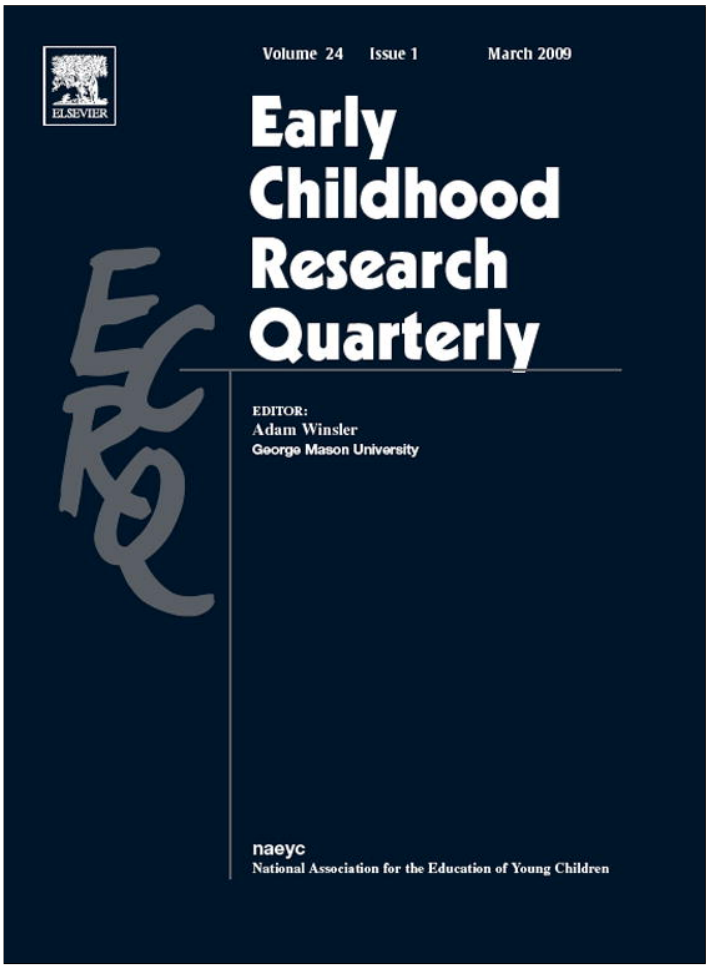

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An intervention for relational and physical aggression in early childhood: A preliminary study

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ABSTRACT

A preventive intervention for reducing physical and relational aggression, peer victimization, and increasing prosocial behavior was developed for use in early childhood classrooms. Nine classrooms were randomly assigned to be intervention rooms ($N = 202$ children) and nine classrooms were control rooms ($N = 201$ children). Classroom was the unit of analysis and both observations and teacher-reports were obtained at pre and post-test. Focus groups were used to develop the initial program. The 6-week program consisted of developmentally appropriate puppet shows, active participatory sessions, passive concept activities and in vivo reinforcement periods. Preliminary findings suggest that the "Early Childhood Friendship Project" tended to reduce physical and relational aggression, as well as physical and relational victimization and tended to increase prosocial behavior more for intervention than control classrooms. Teachers and interventionists provided positive evaluations of the program and there is evidence for appropriate program implementation.

Peer relationships serve as a salient context for children's cognitive, social, emotional, and physiological development across the lifespan (Hartup, 1996; Rubin, Bukowski, & Parker, 2006). Developmental psychology and psychopathology literatures indicate that the skills acquired within peer relationships (e.g., conflict resolution, emotion regulation, perspective taking, friendship formation, and social competence) during children's early school years significantly impact children's interpersonal relationships in subsequent developmental periods (for review, see Sroufe, Egeland, & Carlson, 1999). Significant problems with peer relations may also lead to peer rejection, victimization, social withdrawal, internalizing problems, or externalizing problems, including aggressive behavior, all of which may negatively affect academic competence and the transition to school (e.g., Belsky & MacKinnon, 1994; Buhs & Ladd, 2001; Rimm-Kaufman & Pianta, 2000). Arguably the earlier we intervene for aggression, the greater the probability of children improving (Sroufe, 1997), which was the impetus for designing a classroom-based intervention for early childhood in the present study.

Children from high-risk environments (e.g., high crime and low SES neighborhoods) may begin school with problems in impulse and/or emotional control and social problem solving (Lochman, Lampron, & Rabiner, 1989; Shaw, Keenan, & Vondra, 1997). These children are subsequently more likely to engage in aggressive social behavior and to experience peer rejection (e.g., Dodge, Pettit, & Bates, 1995). These children's difficulties are compounded by academic problems that are intertwined with and exacerbated by behavior problems (Hinshaw, 1994). To impact such pervasive problems, interventions must therefore target educational systems to address multiple contextual factors contributing to the development and

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maintenance of such problems (Greenberg, Domitrovich, Graczyk, & Zins, 2001). To prevent or reduce peer problems in school, interventions must be in settings where aggression occurs (Coie, 1996; Offord, 1996).

1. Aggressive behavior

Researchers have continued to generate and refine models of the development of aggressive behavior as well as evidence-based preventive interventions. Physical aggression is defined as the intent to hurt, harm, or injure with physical force or the threat of physical force, including kicking, hitting, pushing, and forcibly taking objects (Dodge et al., 2006). These behaviors have been associated with a host of social–psychological adjustment factors (e.g., peer rejection, loneliness; Miller-Johnson et al., 2002) and disruptive behavioral disorders (e.g., Attention Deficit Hyperactivity Disorder, Conduct Disorder, Oppositional Defiant Disorder; Waschbusch, 2002) that are problems in school settings and a continued challenge for teachers to address in the classroom. Moreover, aggressive behavior is a major educational and public health concern and is associated with problematic school transitions in early childhood (Ladd & Price, 1987) as well as academic difficulties throughout the school years (Leff, Power, Manz, Costigan, & Nabors, 2001). In addition, victimization has been found to be associated with low-quality friendships, characterized by low levels of warmth and intimacy (Goldbaum, Craig, Pepler, & Connolly, 2003). Finally, physical aggression has been found to be more prominent in boys relative to girls (Dodge et al., 2006).

