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Pilot Evaluation of the ACT Raising Safe Kids Program on Children's Bullying Behavior

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Abstract Research documents that parents play a critical role in the development and maintenance of behavior problems in children. Few bullying prevention programs, however, target children in early childhood or include a parenting component in spite of experts recommending that parent training in behavior management be addressed. Based upon these recommendations, the present study examines the relationship among parent characteristics (hostility, depression, and overall parenting skills) and child bullying and the effects of the American Psychological Association's ACT Raising Safe Kids program on reducing early childhood bullying. The ACT-RSK program is a primary family violence and child physical abuse prevention program for parents of young children. Fifty-two parents/caregivers, representing children ages 4–10, completed the *Brief Symptom Inventory*, the *ACT Parents Raising Safe Kids Scale*, and *Early Childhood Bullying Questionnaire* (derived from the *Child Behavior Checklist* and *Strengths and Difficulties Questionnaire*). Twenty-five of these parents/caregivers were trained in effective parenting including nonviolent discipline, child development, anger management, social problem-solving skills, effects of violent media on children, and methods to protect children from exposure to violence through the ACT-RSK program. The remaining 27 parents/caregivers received treatment as usual. Results indicate decreased bullying in children whose parents completed the ACT-RSK program. Furthermore, of the parent characteristics assessed, parental hostility is the only significant parent predictor for child bullying. These findings suggest the efficacy of this brief intervention for preventing bullying.

Keywords Bullying · Parent–child interaction · Positive parenting · Prevention · Violence

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Introduction

Bullying is a relationship-based form of aggression, which involves the use of various behaviors to humiliate, dominate, and oppress others. Overt bullying is defined as physical aggression directed at peers with the intent of causing physical harm to others or making threats of physical harm. Relational bullying, in contrast, includes the intent of causing harm to peer relationships by relying on verbal aggression and social exclusion (Olweus 2010). Approximately 30 % of youth are either bullies or victims and have moderate or frequent involvement in the bully-victim relationship (Nansel et al. 2001). Moreover, in 2008, at least 20 % of children ages 2 through 17 experienced one or more forms of bullying during the past year (www.childtrendsdatabank.org).

Bullying has been linked to a variety of negative outcomes, including emotional and behavioral problems, (Kumpulainen et al. 1999; O'Moore and Kirkham 2001; Rigby and Slee 1993), academic problems, and increased involvement in delinquent acts and substance abuse in both youth and adulthood (Department of Health and Human

Services and Department of Education and Department of Justice, n.d.; Farrington and West 1993; Olweus 1991). To date, the focus of most bullying research, prevention, and intervention is typically on children over age 7 with most studies investigating the bully-victim relationship in middle school and high school (Craig et al. 2010). Bullying, however, has been observed as occurring regularly in preschool programs (e.g., Belacchi and Farina 2010; Culp et al. 2003). Furthermore, some research has indicated that bullying occurs at approximately the same rate in kindergarten as in elementary school (Alsaker and Nagele 2008; Stassen Berger 2007).

Some experts in violence prevention and bullying recommend that parent training in behavior management be included in bullying prevention/intervention programs (e.g., Craig et al. 2010). However, very few bullying prevention programs include a parenting component. Programs that do include a parent component typically are focused on providing education about bullying and bullying protocols rather than on the parent–child relationship and prevention or modification of maladaptive parenting behaviors (Craig et al. 2010). Due to the high degree of human suffering caused by bullying, it would be best to focus on prevention (Olweus 2010; Schwartz et al. 2010). Because many have documented that bullying can start early in life (e.g., Alsaker and Nagele 2008; Belacchi and Farina 2010; Culp et al. 2003; Stassen Berger 2007), it appears that bullying prevention programs should begin in early childhood.

