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Introduction

Conflict is created by social interactions in which some person (or persons) thwarts the aspirations of another (Johnson & Johnson, 1996, Winter, citing Deutsch, 1973). The presence of conflict directs attention to the existence of problems, introduces variety in perspectives, and provides an impetus for change (Brahm, 2004). Conflict can also derail goals, damage relationships, and incite violence (Horowitz & Boardman, 1995). Whether a conflict yields benefits or inflicts harm will depend in important part on how it is handled.

Children and young people are no strangers to conflict, and their maturation into adulthood includes learning how to handle disputes (Kellermann, Fuqua-Whitley, Rivara, & Mercy, 1998). Public concern over youthful conflict was heightened during the latter half of the twentieth century by surges in juvenile violence and crime. In response, initiatives that addressed the problem behaviors of troubled youth were joined by efforts to prevent the occurrence of such behaviors. In the 1990s, the prevention approach to reducing juvenile violence expanded to include a positive youth development focus which involved interventions to reinforce young people's strengths (Find.Youth.Info.gov, 2012, April 24). As part of this combined prevention/positive youth development approach to reducing violent and disruptive behaviors, strategies – including such school-based interventions as conflict resolution education and peer mediation – have been put forward to enable youngsters to constructively manage conflict and increase the likelihood of positive outcomes. A review of the research provides promising evidence for the effectiveness of such programs in diminishing and managing school-based youth conflict.

Reducing youth violence

The problem of interpersonal juvenile violence – that is, “the intentional use of physical force or power [by persons aged 24 or younger], against another person, group, or community, with the behavior likely to cause physical or psychological harm” (CDC, 2012; CDC, 2013) has generated a number of attempts to rein in youthful aggression. Violence may manifest itself in such behaviors as fighting, weapon use, bullying, cyber aggression, etc. As a systemic phenomenon, violence has been attributed to social problems like poverty, lack of opportunity, injustice, and discrimination (Casella, 2000; Horowitz & Boardman, 1995). At the individual level, violent behaviors may be instigated by a variety of situations and for any number of personal reasons: as a response to conflict, to stress, to scarce resources, to competition, to group expectations; as a means of achieving objectives such as gaining respect, attracting attention, procuring goods or money, protecting turf, demonstrating loyalty, achieving domination, promoting criminal acts, and so on (Denenberg, Denenberg, & Braverman, 1998; Horowitz & Boardman, 1995; Kellermann et al., 1998; Kenney & Watson, 1999).

The issue of youth violence rose to prominence in the 1950s and then again during the 1980s and 1990s as juvenile crime rates escalated. Arrests for juvenile crime began to soar in

1985, and by 1994, 10% of murders, 13% of aggravated assaults and 14% of rapes were committed by juveniles (Kellerman et al., 1998).

The last two decades of the 20th century also saw an uptick in school violence and disruptive classroom behavior (Garrard & Lipsey, 2007). Youth violence infiltrated schools, and school violence – that is, “youth violence that occurs on school property, on the way to or from school or school-sponsored events, or during a school-sponsored event” (CDC, 2013, p. 1) – emerged as a significant category of youth violence. “By the early 1990s, three million thefts and violent crimes were occurring each year on or near school campuses” (Kenney & Watson, 1999).

More recent statistics concerning youth violence reveal that school violence, although diminished, persists. At least one violent incident was reported to police during the 2009-2010 school year by approximately 40% of public schools, and in 2011, 12% of high school students were involved in physical fighting at school, nearly 6% stayed home from school at least one day during the previous month because of safety concerns, and 20% were bullied at school while 16% faced cyber bullying (CDC, 2012).

Impelled by the growth in juvenile crime during the 1950s, law enforcement and juvenile justice endeavors were augmented by an assortment of interventions that addressed youth violence as the result of individual rather than systemic problems (Kellerman et al., 1998). Punitive measures employed by law enforcement and the juvenile justice system proved to be imperfect at reducing violence, not least because their deterrence effect was questionable and the performance of violent acts was necessary to activate these responses. Schools turned to alternative deterrence tactics, including the adoption of disciplinary protocols like zero tolerance policies to discourage disruptive student behavior and reliance upon technology to enhance security by way of increased surveillance and weapon detection through metal detectors, cameras, and security guards (Kenney & Watson, 1999; Wilson & Lipsey, 2007). However, schools’ deterrence methods raised concerns about their potentially negative impact on the learning environment and about the appropriateness of educational institutions undertaking policing duties (Kenney & Watson, 1999; Wilson & Lipsey, 2007).

Psychosocial and socioeconomic programs – harbingers of the emerging view that “[p]revention efforts should aim to reduce factors that place youth at risk for perpetrating violence, and promote factors that protect youth at risk for violence” (CDC, 2011) – became increasingly popular as a means of preventing the perpetration of violence by young people. Accordingly, surges in juvenile crimes and violent behaviors during the 1950s captured federal attention, leading to the establishment of programs to assist distressed families and children (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998) and, in subsequent decades, to interventions undertaken by a variety of institutions for an array of problems plaguing troubled youth, including “substance abuse, conduct disorders, delinquent and antisocial behavior, academic failure, and teenage pregnancy” (Kellermann et al., 1998). By 2007, more than three-fourths of schools in a national sample were using some form of violence reduction intervention

– disciplinary policy, surveillance measure, or psychosocial program – to manage disruptive student behavior (Wilson & Lipsey, 2007).

Schools provide important opportunities to influence juvenile anti-social behavior due to the attendance of nearly all children above a certain age and the frequency of hostile student interactions (CDC, 2007; Wilson & Lipsey, 2007). Violence reduction and violence prevention programs proliferated and were assessed. In the case of school-based interventions, recent research has attested to their value in reducing problematic juvenile behavior. School use of psychosocial anti-violence programs, commonly employing cognitive, emotional, behavioral, or counseling/therapeutic strategies to “address[] some range of social and emotional factors assumed to cause aggressive behavior or to be instrumental in controlling it” (Wilson & Lipsey, 2007, p. S130) proved effective at violence reduction according to two 2007 meta-analyses.

A CDC-sponsored review of fifty-three experimental and quasi-experimental studies of school-based violence reduction programs (six from the 1980s and forty-seven from the 1990s and succeeding years) – namely, so-called universal programs where all students in the classroom learned about violence and its prevention or pursued capacity-building in self-awareness, emotional regulation, self-esteem, social skills, problem-solving, dispute resolution, or team work – found that, over all, “the median effect was a 15.0% relative reduction in violent behavior among students who received the program (interquartile interval: -44.1%, -2.3%)” (CDC, 2007, p. 6). The outcomes measured in the reviewed studies included acts of aggression and such proxies for violent behavior as violating social norms, rule-breaking, defiance, lying, stealing, truancy, delinquency, disruptive class behaviors (e.g., teasing, talking in class, fighting, lying, ignoring directions), suspensions, and disciplinary referrals. The positive impact of these programs on reducing students’ disruptive and antisocial behavior was demonstrated for all treatment strategies (whether “informational, cognitive/affective, [or] social skills building”) and issues (e.g., bullying, dating violence), and at all school levels irrespective of population differences relating to socioeconomic status, race or ethnic affiliation, community environment, or prevailing local crime rates (CDC, 2007).

The second 2007 meta-analysis, conducted by Wilson and Lipsey, examined 249 post-1950 experimental and quasi-experimental studies, with most (over 80%) from the 1980s and later, that assessed the effects of psychosocial programs on aggressive and/or disruptive student behaviors (e.g., fighting, hitting, bullying, crimes targeting persons, intimidation, name-calling, acting out, unruliness). The results of this meta-analysis indicated that two types of school-based programs were effective in reducing aggressive and disruptive juvenile behavior – namely, universal programs, like those examined in the 2007 CDC review, which typically provided the same type of intervention to all students in the classroom (mean effect size of 0.21, $p < 0.05$) as well as selected/indicated programs that furnished a single type of service to specifically identified students in the class (mean effect size of 0.29, $p < 0.05$). The research findings of mean effect sizes of 0.21 and 0.29 for the universal and selected/indicated programs,

respectively, amounted to a 25%-33% decrease in a 20% baseline of negative student behavior at school (Wilson & Lipsey, 2007).

The various treatment modalities used in these programs (e.g., cognitive, which included problem-solving, anger management, and changing thinking patterns; social skills training, which involved communication, conflict management; behavioral strategies, and conferring rewards and incentives; and counseling) did not significantly differ in their outcomes except for behavioral strategies used in programs for selected students. Behavioral treatments for such students were significantly more effective in reducing aggressive/disruptive behavior than the other forms of treatment employed in the selected/indicated programs. Programs involving multiple treatments and/or intervention formats and those targeting students in designated special classes or special schools proved ineffective in reducing violence at the 0.05 level of statistical significance (Wilson & Lipsey, 2007).