Physical and relational aggression (i.e., using the removal or threat of the removal of the relationship to harm, including social exclusion, friendship withdrawal threats, ignoring, spreading malicious rumors, gossip, secrets, and lies; Crick & Grotpeter, 1995) have been theorized and demonstrated to be unique constructs in early childhood and later developmental periods (see Crick, Ostrov, & Kawabata, 2007). During early childhood, these constructs are often correlated when using teacher-report, peer-report, or parent-report (e.g., Crick et al., 2007; Ostrov & Bishop, 2008), but those correlations are not as high in magnitude or sometimes not even significantly associated when observational methods are used (e.g., Crick et al., 2006; Ostrov, 2006). Moreover, teacher-, peer-, self-, and parent-reports of relational and physical aggression have unique associations with adjustment, social–cognitive correlates, physiological markers, and psychopathology (e.g., Bailey & Ostrov, 2008; Crick et al., 2006; Cullerton-Sen et al., in press; Marsee & Frick, 2007; Miller & Lynam, 2003; Murray-Close, Han, Cicchetti, Crick, & Rogosch, 2008; Pellegrini & Long, 2003; Prinstein, Boergers, & Vernberg, 2001).

Relational aggression has been found to be uniquely associated with significant social–psychological adjustment problems across development (e.g., peer rejection) and is associated with symptoms of psychological disorders (e.g., ADHD, borderline personality features, eating disorders, substance use and abuse, delinquency, and internalizing problems; Crick, Murray-Close, & Woods, 2005; Crick et al., 2006; Murray-Close, Ostrov, & Crick, 2007; Werner & Crick, 2004; Zalecki & Hinshaw, 2004). In general, relational aggression is believed to be more prevalent in girls relative to boys, but this finding may depend on the developmental period, culture, or assessment strategy used (Crick et al., 2007). During early childhood, however, girls are generally more relationally aggressive with peers than are boys, display more relational aggression to female peers than they do to male peers and display relational aggression more than physical aggression (e.g., Bonica, Arnold, Fisher, Zeljo, & Yershova, 2003; Ostrov & Keating, 2004; Russell, Hart, Robinson, & Olsen, 2003; cf. Estrem, 2005; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998).

2. Interventions for physical aggression

To date, hundreds of studies have focused on prevention or intervention for physically aggressive behavior (see Leff et al., 2001). One of the largest efforts was "Fast Track," a multi-year, multi-component intensive intervention for young children at-risk for early-onset conduct problems. The Fast Track program was found to have small positive effects on children's aggressive behavior, social cognitions, prosocial behavior, and social skills during elementary school (CPPRG, 2004). These researchers further documented that their program was cost-effective for children at highest risk despite the considerable expense of the program (Foster et al., 2006).

A second program, the Coping Power Program, a preventive intervention for preadolescent physically aggressive boys and their parents has been found to have significant intervention effects with high-risk boys from diverse backgrounds displaying lower rates of antisocial behavior at 12-month follow-ups (Lochman & Wells, 2004). Additional preventive interventions have been developed and found to be effective with children during early childhood and under the age of five. The most widely known intervention of this type is the "Incredible Years" (IYS), an evidence-based program that relies on the use of developmentally appropriate child-size puppets to role-play and communicate various social skills modules for a child training group, as well as parent and teacher training components (see Reid & Webster-Stratton, 2001).

The evidence-based IYS programs target externalizing behaviors but were specifically designed for children presenting with Oppositional Defiant Disorder and Conduct Disorder (Reid & Webster-Stratton, 2001). The program generally focuses on teaching parents and teachers child-directed play techniques, consistent and developmentally appropriate parenting strategies, and strategies for improving children's social interactions with peers (Reid, Webster-Stratton, & Baydar, 2004). Child training is reinforced with activities as well as a token economy system (Reid & Webster-Stratton, 2001). This work has been primarily conducted in individual treatment groups with clinic-referred children (e.g., Webster-Stratton, Reid, & Hammond, 2001). The clinic-based parent and child-training has revealed robust findings. For example, a 2-year follow-up study found that approximately 75% of children that participated in the project had returned to adaptive levels of functioning according to parent- and teacher-report (Reid, Webster-Stratton, & Hammond, 2003). An additional independent examination

of a psychosocial family-based adapted version of the IYS program with preschool children at very high risk for conduct and antisocial behavior has shown marked improvement in a variety of domains including social competence with peers for preschool-age children who receive the program relative to no-intervention control groups (Brotman et al., 2005). In fact, control children were five times higher in levels of observed physical aggression relative to the children that received the intervention at a 16-month follow-up (Brotman et al., 2008).

The more recent Dina Dinosaur ("Dinosaur School") classroom-based component of the IYS program includes 30 lesson plans comprised of videotape modeling, puppets, activities, homework, and role-plays (Webster-Stratton, Reid, & Stoolmiller, 2008; Webster-Stratton & Taylor, 2001). In the past, teachers followed lesson plans for the specific content areas given during circle time or class meetings for two times per week and approximately 15 min per day. Teachers were also encouraged to promote the skills taught in circle time lessons during the day in less structured and free play times both inside and outside the classroom (Webster-Stratton et al., 2008). The classroom-based IYS program has been primarily developed for use with Head Start classrooms and elementary schools serving culturally diverse as well as lower SES families (Webster-Stratton et al., 2008). The IYS universal classroom-based intervention has also demonstrated, via independent blinded observations of classroom behavior, greater effects in reducing externalizing problems (i.e., aggression and disruptive behaviors), and increasing social–emotional competence relative to control classrooms (Webster-Stratton et al., 2008). The program had the greatest effect on classrooms with children at high levels of initial conduct problems and low levels of initial school readiness (Webster-Stratton et al., 2008).

Collectively, these programs seem effective for reducing physical aggression and fostering social competence skills, but to date, few intervention programs have been designed to specifically address relational aggression in young children. For example, some relationally aggressive preschool children have surgent or extraverted personality styles (Russell et al., 2003) as well as advanced social and communication skills (e.g., Bonica et al., 2003) that are often targeted in the traditional programs, but they may have greater problems with making and keeping friendships (Johnson & Foster, 2005) that are less emphasized in the current evidence-based programs.

3. Interventions for relational aggression

Despite the multiple calls for intervention efforts to address a variety of subtypes of aggressive behavior in schools (Geiger, Zimmer-Gembeck, & Crick, 2004; Leff et al., 2001; Young, Boye, & Nelson, 2006), few studies have been conducted. Given that different developmental factors may be involved in relational and physical aggression (see Zahn-Waxler, Crick, Shirtcliff, & Woods, 2006), programs developed to reduce or prevent physical aggression may not be appropriate for relational aggression. Yoon and colleagues recently wrote: "...there is an urgent need to promote a greater understanding of relational aggression and to develop effective, innovative approaches in schools" (Yoon, Barton, & Taiariol, 2004, p. 310). Leff et al. (2001) stated that: "...it is important that the public understand the impact that all forms of aggression have on children over time...Building public awareness for gender differences in the expression of aggression will lead to more sensitive and effective interventions for high-risk young females" (p. 358). Only three known empirically supported intervention studies have been conducted to reduce relational aggression.