Parenting programs have been shown to be effective in reducing child externalizing problems (e.g., Pearl et al. 2011; Webster-Stratton and Reid 2010). Furthermore, research has documented that parents play a critical role in the development and maintenance of behavior problems in children (e.g., Cutner-Smith et al. 2006; Gershoff 2002; Lee and Gotlib 1991; Shaw et al. 1998). It is not yet known, however, if programs teaching parents of young children positive parenting strategies may be effective in reducing bullying. Storey and colleagues (2008) created a prevention/intervention guide, Eyes on Bullying Toolkit, which targets parents of pre-school and school-age children. The Toolkit teaches parents the dynamics of bullying, how to recognize and respond to behaviors that can lead to bullying, as well as how to create an environment that prevents harmful behaviors. Although programs such as Eyes on Bullying provide psychoeducation for parents, bullying prevention typically does not address the broader class of basic parenting skills. However, given the bulk of research demonstrating improvements in childhood behavior problems when training in parenting is implemented, it appears likely that parent training may be a useful strategy.

Research indicates that parent education/guidance is the most effective and empirically supported treatment for families of children with early childhood conduct problems. Further, meta-analyses of parent training have provided evidence of moderate effect sizes for outcomes such as attitudes toward abuse, emotional adjustment, child-rearing skills, and child abuse (Lundahl et al. 2006). Many of the aspects of traditional parent training may be useful in the prevention of child bullying. For example, improving parental knowledge of child development is often one main objective of parenting programs. This is based on research showing that parents who lack knowledge about child development and positive parenting strategies often believe that a child's misbehavior is fully under the child's control and the result of negative intentions (Smith Slep and O'Leary 2007) rather than attributing the behavior to developmental factors. Misattributions lead to negative parent–child interactions and greater use of power assertive disciplinary techniques, which may then result in child externalizing behaviors such as bullying.

Parenting programs addressing child externalizing problems also typically address discipline practices. According to Hoffman's theory of moral internalization (2000), children learn empathy and the moral message of not hurting others through parents' disciplinary measures. Research has indicated that when parents of pre-school age children use more power-assertive disciplinary techniques, their children display lower levels of empathy and less behavioral inhibition at school (e.g., Cornell and Frick 2007; Olweus 1993). Use of harsh disciplinary practices of 5-year-old children was found to be predictive of later aggressive behavior observed on the playground, in peer nominations, and externalizing problems as rated by teachers (Dodge et al. 1990, 1995). Moreover, research (Gershoff 2002; Straus et al. 1997) indicates associations between parental corporal punishment and increased child aggression, as well as increased depression and psychological distress. A meta-analysis of 88 studies consisting of research with children ages 4–16 over the last 62 years found that corporal punishment was related to negative outcomes in both childhood and adulthood (e.g., decreased moral internalization and mental health, and increased aggression, delinquent and antisocial behavior, risk of being a victim of physical abuse, and risk of abusing one's own child or spouse; Gershoff 2002).

In addition to parenting practices, several parent characteristics have been shown to relate to childhood externalizing problems. For example, low maternal warmth and affection are associated with aggressive behavior in both toddlers and school-age children (Deater-Deckard et al. 2006; Dodge et al. 1994; Rublin et al. 2003). Low levels of warmth interfere with a child's ability to modulate arousal, resulting in decreased ability to consider the consequences of actions and refrain from disruptive behavior (Brody et al. 2002; Tronic 1989). Further, parental hostility and

depression are correlated with child externalizing behaviors, and have been shown to be related to greater use of power assertive disciplinary techniques (e.g., Kane and Garber 2009; Knox et al. 2011b).

Lyons-Ruth and colleagues (2002) described a "hostile, self-referential" parenting pattern of depressed parents, which is characterized by negative and intrusive behaviors. The negative, hostile interactions characteristic of this parenting style are associated with children's aggressive and conduct behavior problems (Lyons-Ruth et al. 2002). A meta-analysis of maternal depression and parenting behavior indicated that depression appeared to be most strongly associated with irritability and hostility toward the child (Lovejoy et al. 2000). What is more, Knox and colleagues (2011b) found that parental hostility is a better predictor than parental depression of both current and future child behavior problems.