Positive youth development

The emergence of positive youth development: Wilson and Lipsey's meta-analysis further revealed that the impact of the school-based programs extended beyond the reduction of problem behavior and included changes in social skills (that is, in communication, problem-solving, conflict resolution, relations with peers), academic achievement (measured by school participation and assessment performance), and personal adjustment (assessed through measures of self-esteem, self-concept, anxiety, depression) that, as a whole, were significantly positive with mean effect sizes of 0.20 to 0.35 (Wilson & Lipsey, 2007). This co-existence of decreased negative outcomes and enhanced positive outcomes from the interventions studied was consistent with research "that show[ed] the same individual, family, school, and community factors often predict both positive (e.g., success in school) and negative (e.g., delinquency) outcomes for youth" (Catalano et al., 1998). Other research endeavors during the 1980s and 1990s investigated age-related influences on positive and negative behaviors (Catalano et al., 1998).

The aforementioned research developments contributed to growing recognition of the value of taking a developmental perspective to handling youth issues that incorporated positive factors (Catalano et al., 1998). Fundamental to the view that assisting youth to become successful adults requires more than preventing problem behavior is that

preventing high risk behaviors, however, is not the same as preparation for the future. Indeed, an adolescent who attends school, obeys laws, and avoids drugs, is not necessarily equipped to meet the difficult demands of adulthood. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. (Catalano et al., 1998, quoting Pittman & Fleming, 1991, p. 3).

The initial focus on adolescence as a time of confusion, presented in G. Stanley Hall's pioneering work in the psychology of adolescence, *Adolescence in 1904*, was followed by psychological theories "that identify important developmental tasks, challenges and milestones, and the competencies required to meet them during infancy, childhood and adolescence," and provided early theoretical support for a developmental understanding of adolescent psychology. Erikson's identity development theory (1950, 1968), for example, explained children's behavioral accomplishments and problems in terms of the self-identity that emerges from the child's progress in meeting growth-related challenges (Catalano et al., 1998, citing Erikson, 1950, 1968).

The confluence of developmental theories and research regarding the influence of positive factors on young people's lives contributed to the emergence of positive youth development, an approach that focused attention on promoting the capabilities and strengths of juveniles and not just addressing their problems and deficiencies. This approach manifested itself in policy, theory, and specific youth programs.

Positive youth development as policy: In terms of policy, positive youth development provided a "perspective that emphasize[d] providing services and opportunities to support all young people in developing a sense of a competence, usefulness, belonging and empowerment" (Oregon Commission on Children & Families, n.d.). Government agencies, foundations, and other institutions that supported the use of and research into positive youth development strategies include the U.S. Department of Health and Human Services, the Office of Juvenile Justice and Delinquency Prevention, the Carnegie Council on Adolescent Development, the Annie E. Casey Foundation, the Robert Wood Johnson Foundation (Catalano et al., 1998), as well as the National 4-H Council and Philip Morris USA, which funded research into the relationship between positive youth development and participation in extra-curricular activities (Lerner, Lerner, & Colleagues).

Positive youth development as theory: Qua theory, positive youth development explained a child's growth into adulthood as a function of his/her interaction with the environment and the resulting interplay between the child's individual attributes and environmental features, and further claimed that reinforcing the capabilities and strengths of young people and their positive relationships with other people, institutions, and community tended to discourage problem behavior and promote development into productive adulthood. The developmental asset theory proposed by the Search Institute and the developmental systems theory emerging from the Institute for Applied Research in Youth Development are two variations on positive youth development theory.

Developmental asset theory: The developmental asset theory attributes an increased likelihood of positive developmental outcomes to the presence of 40 strengths (so-called developmental assets), consisting of 20 individual attributes and 20 environmental features, in

the lives of youths (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998). The developmental assets which characterize the individual include self-perceptions, values, and abilities while the assets designated as environmental features include relationships to family, school, and community (Leffert et al., 1998). Several studies were undertaken within the framework of developmental asset theory to determine the relationship between the identified developmental assets and both negative and positive outcomes.

Information about developmental assets, risk behaviors, and indicators of ‘thriving’ was collected through a 156-item self-report survey, the PSL-AB, which was administered to 99,462 youngsters in grades six through twelve during a single year, 1996-1997. In a 1998 study, these survey responses were subjected to stepwise regression analyses to assess the predictive value of developmental assets, (consisting of responses to 92 survey items that operationalized the 40 developmental assets) for reduced risk behavior (i.e., risk behavior categories that involved alcohol use, driving and alcohol, tobacco use, drug use, antisocial behavior, violence, depression/suicide, school problems, sexual activity, and gambling) (Leffert et al., 1998). Among other findings, the asset of positive peer influence (specifically, having friends who model responsible behavior) emerged as a leading predictor of reduced antisocial behavior (consisting of three incidents of shoplifting, trouble with police, vandalism, fighting, threatening another with physical harm, or carrying a weapon), accounting for 23% of antisocial behavior variance. Peer influence also accounted for 21% of violence variance and 18% of risk behaviors, such as the use of illegal drugs (at least three times during year) and of driving and drinking (i.e., presence in car with drinking driver – whether self or other – at least three times during year). Overall, the top predictors of reductions in risk behaviors included positive peer influence (for all studied categories of risk behavior) and restraint (defined as belief in the importance of abstaining from sexual activity or from the use of drugs or alcohol) for seven of studied categories, excluding violence, depression/suicide, and school problems (Leffert et al., 1998).

The data from the 1996-1997 Search Institute survey (the PSL-AB) was also used in a later study to explore the relationship between youth strengths and positive outcomes, more particularly to the connection between developmental assets and adolescent behaviors associated with thriving (Scales, Benson, Leffert, & Blyth, 2000). Thriving was defined in terms of seven behaviors related to school success, leadership, helping others, maintain physical health, delaying gratification, valuing diversity, and overcoming adversity. These behaviors were measured by responses to seven corresponding single survey items concerning, respectively, school grades, frequency as leader of a group or organization, amount of time spent helping others without pay, taking care of one’s body (e.g., regular exercise, daily consumption of three meals, and eating the right foods), saving money for something special, value of knowing people of other races, and reputation as someone who gives up when things get hard. Caution should be exercised in generalizing this thriving construct to the every-day notion of thriving (defined by the *Encarta* dictionary as growing vigorously and healthily or being successful) since, as the

researchers pointed out, no particular combination of these behaviors is considered necessary for an adolescent to be described as thriving, and the thriving index composed of responses to the seven thriving indicator items had a low reliability score, with a Cronbach coefficient alpha of 0.49.

In any event, this 2000 study investigated the relationship of developmental assets to thriving using survey responses of a sub-sample of 6,000 youngsters in 6th-12th grades, who belonged in equal numbers to six ethnic/racial groups (American Indian, African American, Asian American, Hispanic, Multiracial, and White) out of the original sample population of 99,462 that completed the 1996-1997 survey. Statistical tests were conducted on responses to the 92 developmental asset survey items and to the seven survey items identified as indicators of thriving behaviors. The research revealed that adolescents with greater numbers of developmental assets were more likely to report higher scores on the thriving indicators (according to a multivariate analysis of covariance of grade level, sex, and amount of asset on thriving indicators with $p < .02$). Different combinations of developmental assets explained between 10%-43% of the variance in individual thriving indicators for each group beyond the demographic variables, as revealed by stepwise regression analyses.¹ Developmental assets that were major contributors to the variance of individual thriving factors across all racial/ethnic groups included achievement motivation to succeed in school (ranging from 10% for American Indian to 19% for white youths), youth programs (defined as “young person spends 3 or more hours per week in sports, clubs, or organization at school and/or in community organizations” (Leffert et al., 1998, p. 212)) with respect to leadership (ranging from 9% for American Indians to 20% for Asian-Americans); and planning and decision-making (defined as “young person knows how to plan ahead and make choices” (Leffert et al., 1998, p. 212)) in connection with delaying gratification (9% African American to 21% Asian-American youth) (Scales et al., 2000).

Developmental systems theory: Developmental systems theory reframed the connection between youth strengths and positive developmental outcomes as an interactive process between youths and their environment that was partly manifested by the relationship between five types of positive attributes or strengths pertaining to juveniles – comprising the “five Cs” of competence (positive view of one's actions), confidence (a sense of positive self-worth and self-efficacy), connection (positive bonds with people and institutions), character (respect for social norms, a sense of right and wrong), and caring (sympathy for others) – and the outcome of contribution, a “sixth C,” which construed positive developmental outcomes in terms of benefits accruing to the self, family, community, and civil society (Lerner, Almerigi, Theokas, & Lerner,

¹ For example, the set of developmental assets that each explained 1% or more of the variance for the delays gratification indicator of Asian American youth consisted of planning & decision-making, homework, positive peer influence, and time at home (total of variance explained: 25%) while the variance of that same indicator for African American youngsters was explained by planning & decision-making, cultural competence, and homework (total of variance explained: 12%).

2005). Under this theory, these five youth strength categories operationalized the concept of positive youth development. The theory maintained that higher amounts of the five categories of youth strengths enhanced the likelihood of youth contribution while lower amounts increased the risk for behavioral problems, and that these strengths would probably increase as youths interacted with their environment and gained access to resources offered by family, school, and community. According to the theory, youth programs qualified as a positive youth development program, that is to say, as an environmental resource that could reinforce youth strengths, when the programs featured positive relationships with adults, life-skill-building activities, and opportunities to use these skills in community-based activities (Lerner et al., 2005; Lerner et al., 2012).