The first known empirically based intervention for relational aggression is the "Friend to Friend" (F2F) Program, which is a comprehensive school-based initiative that targets small groups of relationally aggressive girls in middle childhood. This program, administered primarily within the context of small friendship groups, attempts to decrease aggression and hostile attribution biases (i.e., inferring malicious intent in ambiguous situations), while increasing prosocial and social competence skills (Leff, Goldstein, Angelucci, Cardaciotto, & Grossman, 2007; Leff et al., in press). Initial research suggests this program is highly acceptable to teachers and children and is effective at reducing relational and physical aggression as well as hostile attribution biases among highly relationally aggressive girls (Leff et al., 2007, in press).

The second program, the "Second Step, Violence Prevention Program" also focuses on changing attitudes toward physical and relational aggression and enhancing social skills. Specifically, this school-based curriculum attempts to teach social and emotional skills (e.g., empathy, behavioral control, problem-solving and anger management). With younger children, puppets are used and the length of lessons is significantly reduced. Overall, these studies have used a variety of methods, such as behavioral observations (Grossman et al., 1997) and structured conflict paradigms (Frey, Nolen, Edstrom, & Hirschstein, 2005) across a variety of developmental periods, including middle childhood (Grossman et al., 1997; Orpinas, Parcel, McAlister, & Frankowski, 1995) and adolescence (Van Schoiack-Edstrom, Frey, & Beland, 2002). Across these studies, Second Step has demonstrated effectiveness at decreasing physical aggression (Frey et al., 2005; Grossman et al., 1997) and reducing tolerance for physical and relational aggression (Van Schoiack-Edstrom et al., 2002), as well as increasing prosocial behavior (Grossman et al., 1997), social competence (Frey et al., 2005), and perceived use of social skills (Van Schoiack-Edstrom et al., 2002). Further, Grossman et al. (1997) demonstrated retention of these skills over a 6-month period.

The third empirically based intervention to reduce relational aggression was developed by Harrist and Bradley (2003). These authors implemented Vivian Paley's (1992) "You can't say you can't play" program in six randomly assigned kindergarten classrooms and four control classrooms. The "you can't say you can't play" rule was reinforced with fairy tales addressing social exclusion and inclusion, discussions of emotions, and the use of group role-plays. Children in the intervention rooms reported that they liked each other more at the end of the year than did children in the control rooms, yet they also reported higher levels of social dissatisfaction. However, observations and teacher-reports did not reveal any significant

changes at the classroom level for social exclusion. In addition, the authors reported that children generally did not like the rule and followed the "letter of the law but not the spirit of the law" (Harrist & Bradley, 2003, p. 201), in that children would not explicitly tell their peers they could not play but they would treat them unfairly such as assigning them undesirable roles in socio-dramatic play.

To date, only one known empirically based program has been developed for specifically addressing relational victimization (i.e., the frequent or chronic receipt of relational aggression from peers; Crick & Grotpeter, 1996). The Walk away, Ignore, Talk, Seek help (WITS) program, created by Leadbeater, Hoglund, & Woods (2003), was a school-based initiative (children were 6-years-old at the start of the 3-year project) to reduce school and classroom levels of relational victimization through a book-based curriculum that permitted teachers to implement the program through literature and activities within the preexisting lesson plans. This program appears to have moderate effects at decreasing victimization and increasing social competence (Leadbeater et al., 2003; Leadbeater & Hoglund, 2006).

Collectively these programs demonstrate the efficacy of various types of intervention strategies with older children (i.e., kindergarten and older), but as yet do not target children 5-years-old and younger during early childhood. Our intervention improves on these existing programs by explicitly developing a brief, classroom-wide program for young children in early childhood centers that targets relational and physical aggression (and victimization), prosocial behavior (i.e., relational inclusion), and friendship formation skills.

4. Developing an intervention for subtypes of aggression in early childhood

We have developed a preliminary version of a classroom-based preventive intervention (the "Early Childhood Friendship Project") inspired by and loosely based on some elements (e.g., brief circle time format, use of puppets, participatory activities, targeted reinforcement, focus on both positive and negative behavior) of the "Incredible Years Dina Dinosaur Classroom" (Webster-Stratton et al., 2008) program, while focusing the curriculum more specifically on friendship-making skills (e.g., entering and joining playgroups, inviting peers to play) and issues related to relational aggression. Three hypotheses guided our study. First, we hypothesized the intervention classrooms would show a greater decrease in physical and relational aggression, relative to the control classrooms. Second, we hypothesized that intervention classrooms would show a greater decrease from pre- to post-test for both physical and relational victimization, compared to control rooms. Third, we hypothesized that intervention classrooms, compared to control classrooms, would show a larger increase over time in prosocial behavior. To test these hypotheses a 6-week curriculum was developed for a sample of young children.

5. Method

5.1. Participants

Classroom was the unit of analysis for this intervention project. Three public schools and four community-based centers (i.e., eighteen classrooms) participated in the study. Eleven of the classrooms were Universal Pre-Kindergarten classrooms (UPK) from three public schools that served ethnically diverse, low SES families in an urban area in the northeast. The other four centers were accredited by the National Association for the Education of Young Children (NAEYC) and served ethnically and socio-economically diverse children from both urban and suburban contexts. One intervention school and two control schools were private institutions and had religious affiliations. One control school was affiliated with an area college. Nine classrooms were intervention rooms ($N = 202$ children) and nine classrooms were control rooms ($N = 201$ children). Assignment to these conditions was random, and intervention status was made for the most part at the level of the school. In one school there were three intervention and one control classrooms, but there was no interaction between these classrooms during the day so there is no risk of cross-contamination. Children were between 3 and 5 years (M = 49.64 months-old; S.D. = 5.79; range = 36–58 months) and the intervention was designed to be developmentally appropriate. The same children participated in the study at both time points. Children attended school on average for 5.36 h a day (S.D. = 2.23) and for 4.50 days per week (S.D. = .86) or approximately 24.12 h per week. On average there were 24.93 (S.D. = 5.72) children per classroom. Teachers on average had a Master's degree in education or a related field (61.1%), but a few teachers had only a BA or undergraduate certificate (11.1%), and some had advanced training beyond the Master's level (27.8%). Teachers were employed at their school for an average of 101.94 months (S.D. = 85.40) or approximately 8 years. The only significant difference between intervention and control classrooms was that intervention rooms had on average a few more children (M = 27.67; S.D. = 3.64) than control classrooms (M = 22.30; S.D. = 6.25), $t(16) = 2.23$, $p = .041$ at the start of the study and prior to randomization.

