregon Prevention Research Center, part of the Oregon Social Learning Center, a nonprofit research center that was formed in 1975 to conduct research on the development of aggression, delinquency, and violent behavior in Eugene. His research focuses on the development and refinement of interventions to prevent parent and child problem behaviors. He is currently the principal investigator of the Paths Project, which is examining the transition to young adulthood for serious juvenile offenders. JOHN B. REID, PhD, is currently the executive director of the Oregon Social Learning Center. Dr. Reid has acted as consultant for prisons and detention centers, taught at several universities, served on numerous editorial boards of professional journals, and served on private, state, and federal task forces to try to determine the most effective interventions for delinquency and antisocial behavior. He has chaired committees for NIMH and NIH to evaluate grant applications to do research on the development and prevention of delinquency. REBECCA A. FETROW, BS, is a research assistant at the Oregon Social Learning Center. She has been the director of operations for several NIMH-funded research projects at the Oregon Social Learning Center. She is currently overseeing the activities of the Oregon Prevention Research Center and the LIFT Program, which is a research intervention program designed to prevent the development of aggressive and antisocial behavior. Address: J. Mark Eddy, Oregon Social Learning Center, 160 E. 4th Ave., Eugene, OR 97401; e-mail: marke@osl org

Authors’ Notes

1. Support for the development and evaluation of the LIFT was provided by grants MH 54248 and MH 46690 to John B. Reid from the Prevention and Behavioral Medicine Research Branch, Division of Epidemiology and Services Research, National Institutes of Mental Health, U.S. P.H.S. The opinions expressed are those of the authors and do not necessarily reflect those of the funding agency.

2. Special thanks to the children and their parents in the Bethel, Eugene 4J, and Springfield Public School districts; to district staff members Charles Stevens, Bob Lady, Robert Hammond, and Sue McNair-Gallup; and to the principals and teachers of the 12 participating schools.

3. Thanks to the many OSLC staff and research scientists for their leadership roles in various aspects of the LIFT project, and particularly to Kathy Jordan, Pat Wasp, and Mike Stoolmiller for their work on conceptualization and analyses and Linda Wallenius for her assistance with the manuscript.
References


---

**APPENDIX:**

**CONTENT OF LINKING THE INTERESTS OF FAMILIES AND TEACHERS (LIFT) CLASSROOM AND PARENT COMPONENTS**

**Classroom Component**

1. **Relationship Fundamentals**
   - Listening
   - Identifying feelings
   - Responding appropriately to others
   - Dealing with anger
   - Asking appropriate questions
   - Understanding and following rules
   - Giving and receiving compliments
   - Being flexible

2. **Peer Group Skills**
   - Joining a group
   - Cooperating within groups
   - Problem solving: Definition, brainstorming, evaluating, and trying solutions
   - Including new people in a group
   - Responding to closed groups

**Parent Component**

1. **Discipline Fundamentals**
   - Disengagement
   - Paying attention sooner rather than later
   - Appearing calm
   - Using small positive and negative consequences

2. **Family Management Skills**
   - Listening and tracking
   - Making effective requests
   - Controlling negative emotions
   - Giving encouragement
   - Defining cooperation
   - Making behavior-change contracts
   - Giving consequences: Time out, work chores, privilege removal
   - Networking with teachers and parents
   - Problem Solving: Definition, brainstorming, evaluating, and trying solutions