Parents who have hostility-related schemas tend to interpret their child's behavior as hostile (Farc et al. 2008) and believe that the child is the cause of the maladaptive relationship (Farc et al. 2008; Todorov and Bargh 2002). These parents may overreact to their children, leading to negative and maladaptive parenting. According to Patterson and colleagues (1992), negative parenting leads to the development and maintenance of childhood behavior problems through a "coercive family process." Changes in the parent's hostile and coercive behavior are negatively reinforced by patterns in negative child behaviors, and children's negative behaviors are negatively reinforced by changes in parents' behaviors (Patterson et al. 1992). In essence, in some families, children are socialized to use coercive behaviors to achieve desired outcomes, which further perpetuate problem behaviors (Conger et al. 1994; Patterson et al. 1992), and may set the stage for bullying behaviors with peers.

Based upon the relationship between parent characteristics and child externalizing behaviors, as well as substantial research suggesting the effectiveness of parent training in reducing childhood behavior problems, it would appear that parent training would be an effective approach to prevent and reduce child externalizing behaviors including bullying. Such an approach should aspire to prevent or reduce parental anger and hostility, reduce parents' use of harsh physical discipline, increase parental warmth, and provide parents with education, support, and guidance in effective behavior management and parenting techniques. The ACT-RSK program holds the potential for achieving such outcomes.

The ACT-RSK program was developed by the American Psychological Association and the National Association for the Education of Young Children (NAEYC), based on the Centers for Disease Control (CDC) and Prevention's Best Practices of Youth Violence Prevention (Thornton et al. 2002). ACT-RSK makes use of a train-the-trainer model in which training is delivered to a mental health professional, teacher, or other professional working with children and then delivered in eight 2-hour sessions to parents in diverse settings such as childcare centers, family support organizations, hospitals, public libraries, churches, schools, community agencies, and shelters.

Through ACT-RSK, groups of caregivers are trained in child development, nonviolent discipline techniques, anger management, social problem-solving, effects of violent media on children, and methods to protect children from exposure to violence. Parents are taught to reframe their children's misbehavior as mistakes that warrant teaching, not intentional assaults or spiteful behaviors. Parents are taught how to manage their anger and then how to model anger management skills for their children. Parents are provided with instruction on how to teach their children developmentally appropriate anger management and social problem-solving skills, as studies have shown that children demonstrate improved, less aggressive behaviors when they have been taught effective methods for managing strong feelings and solving difficult social problems (e.g., Lochman and Wells 2004; Webster-Stratton et al. 2001). Sessions use social-cognitive interventions, such as didactic instruction, modeling, and role-playing to instruct parents on how to assist their child to master positive social skills and to have nonviolent attitudes, beliefs, and behaviors (for more information on session topics, please refer to www.actagainstviolence.apa.org).

Research on outcomes of the ACT-RSK program indicates significantly improved parental knowledge in anger management, social problem-solving, non-violent discipline, media literacy (Porter and Howe 2008), and improved knowledge, behaviors, and beliefs regarding violence prevention and parenting (Knox et al. 2010). In addition, parents and caregivers who completed the ACT-RSK program demonstrated reduced spanking and hitting children with objects (Knox et al. 2010).

In a large multi-site study, caregivers who completed the program demonstrated an increase in prosocial parenting practices, effective anger management, use of positive discipline practices, calm communication with children, reduction of arguments, and discontinuation of physical punishment (Weymouth and Howe 2011). A multi-site, randomized, controlled study of the ACT-RSK program demonstrated similar effects in which findings indicated significantly improved parent nurturing behaviors, reduced harsh discipline, and improved social support for parents who completed the program relative to controls (Portwood et al. 2011). A second multi-site, randomized, controlled trial also indicated improved nurturing, positive parenting behaviors, and use of nonviolent discipline as well as lower rates of psychologically and physically aggressive behavior

toward children. These improvements occurred independent of child's age and prior levels of aggression in a sample of both Spanish and English speaking parents (Knox et al. 2012). Furthermore, in a study by Knox and colleagues (2011a), ACT-RSK program completers had children who evidenced a significant reduction in conduct problems.