Longitudinal cohort research (the 4-H Study of Positive Youth Development) was initiated by Tufts University's Institute for Applied Research in Youth Development in 2002 to investigate the relationship between the five Cs and specified outcomes and between positive youth development programs and the five Cs and other outcomes as measured by scores on a 350-item questionnaire administered to students in successive years, starting in fifth grade and continuing through high school (Lerner et al., 2012). In a 2007 study, these survey results were examined to determine whether scores in the five youth strength categories, the five Cs, were directly related to the positive outcome of youth contribution and inversely related to such negative outcomes as risk behaviors and depression (Jelicic, Bobek, Phelps, Lerner, & Lerner, 2007). The data was collected from surveys administered to 1,720 fifth-graders, and then re-administered to the same students as sixth-graders along with an additional sample of untested sixth-graders for a total of 1,973 sixth-grade students. Survey items were taken from several scales, including the Search Institute's PSL-AB, Harter's Self- Perception Profile for Children, the Eisenberg Sympathy Scale, among others.

The five Cs were constructed as weighted means of fifth-grader responses to various sets of items: confidence was measured by 12 items (e.g., choice of self-attributions between "some kids are happy with the way that they look" and "other kids are not happy with the way that they look"), competence by 17 items (e.g., choice of self-attribution between "some kids feel like they are just as smart as other kids their age but other kids aren't so sure and wonder if they are as smart"), character by 18 items (e.g., importance of "telling the truth, even when it's not easy"), caring by five items (e.g., "I feel sorry for people who don't have the things I have"), and connection by 22 items (e.g., "I get a lot of encouragement at my school).

Survey responses from students as sixth-graders were used to measure outcomes: risk behaviors consisting of substance use and delinquency were measured by 10 inquiries into frequency of substance use (e.g., "How often during past year have you ever sniffed glues, sprays, or gases") and of delinquent behaviors (e.g., "How many times have you hit or beat up someone?"); depression was measured by 20 items (e.g., during the past week, how often I was bothered by things that usually don't bother me), and contribution was measured as a composite

score of 12 items, with one item about leadership (e.g., "During the last 12 months, how many times have you been a leader in a group or organization?"), three items concerning service (e.g., indicating participation in a particular activity such as volunteer work); two items about helping (e.g., the average amount of time spent on some activity during week, such as helping friends or neighbors), and four on contribution values (e.g., "it is important to me to contribute to my community and society").

Results of various random effects regression models showed that higher scores for the five Cs (which is to say, for the second-order concept of positive youth development or PYD) significantly predicted higher contribution scores and lower depression and risk behavior scores. However, effect sizes for these models, calculated by Singer and Willetts' pseudo R^2 , were small with PYD scores explaining minor proportions of within-person variance for the outcomes – 0.050 for risk behavior, 0.132 for depression, and 0.163 for contribution variance (Jelicic et al., 2007).

Positive youth development – programmatic approach: As a type of program, which would include those that employ intervention strategies, positive youth development has involved initiatives that support young people's strengths "instead of their risk factors to ensure that all youth grow up to become contributing adults" (National Conference of State Legislatures, 2010).

Structured out-of-school youth activities have been considered positive youth development programs to the extent that they promote positive youth development. These activities have typically included (adult-organized) extra-curricular and community activities that are structured by rules, goals, and other constraints and in which participation is voluntary (Larson, 2000). Sports have been pre-eminent among such structured activities, "accounting for an average of 4-6 hours per week of U.S. adolescents' time [excluding summer]" (Larson, 2000, p. 174). A longitudinal study involving 10,000 youths found that although participation in extracurricular and community activities was significantly related to improvements in self-concept, school achievement, and education and job goals, effect sizes were small, at less than 1% (Larson, 2000, citing Marsh, 1992). More impressive effect sizes were found by a meta-analysis of a sub-set of structured activities, namely, adventure programs such as Outward Bound. Adolescent participant outcomes had a mean effect size of .26, with the strongest effect sizes characterizing the variables of "independence (.47), self-efficacy (.31), assertiveness (.42), internal locus of control (.30), and decision making (.47)" (Larson, 2000, p. 176, citing Hattie, Marsh, Neill, & Richards, 1997).

Intervention programs that qualified as positive youth development by serving juveniles (from 6 to 20 years of age) and pursuing at least one of 15 objectives in such social contexts as school, family, or community were the subject of a 1998 review conducted by Catalano and associates of experimental or quasi-experimental research into the success of positive youth development programs (Catalano et al., 1998). The 15 objectives consisted of constructs derived

from positive youth development factors revealed by a literature review conducted by the authors. Effectiveness was assessed based on evidence of significant behavioral outcomes, and 25 out of the 77 programs considered were identified as effective.

Although the differences in the 25 program outcomes were reported to be statistically significant, the meaningfulness of these differences was determined for two interventions involving large population samples. Statistical significance is readily obtained for small differences when sample sizes are large (Schmidt, 1996; Coe, 2002). Measures of effect size are especially helpful for assessing the importance of results found in studies involving very large population samples, e.g., more than 1,000 subjects. Effect sizes were provided by studies of the Metropolitan Area Child Study and of Success for All (Catalano et al., 1998). The Metropolitan Area Child Study program sought to reduce aggression through various interventions – viz., combinations of classroom program, small group intervention, and family involvement – to promote student competencies, pro-social norms, and other factors that influence the learning of aggressive behavior. Effect sizes ranging from .15 to .33 were shown for early intervention results that included decreased aggression and improved on-task behavior. With respect to Success for All, a program that focused on reading achievement as an outgrowth of positive youth development, the research showed that reading scores and other outcome measures were significantly higher for children in the treatment group, with the average effect size of a standard deviation for the earliest grades progressively increasing with each successive year in the program.

Various trends were identified in the review by Catalano and colleagues. The vast majority of the 25 programs (88%) involved schools while a smaller proportion (60%) had a family component. All the programs addressed youth competencies, self-efficacy, and pro-social norms, and employed strategies that included skills training, peer tutoring, and teacher training. Three-fourths of the programs also focused on healthy youth-adult bonding and on promoting participation in pro-social activities. The effectiveness of the program interventions was reflected in such outcomes as improvements in school attendance, academic achievement, interactions with peers and adults, and in decision-making and declines in substance use and risky sex (Catalano et al., 1998).

Peer mediation and conflict resolution education

History: Alternative dispute resolution (ADR) techniques were introduced into the legal system during the 1960s (Garrard & Lipsey, 2007). Rising national concern over youth violence during the 1970s led to two popular parallel responses from the nation's schools that involved an ADR approach: the institution of conflict resolution education (CRE), which involved teaching about conflict resolution, and the adoption of peer mediation programs, where conflict resolution strategies were put into practice (Johnson & Johnson, 1996; Van Slyck & Stern, 1991; Winkelspecht, 2007). Both these intervention developments have been considered examples of a

positive youth development approach (Garrard & Lipsey, 2007). Conflict resolution education typically involved the incorporation of lessons dealing with conflict, dispute resolution skills, and related material into some part of the school curriculum (Garrard & Lipsey, 2007). Initiatives for teaching cooperation and dispute resolution strategies in schools originated in a 1972 Quaker-initiated non-violence program in New York City schools (Winkelspecht, 2007). Peer mediation was basically mediation conducted by students for students. It involved students acting as a neutral third party to assist their fellow students reach a mutually acceptable settlement of their dispute by discussing issues and exploring options for agreement. As community mediation centers multiplied during the 1980s, schools increasingly turned to these centers to teach students to manage conflict without relying on adults. And so, peer mediation was introduced into schools. By 2004, peer mediation programs were the most prevalent as well as the most researched of the 15,000 to 20,000 school-based conflict resolution programs operating across the nation (Winkelspecht, 2007).

Instances of government involvement in peer mediation programs emerged by 1985. San Francisco and New York City were prominent examples of different ways to structure the relationship between schools and government support for peer mediation (Van Slyck & Stern, 1991). The San Francisco Community Board Program embraced a consultative approach, where training and implementation assistance was provided by Community Board Program staff while administration of the peer mediation program was left to schools. New York City, on the other hand, employed a centralized, systemic approach, with the administration and monitoring of all school peer mediation programs carried out by SMART – its School Mediators Alternative Resolution Team unit (Van Slyck & Stern, 1991). In 1989, Massachusetts initiated a third approach, which involved government agency funding for individual school-community mediation center partnerships to run peer mediation programs.

For 20 years, the Massachusetts Attorney General’s Office, through its Student Conflict Resolution Experts (SCORE) program, funded partnerships between individual schools and local community centers to implement and maintain school peer mediation programs where students received mediator training from centers and then mediated disputes between their fellow students (Haft & Weiss, 1998). From its modest beginnings with two programs in 1989, Massachusetts peer mediation expanded to twenty-seven programs over the next six years. Since SCORE’s inception, more than 5,000 students were trained by community mediation centers and mediated over 25,000 disputes, achieving a 97% agreement rate (iBerkshires.com, 2007, July 27). Although SCORE was discontinued in 2009, peer mediation in Massachusetts has continued to exist in at least two forms of local endeavor: as an in-house program run either by the individual school on its own (e.g., the Brockton, MA public schools²) or in association with the local community mediation center (e.g., the involvement of The Mediation & Training Collaborative of Community Action with the middle school peer mediation program in the Gill-Montague

² Information available at <http://www.brocktonpublicschools.com/page.cfm?p=2414>

School District). Government support for peer mediation was revived in 2013 in the form of community project challenge grants from the Massachusetts Community Mediation Center Grant Program (administered by the Massachusetts Office of Public Collaboration at the University of Massachusetts Boston) for school peer mediation programs run by community mediation centers.