Two additional classrooms (1 NAEYC-accredited center) participated in the study as intervention rooms but they were not randomly assigned to this condition. This center participated in the focus groups and had partnered with the first author in the past. The center asked for the intervention and given their partnership we decided to provide them with the program. However, in order to have full randomization in the study we removed data from these two classrooms from all analyses. An additional university-affiliated center assisted with the development of the observational methods and participated in the focus groups but did not participate in the intervention study. Thus, the two centers that assisted in the development of the intervention (i.e., focus groups and method pilot testing) are not included in the present analyses.

5.2. Intervention program

5.2.1. Focus groups

Focus groups were facilitated by the first and second authors and recorded by project staff with two groups of teachers (15 teachers) at two different schools, independent from the current study classrooms and schools. These schools had a previous research partnership with the first author. The one-hour, structured focus groups explored the desire for the program, recommendations for the specific components of the program, and raised concerns teachers had regarding the program. Most teachers highlighted relational aggression as one of the top three problems in their classroom. Teachers and directors were overwhelmingly positive in their interest for an intervention and their suggestions revised the initial program. For example, teachers made several suggestions for modifying the active participatory activities and encouraged the team to develop puppet shows rather than books as the main medium for communicating weekly social skills.

5.2.2. Manual preparation

A treatment manual was specifically developed for use in the present study (Stauffacher, Massetti, & Ostrov, 2007). Interventionists were encouraged to add flexibility and creativity in their tailoring of the intervention activities to fit the individual classroom and facilitate participant-treatment fit while retaining the integrity of the manual (e.g., core concepts of the weekly topic and the associated social skill tasks). The manual and activities were expanded and revised during the study based on feedback from teachers and interventionists.

Based on the key problems identified in our focus groups, the manual targeted three behaviors (i.e., physical aggression/victimization, relational aggression/victimization, and prosocial behavior). Each classroom received one puppet show (ten minutes), one participatory activity (five to ten minutes), and one concept rehearsal activity (five to ten minutes) per treatment week. In addition, each classroom received three separate one-hour reinforcement sessions per week. During week 1, the program was introduced, time was spent on building rapport, and physical aggression was the theme of the lesson. The theme for week 2 was social exclusion and relational aggression. The theme for week 3 was relational inclusion and prosocial behavior; whereas, week 4 was friendship withdrawal threats and relational aggression. During week 5, the emphasis was on friendship formation skills and prosocial behavior. Finally, week 6 included a review of prior lessons and a graduation ceremony. Typically, the puppet show occurred during circle time at the beginning of the day while reinforcement occurred immediately after or during the next available free play session, as well as on two other days. The participatory and concept rehearsal activities occurred on separate days and typically one to two days after the initial puppet show. In order to assess fidelity, interventionists maintained weekly logs that were reviewed with the project director at the conclusion of each week. All interventionists were post-bachelor or master's level clinicians and each interventionist received three days (10 h) of group training. Training focused on knowledge of the manual, flexible use of the puppets as actors, use of developmentally appropriate labeled praise, and on practicing structured role-plays for rehearsal of these skills. In addition, each interventionist met for small- group, weekly supervision with the first or second author to address any ethical concerns, practice upcoming activities, and to discuss any treatment changes required to better the classroom-intervention fit. Control classrooms did not receive any of the program components, but the project directors (first two authors) were available for consultation to the directors/principals and staff related to developmental or clinical child psychology issues. In addition, a teacher training in-service was conducted at some of the schools at the conclusion of the study.

5.2.3. Puppet shows

Puppets for the intervention were handmade animal puppets by *Diabolo Puppets* in Laval, Quebec. Each animal type (i.e., dog, rabbit, duck, alligator, and penguin) was selected because it had a particular physical or habitat attribute, which fit with the core social skills for the weekly lesson. For example, Penny the Penguin taught the children about the importance of friends, especially in cold environments, and conveyed the four steps ("Penguin waddle") for entering into play with other children. In addition to a puppet to highlight the week's social skill, one puppet (Danny the Dog) was used across weeks as the host to introduce the "friendship problem" he was having with one of his puppet friends. The Danny the Dog puppet was used during all reinforcement sessions and the participatory activities in the classrooms where it was feasible to do so. Each puppet show focused on illustrating the steps for the social skill through rehearsal and sometimes interactions with other puppets. For example, during week 3 (Relational Inclusion) the steps (based in part on Leff et al., 2007, in press) focused on during the show were (1) stop, (2) look and listen, (3) ask others to play, and (4) waddle into play together.

5.2.4. Participatory activities

Research findings suggest that in vivo rehearsal and reward of acquired social skills is required for generalization of those skills (for review, see Lochman & Wells, 2002). Therefore, weekly, active, participatory activities were designed to reinforce the social skill and steps of the week through engaging the children in practice of these skills, often involving music or fun gross-motor activities. These activities always occurred later in the week after the puppet show. For example, the Benny the Bunny (week 5) activity had the children pair-off with a peer in a large-group game format and conduct in vivo role-plays of the steps to engagement by (1) smiling at each other, (2) saying hello, (3) inviting the other child to join them and (4) hopping together into the friendship circle created by the group.

5.2.5. Concept activities

These activities were more passive but were designed to also support concept rehearsal and to reinforce knowledge acquisition and generalization. Concept activities usually included an individual or small-group art project but it could also include reading a picture book in which the content mirrored the puppet shows (i.e., pictures of the puppets acting out the story). For example, children made their own Penny the Penguin puppets with art supplies the project team provided. In small groups, the children were encouraged to role-play the lesson that the Penny puppet taught the class earlier in the week.

5.2.6. Reinforcement

For one-hour after the weekly puppet show lesson and two one-hour periods that occurred later in the week, the interventionist and Danny the Dog puppet provided children with developmentally appropriate labeled praise during free play to reinforce children's in vivo use of the weekly social skills. During these sessions, the interventionist also asked children to identify "good friendship skills" in other children (Leff et al., 2007, in press). Interventionists also used this time to ask children about the weekly skills lessons in order to monitor comprehension of the material and provide rehearsal of past lesson material.

5.2.7. Teacher involvement

In an initial meeting, teachers were informed by the project directors about the content and nature of the program/activities without discussing specific hypotheses. Teachers did not receive additional training as part of the intervention, but consistent with prior programs (Webster-Stratton et al., 2008) were encouraged to praise children verbally for following the weekly steps/skills both in the classroom and on the playground. In addition, teachers were asked to intervene as they normally would when aggressive behavior was displayed. Interventionists and teachers held short weekly meetings to discuss how best to adapt lessons for the specific classroom. There was no evidence from a review of the weekly intervention logs that the teachers did anything, to our knowledge, to alter the dynamics of their classroom with regard to peer behavior that was outside the confines of the intervention.