There were three goals for the present study. The first goal was to document the presence of bullying in early childhood for both males and females. The second goal was to examine whether parental hostility, parental depression, and parenting skills predict bullying behaviors, as no study to date has investigated the relationship among these characteristics, and greater knowledge of relationships among these variables may provide a better understanding of the context in which childhood bullying exists. The third goal was to investigate whether child bullying is decreased when caregivers complete the ACT-RSK program, relative to a treatment-as-usual (TAU) comparison group. A decrease in child bullying would demonstrate added benefits to those already documented for ACT-RSK program completers. The results also may have broader implications for the integration of parent training in bullying prevention programs. It was hypothesized that in comparison to a TAU group, parents who receive education in the ACT-RSK program would have children who evidence a reduction in bullying behaviors from pre-intervention to post-intervention.

Method

Participants

Participants were caregivers who were recruited from a mental health agency for children, an urban community center, and a Court of Common Pleas. Parents involved in services at the community center, mental health agency, and Court of Common Pleas were approached by members of the research team or agency staff, informed about the study, and asked to participate. Recruitment took place over the course of 2 years by the same staff members at each agency. Over this period of time, standard recruitment procedures were followed. During the course of these 2 years, every parent who visited the community center or the mental health agency and had a child 10 years of age or younger was given a flyer asking him/her to participate in the research. For the Court of Common Pleas, every parent who was mandated by the magistrate to participate in parent training during the recruitment period was asked by court staff to participate in the research. Caregivers recruited at the mental health agency had children who were involved in educational or mental health services at the agency. Caregivers who were recruited from the urban community center had children enrolled in child care or recreational activities at the center.

Inclusion criteria included living with and regularly caring for a 4 to 10-year-old child. Exclusion criteria included severe or incapacitating mental illness (e.g. psychosis) or mental retardation in parent or child. Verbal self-report was used to determine whether interested caregivers and their children met inclusion criteria. A demographic questionnaire completed at the time of pre-test also had caregivers indicate both their previous diagnoses and their children's and was used to confirm that inclusion criteria were met.

A total of 117 individuals consented to participate in the ACT-RSK program. Of these, 25 failed to complete the 8-week program or the post-test measures, leaving a final sample of 92 participants. Seventy-two participants had children ages 4–10. The younger age limit of 4 was chosen, as the literature begins documenting bullying as occurring and being observed regularly on the playground in preschool age children, with samples consisting of children ages 4 and 5 (Alsaker and Nagele 2008; Culp et al. 2003). An age limit of 10 was chosen because the ACT-RSK program is designed to work with parents of children aged birth to 10-years-old. Twenty-two percent of the 72 caregivers were recruited from the Court of Common Pleas, 21 % were recruited from the urban community center, and 57 % were recruited from the mental health agency. Of the 72 caregivers, 32 were assigned to the intervention group and 40 were assigned to the TAU group. Of the 32 intervention group participants, 25 participants completed the pre-test, participated in all eight training sessions, and completed the post-test. Twenty-seven participants from the TAU group completed the pre-test, participated in all eight training sessions, and completed the post-test. Eighty-one percent of caregivers recruited from the Court of Common Pleas completed both pre-test and post-test, 60 % completed both pre-test and post-test from the urban community center, and 73 % of caregivers from the mental health agency completed both the pre-test and post-test. Table 1 provides the percentage of intervention and TAU participants recruited from each site.

The final sample included 45 mothers (41 biological mothers, 2 adoptive mothers, 1 foster mother, and 1

Table 1 Place of recruitment for ACT-RSK program completers

Variable	Intervention		Comparison	
	N	%	N	%
Place of recruitment				
Common pleas court	7	28	6	22
Community center	2	8	7	26
Mental health agency	16	64	14	52

stepmother), 6 fathers (4 biological fathers, 1 adoptive father, and 1 stepfather), and 1 grandmother. The mean parent age was 34 years (SD = 7.35). The ethnicity of the sample was as follows: 29 (55.8 %) white/Caucasian, 14 (26.9 %) African American, 5 (9.6 %) Latino/Latina, and 4 (7.7 %) were biracial. These parents/caregivers represented 21 female and 31 male children, ages 4–10 years, with a mean age of 6.47 (SD = 1.87).