The effectiveness of conflict resolution education (CRE): Conflict resolution education (or CRE), which “models and teaches, in culturally meaningful ways, a variety of processes, practices and skills that help address individual,/ interpersonal, and institutional conflicts, and create safe and welcoming communities,” seeks to enable students to understand and constructively handle the dynamics of conflict (Jones, 2004, pp. 233-234, quoting the Association for Conflict Resolution, 2002, p. 1). The success of any particular CRE program may be measured through the achievement of such relevant goals as creating a safe and constructive learning environment and supporting students’ social and emotional growth as manifested by outcomes that include decreased student anti-social and disruptive behaviors and increased prosocial³ conduct, better student interpersonal problem-solving and emotion management, less teacher-centered and more student-centered disciplinary procedures, a positive school climate, among others (Jones, 2004).

Jones’ review of the research literature on CRE programs provides a sampling of rigorous studies of curriculum projects that targeted desired CRE outcomes (2004). For example, two curriculum projects that helped students with social and emotional competencies were shown to be instrumental in reducing student aggressiveness and enhancing social and emotional development. And so, in a study of the impact on student behavior of the Second Step program, which offered instruction in empathy training, problem-solving, and anger management to elementary and middle school students, Grossman and associates (1997) found that among the 790 participating second and third-graders, students in the program displayed fewer aggressive and more prosocial behaviors than did those in the control group (Jones, 2004). A second study conducted by Kusche and Greenberg (1994) examined the PATHS curriculum program, which focused on self-control, interpersonal problem-solving, and emotional management for elementary school students (Catalano et al., 1998; Jones, 2004). Using a pretest-posttest-follow-up experimental methodology to compare students – both regular needs and special needs – in the PATHS program with a control group, Kusche and Greenberg showed that students in the treatment group significantly improved in their differentiation of internal feelings, self-efficacy in managing emotions, understanding of others’ feelings, and prosocial interpersonal problem-solving compared to the control group. Special needs students and regular needs boys also showed progress in social competence (Catalano et al., 1998).⁴

Other studies reviewed by Jones (2004) examined the relationship between the interventions and the acquisition of relevant knowledge or skills as well as changes in behaviors,

³ Prosocial behavior may be defined as behavior intended to benefit another.

⁴ For additional research on the effects of the PATHS and Second Step programs, see Jones, 2004.

attitudes, and other social competencies. Thus, according to research conducted by DuRant, Barkin, and Krowchuk (2001), which used a pretest-posttest design, violence was reduced among the 292 minority sixth-graders who learned about skill-building for communication, conflict resolution, problem-solving, expressing anger peacefully, etc. from the Peaceful Conflict Resolution and Violence Prevention Curriculum and increased among the control group of 412 students (Jones, 2004). While a Norwegian bullying prevention program involving children aged eight to sixteen, assessed by Olweus (1991), decreased negative behaviors of bullying, fighting, vandalism, truancy, and alcohol abuse in Norway, an American program – Bullying Eliminated from Schools Together (BEST), which included modules on empathy and problem-solving – was not found by Kaiser-Ulrey (2004) to positively impact self-esteem, parental involvement, or frequency of bullying, victimization, and prosocial behaviors. Evidence provided by a number of studies supported the positive impact of peer mediation interventions on such CRE outcomes as increasing conflict knowledge, conflict management skills, and perspective-taking; reducing the incidence of conflict and negative behaviors; and improving school climate (Jones, 2004).

At a minimum, the potential for positive impact from CRE curricula highlighted by Jones’ review underscores the need for rigorous research to assess the success of the variety of available CRE curricula projects in achieving their goals for student conflict and school safety. However, any assessment of CRE effectiveness should be tempered by caveats concerning the applicability of the intervention to other age groups and institutional settings: a student’s developmental stage may influence his or her ability to understand and handle conflict, and the size, organizational structure, and culture of the school can affect its compatibility with the proposed program (Jones, 2004).

Peer mediation – resolving conflict and acquiring conflict resolution skills:

Distinguishing peer mediation from conflict resolution education and from mediation: The characterization of peer mediation as conflict resolution education by researchers such as Jones (2004) and Garrard and Lipsey (2007) is based, in part, upon instructional features associated with mediation, including peer mediation. Mediator training is a pre-condition for mediation, and “peer mediation programs train students as neutral third parties to intervene and assist other students in the resolution and management of interpersonal disputes” (Burrell, Zirbel, & Allen, 2003, p. 7). Peer mediation is distinguishable from other CRE interventions insofar as learning about conflict management is considered ancillary to mediation’s explicitly identified goal of conflict resolution through disputant-generated agreements (see Harris, 2005). If CRE is about gaining knowledge about conflict resolution, peer mediation is primarily about applying such knowledge to resolve juvenile conflicts (Van Slyck & Stern, 1991).

The express goal of helping to resolve juvenile conflict through peer mediation: Mediation, in general, is a voluntary conflict resolution process in which an impartial third party

– the mediator – helps disputants discuss their issues and explore options for a mutually acceptable agreement (Wilkinson, 2001). Since the disputants are the decision-makers and agreements are consensual, mediation constitutes a non-adversarial, non-authoritarian alternative to dealing with conflict that offers such benefits as the resolution of disputes (at a national agreement rate of 85%), substantial party satisfaction, and less relationship damage between parties (Wilkinson, 2001; Wissler, 1995). Peer mediation is an age-based subset of mediation in that both disputants and mediators are juveniles. They tend, for the most part, also to be students since peer mediation is predominantly used in educational settings. Although some researchers have characterized peer mediation in terms of certain kinds of outcomes such as non-violence or integrative solutions,⁵ the express goal of peer mediation does not differ from that of mediation generally, which is that “the stated goal of mediation is to reach resolution of the conflict” (Harris, 2005, p. 144).

The goal to increase the capacity of youth to resolve conflict through peer mediation: The learning component of peer mediation resides in direct instruction of mediator training, the experience of problem-solving by participating in mediation, and observation of mediator modeling of conflict resolution behaviors. Despite differences between the defining purposes of peer mediation (resolving conflict) and CRE (learning about conflict), expectations for the success of peer mediation identified by researchers (e.g., Burrell, et al., 2003; Casella, 2000; Haft & Weiss, 1998; Winkelspecht, 2007) and expressed by policy-makers, school officials, and other stakeholders encompass both educational and conflict reduction outcomes. In one Massachusetts elementary school, for example, “[t]he goal of peer mediation is to reduce conflict and provide children with problem-solving skills” (Davies, 2004). Advocates of peer mediation pair this manifest goal with an additional goal: the acquisition of conflict resolution skills through mediation training and observational learning. According to researchers, “the goal of peer interventions is to generate agreements acceptable to everyone and develop a strategy to handle similar problems in the future” (Burrell et al., 2003, p. 8). Peer mediation programs are instituted in schools with the expectation that not only will student disputes be resolved but that conflict resolution skills will be acquired by students:

Thousands of schools across the United States and around the world have implemented peer mediation programs of various shapes and sizes, with the expectation that violence

⁵ “Students involved in peer mediation programs agree to have their disputes mediated by a peer who has been trained to help both parties analyze the problem and reach a nonviolent resolution.” (Kellermann et al., 1998); “Mediation is a structured process in which a neutral and impartial third party (known as the mediator) assists two or more people in negotiating an integrative resolution to their conflict” where negotiation is “a process by which parties with shared and opposed interests “try to work out a settlement” and an integrative agreement is an “agreement that meets needs of both parties.” (Johnson & Johnson, 1996; Johnson, Johnson, Mitchell, Cotton, Harris, & Louison, 1996, May/June).

and suspensions will be reduced, school climate will improve, and students will learn and take with them essential life skills (Haft & Weiss, 1998, p. 213).

In effect, peer mediation promises a two-pronged approach to reducing juvenile violence: the resolution of youth disputes and acquisition of conflict resolution skills through mediator training (Casella, 2000; Harris, 2005).

Rationale for using peers as mediators for youth conflict: The use of mediation to resolve conflict, including juvenile conflict, may be justified not only by its effectiveness in resolving disputes, but also by the potential for such other benefits as relationship preservation, self-empowerment, and improved conflict resolution skills. Peer mediation, however, eschews mediation by adults in favor of mediation by fellow youths. The rationale for restricting the role of mediator to juveniles rests on the psychological development and social dynamic of young people.

The interrelationship between peer mediation, growth towards independence and autonomy, and peer influence: Maturation into adulthood involves, among other things, developing greater autonomy and independence and reducing dependence (Van Slyke & Stern, 1999, citing Erikson's theory of adolescent development). The traditional approach to solving conflict between juveniles, particularly in schools, resides in adult authority and, as a result, has been criticized by some advocates for not optimizing the child's growth towards increased independence. "Traditionally, in our school settings, adults have retained the authority to help solve problems or fix disputes ..." (Vankoughnett, 1998, May, p. 11). Indeed, the use of typical disciplinary measures to resolve conflict has been judged to further dependence upon adults:

Our current traditional discipline procedures - whether they be reprimand, detention, time-out rooms, suspension or expulsion, only teach students to depend on adult authority figures to help resolve their conflicts (Vankoughnett, 1998, May, p. 7, citing Johnson, Johnson, Dudley & Burnett, 1992).