5.3. Measures

5.3.1. Observations of aggression and victimization

A revised version of Ostrov and Keating's (2004) Early Childhood Observation System was used to record aggression and victimization in both intervention and control classrooms. This observation system uses focal child sampling with continuous recording and the validity and reliability of the method has been demonstrated in three independent samples (Crick et al., 2006; Ostrov, 2006; Ostrov & Keating, 2004) and reviewed by Leff and Lakin (2005). In the present study, the major change was that the observation session lasted three minutes per child rather than ten minutes per child as used in the past (Ostrov & Keating, 2004). Given the large sample size ($N = 403$) and because classroom was the unit of analysis, we decided to use the shorter intervals to sample more children in the classroom per day. In addition, since observations were collapsed across classroom, they were anonymous.

Pilot testing of the revised observational methods was conducted at a NAEYC-accredited university-affiliated early childcare center (two center locations, five classrooms), which were not included in the present study. Over a 2-month period, two female observers conducted the three-minute focal child observations for ten sessions per classroom. During the observation pilot testing, for 30% of the observations, inter-observer reliability was assessed and found to be acceptable, Intra-Class Correlation Coefficients (ICC's) >.70 for all variables.

Observers spent time in the classrooms prior to collecting data to minimize reactivity and adopted a "minimally responsive manner" when in the presence of the children (Pellegrini, 2004). Observations were anonymous in that no names or ID numbers were recorded on the observation forms. Selection of focal children was random; however, each child was observed only once per day. To prevent duplication (i.e., observing the same child more than once per day), if an observer was unable to conduct all observations in the classroom during their morning session they observed only children of one gender (e.g., focal girls) and the observer later in the day would only observe children of the other gender (e.g., focal boys). A minimum of 50% of the children in the classroom was needed for one session to be complete. Each classroom was observed for ten sessions during the pre-intervention and again during the post-intervention phases. Thus, each focal child was observed on a number of days and by different observers at both pre- and post-test. The precise number of observations in each classroom was identical during the fall and spring. That is, across all classrooms 1, 802 observations (5, 406 min) were conducted during pre-test and another 1, 802 observations were conducted for the post-test (i.e., 10, 812 min or 180.2 h of total observation for the study). The average number of observations conducted per classroom was 100.11 (S.D. = 23.38). There were no differences between the number of total observations conducted in intervention (M = 101.78; S.D. = 19.67) versus control classrooms (M = 98.44; S.D. = 27.73), $F(1, 16) = .09$, $p = .77$, $\eta^2 = .01$.

Training consisted of readings, discussion with the trainer, watching and discussing of videotapes, a written vignette/matching test and live practice observations with an experienced observer. At least 15% of a classroom's total observations were assessed for inter-observer reliability. Attempts were made to keep observers unaware of the intervention status of the classrooms. Observers were not told the hypotheses or goals of the study. Materials for the intervention were not present in the classrooms and the observers were not in the schools/centers during the 6 weeks of the intervention.

From our discussions with research assistants, we believe that in a few cases observers suspected their classrooms were intervention rooms (i.e., children made reference to "Danny the Dog" during free play) but we believe these situations were rare.

The observers recorded relevant behaviors that the focal child displayed and received during the three-minute intervals. In keeping with past procedures (Ostrov & Keating, 2004) each separate and discrete behavior (based on a temporal break) was recorded on a structured observation form. Behaviors were only coded under one mutually exclusive category and events were recorded in full detail (an observation manual and forms are available from the first author). Observation categories included: physical aggression (e.g., hitting, kicking, punching, pushing, and taking objects), relational aggression (e.g., engaging in peer exclusion; friendship withdrawal threats; malicious ignoring, spreading malicious rumors, secrets, and gossip), prosocial behavior (e.g., inclusion, helping, and sharing), physical victimization, relational victimization, and receiving prosocial behavior. For each behavior category, observations were scored by summing across all respective behaviors per classroom. Observations for each aggression and victimization category were reliable, ICC's >.70 at each time, but prosocial behavior was not and thus teacher-reports of prosocial behavior were used in analyses.

5.3.2. Teacher-reports of prosocial behavior

A standard teacher-report measure of prosocial behavior (Preschool Social Behavior Scale-Teacher Form, PSBS-TF; Crick, Casas, & Mosher, 1997) was revised from an individual focal child-report to an anonymous classroom climate assessment to be consistent with observational methods and in keeping with the goal of assessing the overall classroom context rather than individual behavior. The content remained the same. Four items assessed prosocial behavior (e.g., "Children in my classroom are helpful to peers"). Additional items assessing aggression subtypes were collected for purposes of a different study. A five-point scale ranging from one ("Never to Almost Never True") to five ("Always or Almost Always True") was used. Each subscale was created by summing across the relevant items for each classroom. A number of studies have supported the favorable psychometrics of the original measure used to assess individual children (e.g., Crick et al., 1997; Crick et al., 2006; Ostrov and Keating, 2004). Three new prosocial items were added to better represent the range of behaviors in the intervention (i.e., "social inclusion or when children include peers in games is common in my class," "Sharing is common in my class," "Children saying: 'You are my friend and/or I would like to play with you' is common in my class"). The full PSBS-TF-Revised measure of prosocial behavior (seven items) was reliable at time 1 (Cronbach's $\alpha = .79$) and at time 2 (Cronbach's $\alpha = .82$). This measure was also correlated with an additional independent teacher-report measure of prosocial behavior, developed by the research team for this study, that indexed the frequency of prosocial behavior (3 items; e.g., "Helping peers when they need it," Cronbach's $\alpha = .85$) on a seven-point scale from 0 (never) to 6 (many times per hour), $r = .52$, $p = .031$. Given the nature of these additional frequency items and the different response scale we did not include these 3 items with the PSBS-TF-Revised subscale.

5.3.3. Program implementation

In order to assess the fidelity and integrity of program implementation, two characteristics of implementation quality were assessed: process and content (Greenberg et al., 2001). *Content* involves the extent to which the content was representative of what was intended as specified by program developers. *Process* involves the extent to which the program was implemented in the manner in which it was intended by the program developers. For this project, process and content were both important, as they both addressed the potential impact and quality of program implementation. For this measurement, for each intervention school, 1 week was randomly selected for implementation observations. Selected weeks were counterbalanced to ensure that all program weeks were observed. During the selected weeks, the first and second authors conducted fidelity observations of each of the components of the program. During these observations, the observers completed a checklist of items that were covered by the program implementer (e.g., interventionist introduced the puppet and conducted the puppet show, interventionist asked at least two comprehension questions of children). This checklist comprised the content component of the assessment. Additionally, the observers completed a series of ratings of the implementation style used by the interventionist on the following domains: interventionist warmth; communication style (pacing/modulation); developmental appropriateness; and child engagement/interest. The seven-point rating scale from one ("Superior") to seven ("Inappropriate") comprised the process component of the assessment. Interventionist logs tracking interventionist activities and contact with teachers and classrooms were separate from these formal evaluations and were turned in to the project directors each week. The directors reviewed these logs as a further continuous weekly check on the fidelity of the project. Deviations from the manual and procedures were documented in the log and discussed in weekly supervision.