Procedure

The intervention and TAU group were recruited sequentially, with the first 32 participants being assigned to the intervention group, and the next 40 participants to the TAU group. Participants in the intervention group completed pre-tests, attended the 8-week parent training sessions, and completed post-tests immediately after the completion of sessions. Participants in the TAU group completed post-tests 8 weeks after completion of pre-tests. Each intervention group was facilitated by one ACT-trained professional. A total of three different facilitators ran the eight groups. All were experienced professionals who regularly work with children and families, and each completed the 2-day training in the ACT-RSK program. Intervention group participants received one $50 gift certificate to a local grocery store after completing pre-test questionnaires, eight parent group meetings (which were held in the evening at three different community agencies), and post-test questionnaires. Small incentives, such as snacks and books, were provided during the training sessions. Child care was also provided. TAU participants received one $25 gift certificate to a local grocery store after completion of pre-test questionnaires and completion of post-test questionnaires. The TAU group was informed that 3 months after completing pre-test measures they would be eligible to receive training in the ACT-RSK program.

Materials

Brief Symptom Inventory (BSI; Derogatis 1993)

This scale consists of 53 items covering nine symptom dimensions: Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, Somatization, Obsession-Compulsion, and Psychoticism. Participants were instructed to report symptoms experienced in the past 7 days. Responses were made on a five-point Likert scale ranging from 0 (not at all) to 4 (extremely) with higher scores indicating the presence of greater symptom severity. In past research, internal consistency reliability for the nine dimensions ranged from 0.71 to 0.85 and 2-week test–retest reliability ranged from 0.68 (Somatization) to 0.91 (Phobic Anxiety; Derogatis 1993). Correlations between the *BSI* and relevant scores on the *Minnesota Multiphasic Personality Inventory* (*MMPI*) were found to be above 0.50 (Derogatis 1993). Because they were the constructs of interest, two subscales were used for the present study: Hostility and Depression.

The Hostility subscale of the *BSI* includes five items: "Feeling easily annoyed or irritated," "Temper outbursts that you could not control," "Having urges to beat, injure, or harm someone," "Having urges to break or smash things," and "Getting into frequent arguments." The *BSI* manual states that "the Hostility dimension includes thoughts, feelings, or actions that are characteristic of the negative affect state of anger" (Derogatis 1993; p. 8). The internal consistency (alpha coefficient) for the five-item scale was 0.78 with 2-week test–retest reliability being 0.81.

The Depression subscale of the *BSI* includes five items: "Thoughts of ending your life," "Feeling lonely," "Feeling no interest in things," "Feeling hopeless about the future," and "Feelings of worthlessness." The *BSI* manual states that "the Depression dimension reflects a representative range of the indications of clinical depression. Symptoms of dysphoric mood and affect are represented as are lack of motivation and loss of interest in life" (Derogatis 1993; p. 8). The internal consistency (alpha coefficient) for the five-item scale was reported to be 0.85 with 2-week test–retest reliability being 0.84.

ACT Parents Raising Safe Kids Scale (ACT-PRSK Scale; Porter and Howe 2008)

This scale consists of 37 items and measures several concepts addressed in the ACT-RSK program (www.actagainstviolence.apa.org) including: Hostile Attributions and Beliefs about Spanking (nine items including "Spanking is a normal part of parenting"), Media Literacy (five items assessing how much the parent limits exposure to media violence including "How often do you switch channels from inappropriate programs"), Beliefs about a Crying/Screaming Child (seven items including "Parents will spoil their children by picking them up and comforting them when they cry"), Teaching Social Skills (nine items including "How important is it for parents to teach children how to compromise"), and Family Communication and Affection (seven items including "How important is it for parents to express affection toward children"). With the exception of the Media Literacy subscale in which participants rated items on a four-point Likert scale, participants rated items on all other subscales using a five-point Likert scale. Lower scores indicated worse parenting skills/less knowledge about the following: Developmentally appropriate child behavior, nonviolent discipline, modeling anger management, teaching social problem-solving, and

identifying the importance of facilitating family communication and showing affection. Scores on all subscales were combined to form the ACT total score. The internal consistency of this scale for the present sample was alpha = 0.73. Information about validity of this scale is not yet available.