Reportedly, most unmediated school disputes get settled by way of adult intercession, through avoidance, or are left unresolved (Sellman, 2003). About half (51%) of quarreling elementary school students, studied by Johnson, Johnson, Dudley, and Acikgoz (1994), involved teachers in their disputes while 30% either relied on repeating demands or withdrawing (Johnson & Johnson, 1996)

To the extent that the influence of peers provides an alternative to adult authority, it constitutes a useful avenue towards independence for young people. Peer influence is also wielded through the common values and language shared among juveniles and excluding adults. The discrepancies between juvenile and adult perceptions are shown by study results indicating that teachers perceived substantially more student interactions to be hostile than did students, i.e.,

given that adolescent communication is replete with words, phrases, and even delivery styles often having different and even opposite connotations to adults, it is possible that the adults may have perceived students' verbal behaviors as more hostile and aggressive than did the students (Theberge & Karan, 2004).

Again, adults may condemn a whole class of remarks as disrespectful while young people may distinguish “a fine line between fashionable insult and cruel and humiliating remarks” (Theberge & Karan, 2004, p. 286) Other times, adults and children may differ about the importance of some object or event: “The literature also suggests that adults rarely have sufficient time to devote to inter-pupil conflicts and can sometimes perceive as trivial what is important to children and young people (citation omitted)” (Sellman, 2003, September, p. 57).

The affinity among young people is borne out by the results of research conducted by MacDougall (1993), which revealed students' preference for student, rather than adult, assistance with managing disputes (Vankoughnett, 1998, May). This affinity supports the underlying assumption of peer mediation, namely, that “young people are inherently better equipped to understand and help their peers than are adults” (Vankoughnett, 1998, May, p. 11). It is noteworthy that the question whether mediation outcomes differ when juvenile disputes are conducted by trained adults – an uncommon practice – rather than peers remains open (Van Slyck & Stern, 1991).

Learning to resolve conflicts through peer mediator training: CRE and peer mediation intersect at mediation training and the modeling of the problem-solving approach to settling disputes by mediators. In a whole school approach to peer mediation, all students receive mediator training. Under the more common cadre approach, a select few are trained.

Selecting peer mediator candidates: In order to increase disputant receptivity and responsiveness to mediation, diversity and leadership tend to be important considerations in selecting peer mediators (Bickmore, 2002; Haft & Weiss, 1998). Juveniles who function either as positive or as negative role models for their peers are considered to have the desired leadership qualities that influence and command the respect of their peers. Since a lack of mediator diversity may discourage children and youths from “seeking out mediation because of a common belief that unless the mediator was someone of one's cultural or racial background they would not be fair” (Theberge & Karan, 2004), diversity among mediators is sought with respect to such factors as grade, age, gender, ethnicity/race, culture, and socioeconomic level so as to reflect the characteristics of the population they are to serve. The use of academic proficiency as a criterion for mediator status has been controversial. On the one hand, the exclusion of a sizable portion of the population may alienate a number of youngsters; on the other hand, mediators need to be able to make up assignments from missed classes (Davies, 2004).

Implementation of peer mediation training: The typical training for peer mediation is based on curriculum that furthers understanding the nature of conflict, using various dispute resolution strategies – such as active listening, paraphrasing, reframing, exploring options, perspective taking, problem-solving, among others – and complying with mediation procedures (e.g., communicating mediation rules, recording agreements) (Burrell et al., 2003; Sellman, 2003; Winkelspecht 2007). A variety of pedagogical techniques may be used, including direct instruction (e.g., lecture), demonstrations, group discussions, and experiential practices such as role playing (Bell, Coleman, Anderson, Whelan, & Wilder, 2000; Johnson, Johnson, Dudley, Ward, & Magnusen, 1995). The amount and distribution of time spent on training typically involve 15 hours that may vary from six hours over three weeks to one-two day workshops to semester courses (Burrell et al., 2003; Johnson & Johnson, 1997; Schellenberg, Parks-Savage, & Rehfuss, 2007).

The effect of training on mediator knowledge: Research-based evidence from 14 studies subjected to meta-analysis indicated that mediation training can be effective in increasing both the familiarity of juvenile trainees with conflict resolution concepts and their ability to apply these concepts during mediation (Burrell et al., 2003).

The increased knowledge about conflict achieved by younger children (eight to eleven years old) was shown in a study of an elementary school cadre peer mediation program, which found that after six hours of instruction about conflict, anger, and conflict resolution and mediation skills, a group of 15 student trainees in third to fifth grades displayed a 43% increase in knowledge as measured by their pre-training and one day post-training responses to a questionnaire (Schellenberg et al., 2007). When pre-training responses were compared to trainees' responses three months after training, however, the increase in knowledge was 42%, indicating no additional growth in the trainees' knowledge even though the post-training interval included 34 mediations, all successfully resolved.

The impact of mediation training on the use of mediation techniques was examined by Bell and associates (2000) in their study involving younger adolescent peer mediators (aged 12-14 years old) in a cadre peer mediation program at a rural intermediate school. Student responses to hypothetical conflict scenarios were used to measure retention of mediation skills. Thirty students from sixth to eighth grades received 12 hours of training and two booster sessions – involving demonstrations, lectures, and role plays – in conflict resolution skills (such as using “I feel” statements, listening, perspective-taking, etc.) and in formal peer mediation training. Trainee accounts (19 in all) of the steps they would take to mediate hypothetical conflict scenarios showed that the number of mediation steps mentioned in post-training accounts were significantly greater than in the pre-training accounts. There was no significant change in the frequency of mediation steps in trainee accounts at a six-week follow-up, even though 34 disputes had been mediated, with an agreement rate of 94%.

The above studies by Schellenberg and associates and by Bell and associates provide additional evidence that juveniles of various ages can learn and retain the knowledge about conflict and conflict resolution skills imparted in mediator training. However, no supporting evidence for continued growth in mediator knowledge after mediation practice was found.

Age as a factor in training and skill acquisition: Training – and the level of mediation skills acquired – may vary according to the age of participants. Younger children (under age 11), for instance, require additional training in staying neutral, ensuring confidentiality, and other high-level skills (Sellman, 2003, September). In one study of peer mediation programs for students in grades three-five in 28 Cleveland schools, observation of mediation sessions revealed that confidentiality was incompletely maintained and, at three schools, mediators reverted to directive behavior – “telling other children how to behave and assigning blame” (Bickmore, 2002). Based on research, youngsters can be expected to learn to listen to feelings and help disputants reach simple solutions (Sellman, 2003, September).

Juveniles can attain greater competence with a broader range of mediation skills as they mature. “Research in these domains [of social and developmental psychology] shows that many constructive conflict resolution strategies require the orchestration of higher order cognitive abilities that typically increase with experience and maturation (citation omitted)” (Garrard & Lipsey, 2007, p. 2). Older children (over age 11) may be able to assist disputants with perspective-taking, understanding the underlying problem, and reaching a mutually acceptable agreement while adolescents may also help disputants uncover underlying issues and needs (Sellman, 2003, September).

In order to overcome the lack of sophistication of youthful trainees and, perhaps, restrict the scope of peer mediators’ authority to intervene in conflict situations, some training programs require mediators to use a script to manage the mediation process and to undergo training in using the script in different situations (Sellman, 2003, September). Observation of scripted middle school peer mediation revealed problems when the mediation went off-script (Sellman, 2003, September). In one peer mediation program at an urban at-risk middle school, the mediation script guided the process towards certain outcomes by enumerating acceptable outcome strategies – viz., “take turns, share, chance (that is, flip a coin), postpone, avoid, get help, apologize, humor, and compromise” – which, in practice, resulted in mediations in which “the mediators seem to expect or anticipate avoidance-type settlements from the disputants” (Nix & Hale, 2007, p. 337).

The effectiveness of peer mediation: achieving agreements and reducing juvenile conflict: Research shows that school disputes commonly addressed in peer mediation include teasing, name-calling, threats – both physical and verbal, gossip, rumor mongering, and disagreements over relationships (involving friends or romantic interests) or over personal property (Daunic, Smith, Robinson, Miller, & Landry, 2000; Denenberg, Denenberg, &

Braverman, 1998; Johnson & Johnson, 1996, Winter; Winkelspecht, 2007). Depending upon the individual school, certain conflicts may be excluded from peer mediation such as those involving racism, bullying, violence, or school policy violations (Sellman, 2003; Winkelspecht, 2007). Between 71% to 100% of peer-mediated conflicts led to agreements devised by the disputing students (Schellenberg et al., 2007; Winkelspecht, 2007).