5.3.4. Teacher evaluations

At the conclusion of the intervention, teachers were given evaluation forms. For each question (e.g., "The children in my classroom benefited from the program") a five-point Likert rating scale was used from one ("Strongly Disagree") to five ("Strongly Agree"). Thirteen head teachers or 100% of the primary classroom teachers (two classrooms had two head teachers that both completed the evaluation and scores were averaged) completed the evaluation.

5.3.5. Interventionist evaluations

At the conclusion of the intervention, the interventionists anonymously (typed) completed an evaluation of the intervention. On a five-point rating scale from one ("Strongly Disagree") to five ("Strongly Agree") the interventionists responded to

several questions (e.g., "Teachers were actively engaged in the program"). One interventionist did not return an evaluation so data was available on 7 of the 9 intervention classrooms.

5.4. Procedures

The study was approved by the local social and behavioral sciences Institutional Review Board (IRB). NAEYC-accredited early childhood centers in the metro area were contacted via email, mail, or phone to participate. In addition several UPK public schools that had participated in past research with the second author were contacted. All schools that agreed to participate were enrolled in the study. Principals or directors at each school approved the project for use in their schools. Teachers completed informed consent documents for their own participation in both types of schools. In keeping with stipulations from our local IRB, parents completed informed consent documents for children assigned to intervention classrooms and consented to the intervention activities (i.e., puppet shows, reinforcement sessions, participatory and active activities). Parents in the control classrooms were informed of the study by letter, but were not given consent documents since the anonymous classroom-wide assessments were deemed exempt from parental consent by the IRB. Pre-test assessments (i.e., observations and teacher-reports of classroom climate) were conducted over a 2-week period several months after children started school. The delay ensured that the children were acclimated to the peer group. The 6-week intervention immediately followed, and the 2-week post-intervention assessment (i.e., observations and teacher-reports) occurred the week after the intervention ended. The assessments were conducted at the same time of year and during the same weeks for the control and intervention classrooms. Participating children each received a graduation certificate containing a picture of all the puppets. Participating families and school personnel were provided a newsletter summarizing the study findings. Teachers were given a $10 gift card to compensate them for their time in completing each teacher-report. The total program costs were $2000 (i.e., cost of puppets, intervention materials, graduation certificates, and teacher honorariums for all of the classrooms).

6. Results

6.1. Analytic plan

First, preliminary analyses were conducted to examine the descriptive statistics, skew and kurtosis of all study variables. Next, the content and process evaluations were examined and descriptive statistics of these measures were conducted. Third, teacher and interventionist evaluations were analyzed. Fourth, bivariate correlations were conducted at pre-test for the intervention and control classrooms in order to examine potential differences in association at the start of the intervention. Finally, the intervention effects were examined with independent group *t*-tests and change scores on the key behaviors served as the dependent variable. We hypothesized that relative to control classrooms, intervention classrooms would show a decrease in both physical aggression/victimization and relational aggression/victimization. In addition, we hypothesized that intervention classrooms would show a significantly greater increase in prosocial behavior compared to control classrooms. Given the reduced power for testing our effects, emphasis was on the effect sizes rather than statistical significance of the analyses.

6.2. Preliminary statistics

Skew was less than three and kurtosis was less than eight suggesting that non-normality of the data was not a problem (Kline, 1998). Descriptive statistics are presented in Table 1.

6.3. Content and process evaluations

The content checklists indicated that the interventionists covered all key program requirements for each observed session (100% of material covered in each session). The process ratings indicated that the average rating was 1.38 (S.D. = .44) out of a seven-point rating scale from one ("Superior") to seven ("Inadequate"); on average the interventionists were rated as warm, developmentally appropriate with good pacing and high levels of child engagement.

6.4. Teacher evaluations

Generally, the evaluations were positive, as the mean response was above 4 for all items. These findings suggest that the teachers believed that interventionists were effective and the program was beneficial (see Table 2).

6.5. Interventionist evaluations

In general, according to the interventionists, teachers were engaged and supportive of the program. In addition, according to the interventionists, classroom children seemed to benefit from the program and were engaged with the content (see Table 2).

Table 1
Descriptive statistics

	Pre-test			Post-test		
	M	S.D.	Range	M	S.D.	Range
Relational Aggression Observation						
Intervention	6.55	2.79	3–10	3.78	2.64	1–7
Control	5.00	3.12	0–9	4.78	3.86	0–11
Physical Aggression Observation						
Intervention	7.89	4.59	4–19	4.33	1.58	2–6
Control	6.78	3.67	1–13	5.89	5.55	1–18
Relational Victimization Observation						
Intervention	5.78	3.07	2–11	4.00	2.45	0–7
Control	4.67	3.35	0–10	3.67	3.08	0–10
Physical Victimization Observation						
Intervention	8.22	3.60	5–17	5.00	3.81	0–12
Control	5.22	2.86	1–8	4.56	3.08	2–11
Prosocial Behavior Teacher-Report						
Intervention	24.63	3.25	21–31	26.25	3.01	23–30
Control	26.33	3.67	22–32	26.44	4.61	19–32

Table 2
Descriptive statistics for teacher and interventionist evaluations

	M	S.D.
Teacher Evaluations		
The program was entertaining for the children	4.54	.69
The interventionist was knowledgeable and skilled in handling program topics and content	4.45	.69
The program was developmentally appropriate for my classroom	4.36	.81
The children in my classroom benefited from the program	4.45	.82
I would recommend this program to other teachers in my school	4.55	.69
Interventionist Evaluations		
Teachers were supportive of the program and provided classroom management when needed	4.00	1.00
Teachers were actively engaged in the program	3.80	1.30
Children in the classroom benefited from the program	4.00	.00
Children actively attended and participated in weekly intervention tasks	4.40	.89
Children in the classroom were engaged with the program components	4.80	.45

Note. Responses on the surveys were on a five-point scale from one ("Strongly Disagree") to five ("Strongly Agree").

6.6. Bivariate associations

Bivariate correlations between the key study variables were run separately for each intervention group in order to test for differential associations at pre-test (see Table 3) and Fisher *r* to *z* tests were conducted comparing the groups. None of the Fisher *r* to *z* tests were significant. However, for the control group classrooms there was a significant association between relational aggression and relational victimization at pre-test. There were no differences in the pattern of associations between the groups for correlations with initial physical aggression. There were no differences in the pattern of associations for prosocial behavior. In sum, despite one initial differential association, the groups displayed relatively equivalent correlations between the constructs at pre-test.