Early Childhood Bullying Questionnaire

The investigators developed a questionnaire to assess for the presence of bullying behaviors and the absence of prosocial behaviors, as there is no consistently used or recommended best practice measure for parent report of early childhood bullying behaviors. The investigators of the present study created the *Early Childhood Bullying Questionnaire* from items taken from the *Child Behavior Checklist* (*CBCL*; Achenbach and Edelbrock 1983) and the *Strengths and Difficulties Questionnaire* (*SDQ*; Goodman 2001). The investigators assessed items listed on the *CBCL* (Achenbach and Edelbrock 1983) and *SDQ* (Goodman 2001) and chose those characteristic of bullying (Cornell and Frick 2007; Zhou et al. 2002). The primary investigator obtained internal reliability statistics and all items that were originally chosen were retained. Investigators presented the items to four child mental health professionals who were naïve to the purpose of the study. The clinical professionals were instructed to indicate the construct the measure was designed to assess. The members of the panel indicated that the construct under investigation is child bullying, supporting the measure's content validity.

Because the *CBCL* (Achenbach and Edelbrock 1983) is divided into two parent forms based upon age (*CBCL* for children ages 4–5 ½ and *CBCL* for children ages 6–18), two questionnaires were developed. Table 2 lists the questions in each form of the *Early Childhood Bullying Questionnaire*. Eleven questions were included in the *Early Childhood Bullying Questionnaire* for parents who have children ages 4 and 5 years. Twelve questions were included in the *Early Childhood Bullying Questionnaire* for parents who have children ages 6–10 years. Item responses were made on a three-point Likert scale with lower scores indicating the parent's perception of the child's use of greater verbal aggression, direct aggression, and indirect aggression, as well as lack of empathy and prosocial behaviors. An average score was computed for each participant's report of his/her child's behavior. The total score for the measure ranges from 0 to 33 for children ages 4 and 5 years and 0 to 36 for children ages 6 to 10 years. The internal consistency of both the pre-test and post-test ranged from 0.88 and 0.94.

Table 2 Early Childhood Bullying Questionnaire

Age	Questions
Children ages 4–5½	1. Considerate of other people's feelings
	2. Shares readily with other children
	3. Helpful if someone is hurt or ill
	4. Often fights with other children or bullies them
	5. Kind to younger children
	6. Often offers help
	7. Doesn't get along well with other children
	8. Gets in many fights
	9. Hits others
	10. Physically attacks people
	11. Selfish or won't share
Children ages 6–10	1. Considerate of other people's feelings
	2. Shares readily with other children
	3. Helpful if someone is hurt or ill
	4. Often fights with other children or bullies them
	5. Kind to younger children
	6. Often offers help
	7. Cruelty, bullying, or meanness to others
	8. Doesn't get along well with other children
	9. Gets in many fights
	10. Physically attacks people
	11. Teases a lot
	12. Threatens people

Results

Independent samples t-tests were used to determine if the two groups were comparable on key study variables (*BSI* Hostility subscale, *BSI* Depression subscale, *ACT Parents Raising Safe Kids Scale*, and pre-test scores on the *Early Childhood Bullying Questionnaire*). This analysis did not reveal any significant differences between the intervention group and the TAU group. Independent samples t-tests and Chi-square analyses were used to compare program completers to non-completers on demographic variables (gender and age of parent and child, participant relationship to child, and participant income) and key study variables. A cutoff value of $p = 0.05$ was used to determine if completers and non-completers were similar on demographic variables. Analyses resulted in p values greater than 0.10, suggesting that there was no identifiable pattern of attrition. Chi-square analyses also indicated no difference in dropout rate by place of recruitment. Table 3 lists means, standard deviations, and confidence intervals of the intervention and TAU group on key study variables. Bivariate correlations revealed strong relationships among parent characteristics and child bullying. Table 4 lists bivariate correlations for parental hostility, parental depression, parenting skills, and child bullying.