Reaching agreement through peer mediation: The success of peer mediation in fulfilling its primary purpose of dispute resolution has been measured by agreement rates and by the frequency of negative behavior and indicators of such behavior, including disciplinary actions. Thus, a 93% agreement rate was achieved for the 4,327 mediations of juvenile disputes reported in 23 studies subjected to a meta-analysis by Burrell and associates (2003). Eighty-eight percent of disputants were satisfied with the agreement achieved according to this meta-analysis of 15 studies.

The substance of agreements reached through peer mediation has not been extensively investigated. So far, research indicates that, as recorded, elementary and middle school peer mediation agreements tend to be on the simple side (Johnson & Johnson, 1996). Hart and Guntz (1997) reported that as a result of an elementary school program that combined CRE and peer mediation, “common agreements recorded on contracts included such simple phrases as: be friends, apologize, stay away from each other, walk away when you get mad, straighten out a rumor, keep hands to self, talk it out, and ask nicely” (p. 82). Likewise, Johnson and Johnson’s study (1996) of an elementary school CRE-cum-peer mediation program found that 84% of the agreements that made up the 98% agreement rate consisted of mutual avoidance decisions. At the middle school level, a combined CRE and peer mediation program that mostly addressed conflicts over name-calling, threats, and gossip produced a 95% settlement rate “with students most frequently resolving to avoid each other, to stop the offending behavior, or to ‘agree to get along’” (Daunic et al., 2000, p. 99).

The impact of training in conflict management and mediation on attitude and use of conflict management strategies – the whole school/grade/class approach: Under the so-called whole school approach to peer mediation, training in conflict resolution and mediation is provided to an entire student population – whether a whole class, a whole grade, or a whole school. At its core, whole school peer mediation provides all students with the opportunity to fulfill dual roles as the recipient of assistance in dealing with their own disputes and as the provider of assistance to others in the management of the others’ disputes (Denenberg et al., 1998). In the whole school version of peer mediation exemplified by the heavily researched program devised by Johnson and Johnson, training in managing own conflict and in mediating others’ conflicts was provided to all students, as was the opportunity to mediate (Johnson & Johnson, 2002). The role of mediator – assigned daily to two students in each participating class on a rotating basis – consisted of assisting disputing students with integrative negotiation in order to maximize joint outcomes (instead of distributive negotiation which maximizes own outcomes). If peer mediation

failed, teacher mediation was attempted. Arbitration by the principal was resorted to when all mediation efforts proved futile (Johnson & Johnson, 2002).

Examination of the knowledge base, conflict attitudes, and conflict management behavior of participating elementary school students provided encouraging indications of a positive impact from the Johnsons' model of whole-school peer mediation. Student retention of training information was demonstrated by the immediate recall of all mediation and negotiation steps by more than 90% of trained students, and by about 75% up to a year after training (Johnson & Johnson, 2002).

Student attitudes toward conflict were shown to become more positive following program training. Pre-training responses from all participating students to a word association test indicated that student attitudes to conflict were predominantly negative, "seeing almost no potential positive outcomes" (Johnson & Johnson, 2002, p. 35). However, the conflict attitudes of students who subsequently underwent training became significantly less negative while the attitudes of untrained students remained virtually unchanged (Johnson & Johnson, 2002).

Changes in students' conflict management behavior as manifested by the frequency of adult involvement and the use of conflict resolution strategies indicated that students were able to apply the knowledge provided by program training to conflict situations. Improved student management of conflict, whether their own or that of others, following program participation was suggested by a post-training decrease in the demand for adult intervention in student disputes (Johnson, Johnson, Dudley, & Acikgoz, 2001). After the training of 92 students in four randomly chosen classes covering grades one through six at a suburban school, teacher intercession in student disputes diminished by at least 80%, and no conflicts were brought to the attention of the principal.

Furthermore, based upon student-reported responses to actual and hypothetical conflicts, the post-training change in student conflict management involved greater use of negotiation (Johnson, Johnson, Dudley, & Acikgoz, 2001; Johnson, Johnson, Dudley, Ward, & Magnuson, 1995). In a 2001 study, Johnson and associates explored the effect of training on student use of conflict resolution strategies through hypothetical conflict scenarios. Students were asked to explain, before and after training, what they would do in two hypothetical conflicts over name calling and computer access. Before training, at least half the students indicated they would request teacher assistance; after training, appeals for teacher intervention were reduced to 15%. Moreover, responses specifying the use of integrative negotiation techniques increased from 0% before training to more than 60% after training. In all, there was a significant increase in the post-training use of constructive management strategies like negotiation, invoking norms for behavior, proposing alternatives, etc. (Johnson et al., 2001). The effect of program participation on the actual use of conflict resolution strategies was examined in a 1995 study by Johnson and associates, using students' self-reported recollections of past conflicts. Results showed that there

were significant after-training – but not before-training – differences between trained and untrained students in the use of negotiation, with negotiation used more frequently by trained students. Moreover, out of 738 reported conflicts, there were no significant differences between the strategies students used for (574) home conflicts and those for (209) school conflicts (Johnson et al., 1995).

The differences in peer mediation’s impact on disputants and mediators: The distinction between disputant and mediator gains cogency when mediation training is furnished to a limited number of students as in the cadre approach to peer mediation (Denenberg et al., 1998). Unless the cadre peer mediation program includes an expansive conflict resolution education component, only mediator trainees are tutored in negotiation mediation skills. While mediators experience mediation as purveyors of conflict resolution assistance, disputants experience mediation as recipients of assistance in managing disputes. Experience indicates that only a minority of disputants turn to peer mediation for assistance with conflict.

Impact of peer mediation on disputants:

Disputant resistance to using mediation: Peer mediation has not proved immune to the under-utilization that plagues mediation generally (Ballard, Holtzworth-Munroe, Applegate, & D’Onofrio, 2011; McGillis, 1997; Pearson & Thoennes, 1988). At one urban New England junior high school (seventh through ninth grades) with a cadre peer mediation program, few students – 12% – made use of the program services or knew someone who had, and fewer still – 8.6% – had actually used peer mediation despite widespread (nearly 95%) student awareness of the program’s existence (Theberge & Karan, 2004). Participation remained low even though the school pursued a policy of allowing some conflicting students to choose mediation and detention. Theberge and Karan (2004) examined the factors underlying the reluctance of these young adolescents to using mediation through a qualitative analysis of survey responses from 58 students, 24 teachers, and 57 parents and interviews of another 20 students, 12 teachers, and 8 parents. Emerging themes implicated a variety of school circumstances, program conditions, and student attitudes and behaviors in discouraging the use of peer mediation. Student attitudes included concern with other students’ negative opinions about mediating (peer pressure), mediation’s ‘un-cool’ reputation, distrust in mediators’ maintenance of neutrality and confidentiality, and doubts about peer mediation’s effectiveness. Student behaviors reflected, among other things, their reliance on avoidant or passive modes of conflict management, a preference for autonomous problem-solving, and getting help from friends and, sometimes, from other adults. Relevant school circumstances included the absence of modeling of mediation by school personnel; an authoritarian, rule-based disciplinary system; and a school climate in which safety was not an issue but teacher-student bonds were weak and faculty support for mediation was lacking (Theberge & Karan, 2004). In other research, student appreciation of the benefits of engaging in conflict, expressed by 40 inner-city seventh-graders in interviews conducted by Opotow (1991) – benefits such as “maintaining valued social norms, deterring harmful behavior,

providing protection from victimization, providing gains in status, increasing self-awareness, clarifying personal identity, clarifying others' identities, clarifying dominance hierarchies, initiating friendships, and they were enjoyable" – may also depress disputants' use of peer mediation (Opatow, 1991, cited by Johnson & Johnson, 1995, p.483).

The impact of peer mediation on post-mediation behavior of disputants: Since disputes that get resolved cease to instigate further negative behavior by disputants, peer mediation has the potential to depress the incidence of negative behavior in school. Support for the salutary effect of peer mediation on the subsequent behavior of disputing high school students was furnished by a 1992 study conducted by Tolson, McDonald, and Moriarty (Kellermann et al., 1998). These researchers tracked post-dispute disciplinary actions for quarreling high school students who were randomly assigned to either peer mediation or traditional disciplinary measures (consisting of warnings, suspensions, and demerits) and found that during a ten-week period peer mediation participants were less likely to be referred to the assistant dean. Additional evidence of a positive mediation impact on disputants' conduct was suggested by a study involving 81 disputes over rumors, harassment, or fighting among middle school students (Van Slyck & Stern, 1991). Three-fourths of the disputants reported that their disputes would have escalated to physical fighting absent mediation.

Peer mediation's impact on post-mediation beliefs of disputants: Over all, studies of the interaction between peer mediation and conflict-related disputant beliefs have been few, with the exception of research into disputant attitudes about the mediation process, which has tended to show positive mediation impact. Disputants' satisfaction with their peer mediation experience has been well-documented (e.g., Burrell et al., 2003; Harris, 2005; Van Slyck & Stern, 1991). In the same vein, disputants' expectations about the helpfulness of mediation showed improvement after mediation according to a small study conducted by Harris (2005) into the effects of peer mediation on disputing adolescent students.