6.7. Intervention effects

Given our focus on changing behavior at the level of the classroom, our unit of analysis was the classroom and not individual focal children. As such, the present preliminary study was underpowered for testing the significance of the intervention

Table 3
Initial correlations between key study variables

	1.	2.	3.	4.	5.
1. Relational Aggression Observation Pre-test	x	.61+	.78**	.53	−.19
2. Physical Aggression Observation Pre-test	.10	x	.42	.64+	−.10
3. Relational Victimization Observation Pre-test	−.13	−.35	x	.30	.30
4. Physical Victimization Observation Pre-test	−.56	.06	.23	x	−.02
5. Prosocial Behavior Teacher-Report Pre-test	.02	−.27	−.16	.39	x

Note. Intervention group is below the diagonal and control group is above the diagonal. $+p < .08$, $^{**}p < .01$

Table 4
Descriptive statistics and effect sizes for change score analyses (intervention effects)

	M	S.D.	Cohen's *d*
Relational Aggression Observation Change Score			−.88
Intervention	−2.78	3.67	
Control	−.22	3.11	
Physical Aggression Observation Change Score			−.54
Intervention	−3.56	4.39	
Control	−.89	5.46	
Relational Victimization Observation Change Score			−.23
Intervention	−1.78	2.82	
Control	−1.00	3.81	
Physical Victimization Observation Change Score			−.91
Intervention	−3.22	5.07	
Control	−.67	3.28	
Prosocial Behavior Teacher-Report Change Score			.54
Intervention	1.63	2.50	
Control	.11	3.10	

effects. Leff et al. (2001) encouraged authors to calculate and provide effect sizes for early childhood school-based intervention programs. Thus, effect sizes (Cohen's *d*) were used to evaluate the potential differences between intervention and control classrooms. We used Cohen's (1988) effect size recommendations which defines $d = .2$ as small, $d = .5$ as medium, and $d = .8$ as large effects. To limit the number of comparisons and in turn the risk of Type I error, independent group *t*-tests and Cohen's *d* were only conducted for the five key constructs in the study (i.e., observed relational aggression, observed physical aggression, observed relational victimization, observed physical victimization, and teacher-reported prosocial behavior). Prior to the analysis, a change score was created for each construct such that the behavior at pre-test was subtracted from the behavior at post-test. Change scores have been found to be controversial and problematic when scores are skewed and when measures are unreliable (Tabachnick & Fidell, 2007). However, in the present study the change scores were not skewed (ranged from −.09 to .69), did not demonstrate any kurtosis problems (ranged from .05 to .47), and the observations (and teacher-reports of prosocial behavior) were reliable suggesting that use of the change scores is appropriate. In addition, the other widely used analytic approach is to use analysis of covariance (ANCOVA), which is generally viewed as a more powerful test. We thus ran all models using this approach with pre-test data serving as the covariate and these analyses revealed effects that were virtually identical. In addition, we also controlled for the average number of children in the classrooms and the analyses with and without this covariate were similar. Therefore, independent group *t*-tests with change scores as the dependent variable and Cohen's *d* statistics, as a commonly reported index of the magnitude of the effects, are used for ease of communication. In all analyses the between-subjects factor was intervention status (1 = intervention; 2 = control). Descriptive statistics for the original variables are reported in Table 1 and the statistics for the change scores (descriptive statistics and Cohen's *d*) are presented in Table 4.

For observed relational aggression, the analysis was not statistically significant for differences between intervention and control rooms, $t(16) = -1.59$, $p = .13$. The large effect size (see Table 4) reveals that the intervention rooms tended to have greater reductions in relational aggression over time relative to the control rooms.

For observed physical aggression, the analysis was not statistically significant for differences between intervention and control rooms, $t(16) = -1.14$, $p = .27$. Cohen's *d* was indicative of a medium effect (see Table 4), suggesting that physical aggression tended to be reduced more for intervention rooms than control rooms.

For observed relational victimization, the analysis was not statistically significant for differences between intervention and control classrooms, $t(16) = -.50$, $p = .63$. The small effect size (see Table 4) suggests that the intervention rooms tended to have more of a decrease in relational victimization relative to control rooms.

For observed physical victimization, the analysis was not statistically significant for differences between intervention and control rooms, $t(16) = -1.27$, $p = .22$. The large Cohen's *d* (see Table 4) indicates that the intervention rooms tended to experience a greater reduction in physical victimization than control rooms.

For teacher-reported prosocial behavior, the analysis was not statistically significant for differences between intervention and control classrooms, $t(15) = 1.10$, $p = .29$. The medium effect (see Table 4) indicates that the intervention rooms tended to increase more in prosocial behavior over time than did the control rooms.

It is possible that teacher support moderated the changes in behavior among the intervention rooms. Unfortunately, there was limited variability in the construct of teacher support and reduced power for testing the statistical significance of these findings, so caution should be exercised in interpreting the models. A series of regression models was conducted in which initial behavior was entered at step 1 and teacher support (from the interventionist evaluations) was entered at step 2 to predict time 2 behavior for each of the five main outcome variables. None of the models were statistically significant (β's from −.34 to .31; R^2's from .00 to .10) and only the relational aggression model indicated a possible role for teacher support ($\beta = .69$, $p = .32$; $R^2 = .44$).

7. Discussion

The main goals of the study were to develop and test the initial effects of a preventive intervention program designed for reducing subtypes of aggression and victimization and increasing prosocial behavior in early childhood. In keeping with best practice for school-based intervention efforts (Leff et al., 2001), focus groups were conducted with local centers to assist in the development of the program. We hypothesized that relative to the control classrooms, intervention rooms would show a decrease in relational aggression, physical aggression, and victimization subtypes, and would reveal an increase in prosocial behavior from pre- to post-test. The current study was a preliminary investigation and as such we were underpowered for testing the statistical significance of our hypotheses. Thus, we interpret effect sizes as an index of the initial promise of the program (Leff et al., 2001). In all cases, a qualitative review of the levels of aggression and victimization suggest that the intervention rooms did in fact drop at a greater rate relative to the control classrooms. An inspection of the effect sizes (i.e., Cohen's *d*) indicates that the magnitude of these effects was from small to large (range from .23 to .91) with most moderate to large in nature. Our effect sizes generally compare or were slightly higher in magnitude relative to results from existing physical aggression prevention programs in which the typical effect size is small to medium (i.e., .2 to .4; see Leff et al., 2001; Lochman & Wells, 2004). Our findings are comparable with an existing program, developed for older children, for physical (i.e., Cohen's $d = .43$) and relational (i.e., Cohen's $d = .74$) aggression, respectively (Leff et al., in press). The findings certainly await replication, but a closer examination of the effect sizes suggests that the program may have had more of an effect on relational aggression and physical victimization, which both had large effects, relative to the other behaviors.