Table 3 Means, SD, and CI of parent characteristics and child bullying at time 1

Variable	Intervention		Comparison	
	M (SD)	95 % CI	M (SD)	95 % CI
BSI Hostility	58.05 (7.87)	(54.56, 61.54)	54.12 (11.54)	(49.35, 58.89)
BSI Depression	56.86 (10.30)	(52.30, 61.43)	55.40 (11.26)	(50.75, 60.05)
ACT Parents Raising Safe Kids Scale	137.77 (10.42)	(133.15, 142.40)	142.36 (12.38)	(137.25, 147.47)
Early Childhood Bullying Questionnaire	1.31 (0.53)	(1.07, 1.54)	1.35 (0.57)	(1.11, 1.60)

Table 4 Correlations among parental hostility, parental depression, parenting skills, and child bullying

Variable	1	2	3	4
1. Hostility		0.70**	−0.29**	−0.50**
2. Depression			−0.22	−0.25*
3. Parenting skills				0.33**
4. Child bullying				

** $p < 0.01$; * $p < 0.05$

Table 5 Regression analysis for the prediction of child bullying

Criterion	Predictor	ΔR^2	B	SE B	ß
Child Bullying	Hostility		−0.03	0.01	−0.46*
	Depression		0.01	0.01	0.14
	Parenting skills	0.17	0.01	0.01	0.22

* $p < 0.05$

At pre-intervention, 17 of the 72 parents responded *certainly true* to items asking if their child often fights with or bullies other children. In addition, 18 parents responded *somewhat true* to items asking if their child often fights with or bullies other children. Thus, 49 % of the parents in the total sample indicated that it was *somewhat* or *certainly true* that their child exhibited bullying behaviors at pre-intervention. Of the portion of the sample that had children ages 5 and younger, 52 % reported it was *somewhat* or *certainly true* that their child exhibited bullying behaviors. There was not a significant difference between males' and females' total score on the *Early Childhood Bullying Questionnaire* $t(69) = -1.27, p = 0.21$, suggesting that, in the present sample, males and females exhibit bullying behaviors with similar frequency.

A linear multiple regression analysis was performed to examine the relationship among parental hostility, parental depression, parenting skills, and child bullying. Parental hostility, parental depression, and parenting skills were entered simultaneously. The multiple R for regression was statistically significant, $F(3, 45) = 4.07, p = 0.01$. The full model accounted for 17 % of the variance in scores of child bullying with parental hostility as the only significant predictor (see Table 5 for the results of the regression analysis).

A repeated measures ANOVA was conducted to examine the effects of time (pre- and post-intervention) and group (intervention and TAU) as well as the interaction of these variables on child bullying scores. The time by condition interaction was significant, indicating a moderate effect, $F(1, 51) = 4.50$, $p = 0.039$, $\eta^2 = 0.08$. Paired samples t-tests revealed a significant difference for the intervention group between pre- and post-intervention, $t(24) = -2.664, p = 0.014$, Cohen's d = 0.58, with scores at post-intervention reflecting a significant reduction in child bullying with a moderate effect. There was not a significant difference for the comparison group between pre- and post-test.

A one-way ANCOVA was conducted with condition as the independent variable, pre-test bullying scores as the covariate, and post-test bullying scores as the dependent variable. The ANCOVA was significant, $F(1, 53) = 5.85$, $p = 0.02$, adjusted $R^2 = 0.49$, $\eta^2 = 0.12$. The relationship between condition and bullying post-test scores was very strong, with condition accounting for 49 % of the variance of post-intervention bullying scores.