To the extent that the influence of peer mediation on other conflict-related beliefs of disputants has been investigated, results have been mixed. Harris' study, which involved a pre- and post-intervention design using surveys of 51 high school students, provided indications of a positive peer mediation influence on some conflict-related beliefs of disputants. It revealed that adolescent disputants' view of their relationship with the other disputant was significantly more positive after peer mediation. Post-mediation ratings of school climate by these students also climbed (Harris, 2005). When it came to disputants' beliefs about how to respond to conflict, however, the findings from the Harris study and from a small dissertation study by Winkelspecht (2007, December 17) did not align well. The study by Harris, which involved adolescent disputants, found that the use of collaborative conflict techniques was rated more positively by disputing adolescents after peer mediation than before (Harris, 2005). Yet, Winkelspecht's quasi-experimental study, which investigated the impact of peer mediation on the beliefs of disputing

elementary school students, yielded results that did not provide clear support for post-mediation improvement in disputant attitudes towards collaborative strategies.

In order to assess the effect of peer mediation on children's beliefs about what strategy to use in conflict situations, fourth and fifth graders (nine-eleven years old) were asked in the Winkelspecht study, before and after peer mediation was instituted, to respond to a questionnaire in which they were invited to imagine themselves in various conflict situations and to choose which response they would employ in each scenario out of an array of options that included both aggressive and competent (i.e., likely to increase productive outcomes and decrease harmful ones) strategies. Analysis of the responses of 14 disputants and a 35-student control group failed to yield convincing evidence that mediation changed disputants' selection of competent strategies. Disputants' post-mediation choices of competent strategies did not differ significantly from their pre-mediation choices (nor did those of the control group). Similarly, there was no significant change in pre- and post-mediation selection of aggressive responses by disputants (or by the control group). Furthermore, a comparison of disputant and control group responses showed that disputant post-mediation scores on selecting competent strategies in conflict situations did not differ significantly from those of the control group. However, disputant post-mediation scores regarding their use of aggressive tactics were significantly lower than those of the control group.

The Winkelspecht research also examined children's beliefs about behaving aggressively in response to conflict. On a second questionnaire administered before and after mediation, students provided their evaluation of the appropriateness of various examples of aggressive behavior (e.g., indicating on a Likert scale whether it's okay or wrong to say mean things to other people when you're angry) and of the use of aggressive behavior as retaliation in a conflict situation (e.g., indicating whether it's okay or wrong for a boy to scream at another boy who said something bad to him). Again, there were no significant differences between pre- and post-mediation evaluations on the part of the disputing children (or of the control group). Likewise, when comparing the evaluation of retaliatory aggression by disputants to that of the control group after mediation, no significant differences emerged. Yet a significant difference between the responses of these two groups was found with respect to their evaluation of aggression that was contrary to the predicted direction: disputants evaluated examples of aggressive behavior more favorably than did the control group following mediation.

Caution is in order in understanding these research results about the interaction between peer mediation and disputant beliefs. First of all, it should be remembered that the absence of evidence is not evidence of absence, which is particularly relevant to investigations into the effect of infrequent interventions, like peer mediation, on entrenched behaviors and beliefs, like those relating to conflict. Secondly, factors relating to age and belief type may have moderated results. Finally, methodological considerations such as reliance upon self-reporting, small sample

size, and lack of uniformity in the instruments for measuring beliefs, may have influenced research findings.

Disputant's learning to manage conflict from peer modeling of conflict resolution behavior: Peer mediation's role in reducing conflict may extend beyond the resolution of the disputes brought to mediation to include strengthening disputants' conflict resolution skills. Typical untrained elementary school student conflict responses include requests for teacher intervention, repeating demands, and forcing the other disputant to concede (Johnson & Johnson, 1995). Interviews of more than 8,000 students and 500 faculty members in over 60 junior and senior city high schools revealed that over 90% of student conflicts were either unresolved, avoided, or involved overpowering the opposition; 55% were decided by school authorities; and 17% were dealt with through negotiation (DeCecco & Richards, 1974, cited by Johnson et al., 2001 and by Vankoughnett, 1998, May). Under social learning theory advanced by Bandura (1969, 1977, 2001), "through *modeling* (the behavioral, cognitive, and affective changes derived from observing one or more people) and *observational learning* (acquisition of new behaviors demonstrated by a model) people can learn new behaviors as well as understand the consequences of their actions" (Harris, 2005, p. 142). In a cadre approach to peer mediation, students who are not mediators remain untutored in negotiation and mediation skills. However, under this theory, the conflict resolution capacity of disputants may be enhanced during the mediation process to the extent that the conflict resolution behaviors modeled by peer mediators, such as cooperation, collaboration, communication, and problem-solving, are observed and learned by the disputants. The use of peers as mediators – often chosen on the basis of leadership qualities and other features representative of the youth community – is designed to enhance the effectiveness of modeling as a learning tool since factors like similarity between observer and role model, social status among peers, and mediation competence (imparted by training and experience) increase the likelihood that disputants will learn the conflict resolution behaviors that they observe being modeled by mediators (Harris, 2005).

The influence of peer mediator modeling of conflict resolution skills on disputants' conflict resolution capacity was examined in a study of the effects of peer mediation on 51 disputing students at three high schools (Harris, 2005). In response to surveys, high school disputants demonstrated their awareness of the skills used by mediators by identifying which skills were employed and indicated that communication skills (i.e., talking calmly, asking questions, clarifying information, listening actively, etc.) were the most frequently used. Eighty-one percent of these disputants agreed that they had learned new skills, rating the communication skills of talking calmly, clarifying information, and listening actively as the most useful of the skills they had used after mediation. Eighty-six percent reported learning skills by observing the mediator's behavior. These self-reports were partially corroborated by a 60% reduction in discipline referrals for disputants following mediation (Harris, 2005).

The impact of peer mediation on post-mediation behavior of mediators: Research suggests that mediators' behavior may also improve after participation in peer mediation. A significant decrease in disciplinary referrals for peer mediators compared to a control group of students was found by Bell and associates (2000) in their study of an intermediate school cadre peer mediation program. During the treatment year, 30 students, ten each from the sixth, seventh, and eighth grades, received training in conflict resolution skills and in mediation, and subsequently mediated 34 disputes with a 94% agreement rate. Before participating in the program, disciplinary referrals for mediators did not differ significantly from those of the control group. After program participation, not only did mediators have significantly fewer disciplinary referrals than the control group, but the office referrals for mediators (but not for the control group) declined since the previous year (Bell et al., 2000).

The acquisition of mediation skills and their application to non-mediation situations by children trained as peer mediators were shown by Johnson and Johnson (1995) for an elementary whole school peer mediation program and subsequently confirmed by a study of cadre peer mediation in three rural middle schools (Smith, Daunic, Miller, & Robinson, 2002). In the latter study, a large majority of middle school peer mediators (87% of 85) reported that they used mediation skills once or twice a month in their interactions with friends and family, and 85% of 40 parents confirmed the monthly home use of these skills.

The impact of peer mediation on conflict-related beliefs of mediators: Research into the impact of peer mediation training and mediation practice on mediators' attitudes towards conflict resolution strategies did not yield positive results. No significant changes between mediators' pre-training and post-training preferences for conflict-related coping strategies were found in a 1986 study of rural middle school cadre peer mediation by Stern, Van Slyck, & Valvo (cited by Van Slyck & Stern, 1991). Denial and self-blame were preferred over active mastery in dealing with conflict by peer mediators, aged 13

s on average, in their responses on normed scales both before and after training and mediation experience. Equally, changes in conflict resolution styles or in the importance placed upon communication skills as measured by relevant scales were not significantly different for urban middle school peer mediators after mediation training and experience than for a control group (Smith et al., 2002).

Impact of peer mediation on the psycho-social development of mediators: Adolescent psycho-social development presumably benefits from the child's taking responsibility for dealing with conflict in ways that do not rely on authority (Van Slyck & Stern, 1991). Accordingly, enhanced self-esteem and improved social skills are among the anticipated positive outcomes of mediation practice. So far, though, evidence for a positive impact from training and mediating on mediators' psycho-social development has been mixed at best. The strongest evidence for such a connection was reported in the 1986 middle school peer mediation study by Stern and associates (Van Slyck & Stern, 1991). Pre- and post-treatment administration of a normed measure of self-

image – the Offer Self-Image Questionnaire – to peer mediators revealed significant changes on just two scales – Morals and Vocational-Education, which showed improved adjustment in responsibility and concern for others and greater recognition of the importance of vocational and educational achievement. Additional supportive evidence for the positive impact of training and mediating on peer mediators’ social skills was furnished in a 1996 examination of an elementary school peer mediation program by Epstein, which revealed greater gains in mediators’ social skills as measured by the Social Skills Rating System than in those of disputants or control students (Jones, 2004).

By contrast, other research did not convincingly reinforce findings of significant improvements in mediator self-esteem or social skills when measured by different instruments, or when other grade levels of students were studied, or even when the same instrument was used. Thus, contrary to the findings of a positive association between increased social skills and mediator training noted above, Zucca-Brown’s 1997 pretest/posttest-control group research found no significant differences between responses of elementary school student mediators and a control group on an identical assessment – the Social Skills Rating System (Benton, 2012; Jones, 2004). Moreover, the self-esteem of elementary school mediators did not differ from that of a control group as measured by the Piers-Harris Children’s Self-Concept assessment (Zucca-Brown, 1996), nor did the self-esteem of 53 middle school peer mediators significantly improve according to overall pre- and post-treatment mean responses to the Barksdale Self-Esteem Scale (Crary, 1992).⁶ Likewise the self-esteem and locus of control (i.e. a developmental factor involving the ability to self-regulate own behavior instead of relying on external controls) of nine-eleven year-old students did not significantly diverge from the normal range of their age group and remained constant before, during, and after mediation training, based on their responses to the B-G Steem Questionnaire (Sellman, 2003, September).