The study findings generally support the initial efficacy of the intervention program. That is, the initial findings suggest that the effects were in the predicted direction. Specifically, the brief program tended to reduce both physical and relational aggression as well as physical and relational victimization, while prosocial behavior (e.g., inclusion) tended to increase. Therefore, these findings suggest that a brief, classroom-based social skills training program using developmentally appropriate puppet shows, active participatory and passive concept activities, along with intensive behavioral reinforcement may have promise in future large randomized intervention studies during early childhood. Future research using larger diverse samples and the focal child as the unit of analysis are likely to support beneficial effects of the intervention on children's socialization skills.

The findings indicate that the revised observational methods have acceptable reliability and are feasible for studying behavioral change over relatively short periods of time. The use of independent observational methods to measure child behaviors in the classroom is rare in the intervention literature and a strength of the current study (Webster-Stratton et al., 2008). This revised observational approach (i.e., three minutes per observation and classroom as the unit of analysis) was necessary in the present study due to the preliminary nature of the implementation and the focus on the classroom climate. However, such an approach contributed to the lack of significant results, as collecting information about the classrooms as a whole may have yielded less powerful results than drawing data about each individual child ($N = 403$) in each classroom. For example, teachers reported on classroom climate and overall behavior, so the impact of the intervention on each individual child's growth and socialization skills may not be reflected in their aggregate scores. Although information about classroom climate and functioning is important to collect, in the future, it will be critical to document individual child-level impact of the intervention.

The evaluations by teachers supported the goals of the project and are a testament to the potential efficacy of the study. The evaluations by the interventionists indicate that teachers were generally engaged in the program and that they believed children benefited from the intervention. From a feasibility and consumer preference standpoint, the ratings provide strong support for the implementation of the intervention, and suggest that teachers are likely to be engaged in the process. Finally, the fidelity ratings indicate that interventionists implemented the program in an appropriate and consistent manner, and reflect the feasibility of documenting fidelity procedures. This is an important issue in field-based and especially school-based research, where investigators often encounter a tension between meeting the needs of teachers and classrooms as well as maintaining consistency and quality of implementation.

The current study has several strengths including the use of multiple methods and informants for assessing the effects of the intervention. The intervention was based on existing evidence-based intervention programs for physical aggression during early childhood (Webster-Stratton et al., 2008), and available interventions for relational aggression with older children (e.g., Harrist & Bradley, 2003; Leadbeater et al., 2003; Leff et al., 2007, in press; Van Schoiack-Edstrom et al., 2002). Focus groups were used to modify the program content and delivery methods to be most effective for our targeted population (Leff, Costigan, & Power, 2004).

Despite several strengths there were clear limitations in this preliminary study. The use of classroom-wide anonymous assessments and classroom as the unit of the analysis precluded our ability to analyze the intervention effects at the level of the child. The present statistical analyses were thus greatly underpowered. As such we interpret effect sizes and findings with caution and await full replication of the study with a large randomized trial of the piloted program with assessments that are powered to tests models in which children are nested within classrooms, which in turn are nested within schools. The pre-test correlations revealed a significant association between relational aggression and victimization only for the control classrooms and this relatively high overlap may have biased the findings and warrants attention in the future. An additional limitation is the relatively brief nature of our 6-week intervention program that targeted several behaviors (i.e., displayed and received physical and relational aggression and prosocial behavior).

Unfortunately, we do not have data on teacher adherence to the program or the degree to which they actually reinforced children in keeping with the weekly lessons. We do know that teacher support was the lowest rated item on the evaluation forms. The present program was primarily implemented by the interventionists so the possibility of lower levels of support is not a major concern. Moreover, we did find that teacher support was not significantly related to classroom change in behavior, but future work is needed to further examine the effectiveness of teachers in assisting with the program. Presumably, teacher support could have a significant impact on implementation and intervention outcomes. The IYS Dinosaur School Curriculum includes in-depth teacher training that involves evidence-based techniques for classroom management as well as promoting emotional literacy and prosocial behaviors (Webster-Stratton et al., 2008) and future versions of the ECFP should incorporate a similar component. Moreover, future work should test if the intervention has stronger impact in some classrooms than others. We recognize that the generalizability of the program is potentially problematic. However, we believe that with future work to adapt the program along with minor initial consultation, teachers could deliver the program without outside intervention staff.

Future research should focus on reducing the presence of these aggressive behaviors across children's social contexts. Scholars have called for inclusion of parent training sessions to facilitate reductions in negative parenting techniques and facilitation of positive parenting skills as well as parental recognition of aggression and victimization (Leff et al., 2001; Taylor & Biglan, 1998). Indeed several interventions for aggressive behavior already indicate that programs that include a parental component (e.g., parent training) can facilitate greater treatment gains as well as greater skill generalization than programs that just include a child component (for review, see Lochman & Wells, 2004). Teacher training components are also recommended as these may facilitate greater teacher support of the program and continuation of the intervention once researchers leave the classroom. As is recommended for all evidence-based practices, future assessments should examine longer follow-up periods in order to examine the durability of the treatment effects (e.g., Brotman et al., 2008). Follow-up assessments would inform treatment duration as periodic booster sessions may facilitate continued peer interaction and social skill improvement.

7.1. Implications for policy and practice

This preliminary study is relevant to the field of early childhood as it directs attention to the importance of empirically supported intervention efforts for relational and physical aggression. Our brief program was relatively inexpensive and we believe with some initial training could be implemented by school staff without much difficulty. Given the harmful effects of both subtypes of aggression and victimization it is crucial that early childhood directors and teachers adopt evidence-based programs for reducing aggression and promoting prosocial behavior and friendship formation skills. In partnership with researchers, programs and assessment tools must be continually evaluated and only evidence-based programs and psychometrically sound instruments should be implemented. We further call upon policy makers to direct much needed funding to the area of social–emotional development within early childhood so that future large-scale randomized studies may be conducted to test the efficacy of future programs.

In conclusion, the current preliminary study was designed to test an initial intervention for subtypes of aggression and victimization in early childhood classrooms. These findings suggest that the adopted intervention approach is promising but requires future replication. Past observational and teacher-report instruments were revised and appear sensitive to the effects of the intervention. Given the harmful effects of these behaviors and the importance of friendship formation skills, we believe the current study strongly suggests that additional empirical evidence of the Early Childhood Friendship Project with larger randomized samples is greatly needed.

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