Discussion

The results of this study suggest that bullying is present during early childhood and that it occurs at approximately the same rate in males as in females. Based upon parent/caregiver report, 24 % of children in the present study often fight with or bully other children with 25 % sometimes fighting with or bullying others. What is more, the majority of parents reported bullying/fighting to occur in very young children (5 years and younger).

Associations between parent characteristics and bullying identified in the present study suggest the importance of involving parents in bullying prevention. This is the first study to concurrently investigate the relationship among parental hostility, parental depression, parenting skills, and child bullying. Of the parenting characteristics

investigated, hostility was the only significant predictor, suggesting that reducing parental hostility could be an important goal of bullying prevention. Parental hostility is addressed in the ACT-RSK program by providing psychoeducation on child development (i.e. parents are taught to reframe the child's misbehavior as mistakes that warrant teaching, not intentional assaults or spiteful behaviors), anger management, prosocial problem solving techniques, and positive disciplinary strategies.

Research has shown that violence prevention programs are effective at reducing violence and aggression when parents are involved (Brestan and Eyberg 1998). Early childhood is a time when developmental milestones include secure attachment, emotion regulation, and expansion of peer relationships (Cicchetti and Toth 1997). Also emerging during the formative early years of life are cognitive functioning and interpersonal skills (Masten and Coatsworth 1998). Central to violence prevention in both the home and with peers is having an understanding of one's feelings and possessing a repertoire of appropriate non-violent responses. These components are specifically addressed in the ACT-RSK program. It is likely that the success of this intervention in reducing bullying is due to parental involvement and early attention to both child and adult behavior.

One limitation to the present study is that both parent symptoms and children's problems were identified with parent report. Therefore, the relationship between parent psychopathology and children's behavior problems may be inflated due to shared informant and method variance. Second, although the dependent variable as measured by the *Early Childhood Bullying Questionnaire* is derived from valid and reliable measures, the *Child Behavior Checklist* (Achenbach and Edelbrock 1983) and the *Strengths and Difficulties Questionnaire* (Goodman 2001), it is not a measure that has been used in previous studies. Therefore, replication with a larger sample size is warranted, as is conducting an intent-to-treat analysis to better identify patterns of attrition.

Parental depression and hostility were evaluated only at pre-test. Therefore, it is not possible to determine if the ACT-RSK program resulted in reduced parental depression and hostility and if these changes contributed to changes in children's behaviors. Future research should conduct repeated assessments of these variables. Future research should also assess longer-term outcomes and use other sources of information such as direct observation, teacher report, and/or peer nomination to allow for assessment of inter-rater reliability. Additionally, it would be beneficial if future development of the ACT-RSK program would involve having parents practice the skills they are learning in vivo with their children. Standardized observation of the parent–child interaction could serve as an objective measure for assessing anger management and internalization of child development knowledge and positive discipline. Future research should isolate bullying behavior and define it clearly for parents/caregivers so as to better determine whether and to what extent bullying behaviors may exist in very young children, as the results of the present study suggest that a substantial portion of parents indicated that children aged 5 and younger engage in fighting or bullying behavior.

The results of the present study make important contributions to the bullying literature. First, this study substantiates that bullying occurs in early childhood and at approximately the same rate in males and females. Second, this is the first study to concurrently evaluate the relationship among parental hostility, parental depression, parenting skills, and child bullying. The results of this study suggest that when interventions are implemented to reduce bullying, parental hostility should be a significant focus. Third, this is the first study to evaluate the efficacy of the ACT-RSK program (www.actagainstviolence.apa.org) in reducing child bullying. It is likely that the ACT-RSK program was effective because it provides parent education on child development, nonviolent discipline, effects of violent media on children, anger management, and prosocial problem-solving, constructs that research has shown to be related to the broader construct of child externalizing behaviors (Fetsch et al. 2008; Tucker et al. 1998; Webster-Stratton et al. 2001), and which may have particular relevance to bullying.

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