The impact of peer mediation on school-wide post-mediation experience of conflict: With respect to the perception of school conflict from a group perspective, a number of studies have indicated that the presence of a peer mediation program positively impacted school climate (Burrell et al., 2003). Several studies found that the operation of a peer mediation program was associated with a reduced perception of school conflict by administrators and teachers and greater feelings of safety at school on the part of students, teachers, and parents (Horowitz & Boardman, 1994; Johnson, Johnson & Dudley, 1992; Jones, 2004; Smith, Daunic, & Miller, 2002; Winkelspecht, 2007, December 17). A comparative study of different models of peer mediation programs (e.g., cadre, whole school) involving 27 schools in three cities found that the impact of peer mediation on school climate was significant in elementary schools but not in middle or high schools (Jones, 2004).

⁶ The Crary study, which concluded that although two individual items showed significant changes, the overall means in responses to a self-esteem measure showed no significant changes, was one of four studies used in a meta-analysis by Burrell and associates (2003) to claim that research showed that mediating improved student mediators’ sense of self.

In contrast, when the impact of peer mediation on frequency of disputes was measured by all students' reported experience of school conflict, results failed to confirm a positive impact from peer mediation (Sellman, 2003, September). This outcome was presented by dissertation research into a peer mediation program at a British junior school, where instruction in conflict resolution and related skills and values was provided to all students in Year-3, Year-4, and Year-5 classes. While the two younger classes received six lessons, the class of 25 Year-5 students, ages nine-ten, received nine hours of instruction, with an additional two days of training in peer mediation skills. The mediation process was scripted and mediation training largely consisted of practice in using the script. Eighteen of the older students volunteered as mediators. A survey (developed by Arora, 1994) of 80-plus students from all three classes, administered before, during, and after the intervention year in which peer mediation was conducted, tracked the frequency of student-reported instances of interpersonal conflict, consisting of 40 items of positive and negative experiences that included "tried to kick me," "threatened to hurt me," "demanded money from me," "tried to hurt me," "tried to hit me," and "tried to break something that belonged to me." For each survey administration, responses about frequent instances of conflict were used to generate a Bullying Index while infrequent instances yielded a General Aggression Index. The indices did not significantly change from one survey administration to the next, indicating that the operation of the peer mediation program did not affect the frequency reports of interpersonal conflict experienced by students (Sellman, 2003, September). The possibility that the program had an impact on the frequency of conflicts experienced by mediators or by disputants who used mediation rather than the entire school population was not addressed in this research.

Association between peer mediation and school-wide disciplinary actions: School-wide measures of disciplinary actions and conflict indicators have also been used to assess the impact of peer mediation on student conflict. Presumably, mediation-induced cessation of hostilities may be reflected in changes of the school-wide indicators. A meta-analysis of 36 experimental studies of school conflict resolution interventions, including 17 peer mediation programs and 16 instructional programs (also called conflict resolution education) serving students aged six to seventeen years old, provided robust evidence for a post-mediation reduction in student conflict as measured by decreases in general school disciplinary events, suspensions, and aggression indicators (Garrard & Lipsey, 2007). Indeed, the mean effect size of .26 standard deviations found in this meta-analysis translated into nearly one-third fewer student fights from the level of fighting typically found in schools for a given year. Notably, there was no significant difference in effect sizes for types of programs – for example, between conflict resolution education and peer mediation. Age, however, was a significant factor with larger effect sizes for conflict resolution intervention on the anti-social behavior indicators for older students than for younger ones (Garrard & Lipsey, 2007). Additionally, a significant decrease in out-of-school suspensions over three successive years of operation of an elementary school peer mediation program as compared to the year preceding the program's launch provided supporting evidence for the longitudinal impact of peer mediation on reducing student conflict (Schellenberg et al., 2007).

On the other hand, a study of a middle school peer mediation program conducted by Van Slyck and Stern (1991) found that student reports of reduced violence after peer mediation were associated with a decline in reported fighting but not in recorded detentions, suspensions, or expulsions. Similarly, a 1989 controlled study performed by Araki, Takeshita, and Kadomoto indicated that rates of student retention, suspension, dismissal and attendance were not significantly related to peer mediation (cited by Kellermann et al., 1998).

Overall, research results for the reduction of student conflict through peer mediation as measured by school-wide indicators of conflict appear promising. Yet, setting aside methodological differences and limitations, the lack of uniformity in research findings about peer mediation's connection to disciplinary measures signals the need for additional information about the role of peer mediation in a school's disciplinary structure, e.g. to determine the extent to which school policies – like excluding violent altercations and major infractions from the repertoire of conflicts handled through peer mediation or using mediation to replace rather than supplement disciplinary measures – constitute intervening factors that influence the relationship between peer mediation and disciplinary actions.

Lessons from the Research

Schools may choose from a variety of demonstrably effective intervention programs to minimize student conflict: Schools concerned about reducing or preventing students' violent behavior have a wide array of school-based intervention programs at their disposal. The positive effects on aggressive and disruptive student behaviors demonstrated by 249 experimental or quasi-experimental studies of intervention programs led Wilson and Lipsey (2007) to conclude that "schools seeking prevention programs may choose from a range of effective programs with some confidence that whatever they pick will be effective (p. 30)." If a positive youth development approach to addressing student conflict is sought, an assortment of 25 rigorously evaluated programs that "address positive youth development constructs" were identified by Catalano and associates as likely to "result in positive youth behavior outcomes and the prevention of youth problem behaviors" (1998, November 13). In particular, conflict resolution programs involving peer mediation and conflict resolution education significantly reduced students' anti-social behavior among participating students according to 36 rigorous studies of such programs (Garrard & Lipsey, 2007).

Financial costs and the detriment to educational opportunities from serious disciplinary measures may be reduced through implementation of a conflict management program: There are significant financial and educational costs exacted by disciplinary actions that remove students from school, such as out-of-school suspensions and expulsions. The harm that expulsions and suspensions can inflict upon students ranges from impeding educational progress to entanglement with the juvenile justice system: "Suspended students are less likely to graduate on time and more likely to be suspended again, repeat a grade, drop out of school, and become

involved in the juvenile justice system” (U.S. Department of Education, 2007, January, p. ii). The use of an effective conflict resolution program to deal with student conflict has been shown to reduce the incidence of student anti-social behaviors and aggression (e.g. Garrard & Lipsey, 2007; Wilson & Lipsey, 2007) thereby lessening the need for serious disciplinary actions with their accompanying loss of the educational opportunities associated with school attendance. Serious disciplinary actions like expulsions and suspensions also have financial repercussions, costing schools an average of \$12,437 over a decade ago (Batton, 2003). In contrast, the operation of a conflict management program typically involved an investment of \$8,441 (Batton, 2003). Despite the passage of time, these 2003 numbers are instructive, indicating that to the extent that an effective conflict intervention program reduces the need for suspensions and expulsions, savings in disciplinary costs may be achieved. Indeed, “programs that address conflict resolution are widely used in U.S. schools because they are viewed as low in cost to administer and promise long-term benefits by reducing the amount of resources schools expend managing problematic interpersonal behaviors [citations omitted]” (Garrard & Lipsey, 2007, p. 9).

Ease of satisfactory program implementation and quality maintenance emerges as a key factor in a school’s selection of an intervention program for reducing student conflict:

Neither treatment modality nor service format – i.e., whether the intervention is informational, cognitively-oriented, or social skills building or whether services are delivered to all students or to a select group, or through direct conflict resolution skills instruction, embedded conflict resolution education, or peer mediation – significantly affected the success of conflict intervention programs (Catalano et al., 1998, November 13; Garrard & Lipsey, 2007; Wilson & Lipsey, 2007). However, “inadequate implementation can obscure the value of sound concepts” (Kellermann et al., 1998), and the effectiveness of conflict intervention programs was impacted by the adequacy of program implementation. In the meta-analysis of conflict resolution education and peer mediation programs conducted by Garrard and Lipsey (2007), effects were larger for well-implemented programs than for those that experienced implementation difficulties. Similar findings emerged from research into student violence prevention programs: “significantly larger reductions in aggressive and disruptive behavior were produced by those programs with better implementation, that is, more complete delivery of the intended intervention to the intended recipients” (Wilson & Lipsey, 2007, p. 132). As a result, schools are advised to consider the degree of difficulty of adequate implementation and maintenance of program quality in their choice of a student conflict intervention program. “Plausible tools to support implementation fidelity include a clearly articulated program manual, consistent training of service providers, and systematic monitoring of the transactions that take place between ... service providers and recipients.” (Garrard & Lipsey, 2007, Fall, p. 28). Institutional commitment to the program, including the availability and sustainability of administrative support and resources, would likewise be critical to program success in diminishing and managing student conflict (Theberge & Karan, 2004).

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