

EVALUATION OF A SCHOOL-BASED PEER MEDIATION PROGRAM:
ASSESSING DISPUTANT OUTCOMES AS EVIDENCE OF SUCCESS

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EVALUATION OF A SCHOOL-BASED PEER MEDIATION PROGRAM:
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DISSERTATION ABSTRACT

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Peer mediation programs are frequently employed by school systems nationwide to help decrease rates of violence and promote constructive problem-solving methods. The current literature regarding evaluation of these programs provides a mixed picture related to their effectiveness. The literature largely fails to examine outcomes on disputants, who are arguably the group most impacted by this intervention. The current study seeks to expand the current literature by examining disputant outcomes after participation in mediation sessions utilizing a pre-posttest design. Two self-report measures examining conflict resolution strategies and beliefs about aggression were used to study disputant outcomes. Results of self-report measures given at pre and post test indicated disputants did not change their overall beliefs about retaliatory aggression but increased their endorsement of general aggressive beliefs at posttest. Results also indicated disputants endorsed using significantly less aggressive strategies in response to

conflict scenarios after participation in mediation. This study does not support that peer mediation programs can be effective at changing core beliefs about aggression but does demonstrate children who participate in mediation are less likely to act on these aggressive beliefs in future conflict situations. Results support the need for more research investigating the impact of peer mediation programs on disputants.

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INTRODUCTION

Violent activities in our nation's school systems continue to make headlines. Discussions on how to improve conditions in our nation's schools notably follow an event such as the tragedy at Columbine High School. These incidents, while tragic and high profile, overshadow the greater problem with school-based conflict in our nation's schools. The reports that follow these events are misleading as these events account for less than 1% of homicides among school-aged children (CDC, 2006). What is more disturbing are the plethora of national school violence statistics reported by the Center for Disease Control's (CDC) National Center for Injury Prevention and Control (NCIPC). Most notable the NCIPC's current report highlights the following statistics (Youth Violence Fact Sheet, March 2007, www.cdc.gov/ncipc/factsheets/yvfacts.htm):

- 5,570 people aged 10-24 years were murdered in 2003; of these deaths 82% were killed as a result of firearms.
- More than 780,000 people ages 10-24 were treated in emergency rooms in 2004 for injuries sustained in a violent altercation.
- Results of a survey of high school students conducted in 2005 reports 35.9% of respondents reported being in a physical altercation one or more times in the preceding year.
- 6.5% of respondents reported carrying a weapon on one or more occasions on school property in the past 30 days.

- 30% of 6th-10th graders in the United States were involved in bullying (either as a victim, aggressor, or both).
- 6% of high school students reported not attending school on at least one occasion in the preceding 30 days because they felt unsafe at school or on the way to and from school.

Perhaps as a result of such sobering statistics conflict resolution education (CRE) programs are on the rise in our nation's schools. There are a variety of CRE programs that are being implemented in schools today. Overall, these programs have good intentions but lack strong empirical evidence to support their effectiveness. Providing program evaluations that seek to determine the effectiveness of these programs is important so administrators can make decisions about which type of program to implement, estimate the amount of time and money involved in such a program, and provide the institutional support to begin and maintain the program over time. The current study provides an evaluation of one such program: peer mediation.

This study examines the effectiveness of a peer mediation program in a local school. We examine the nature of conflicts referred to mediation, the resolution rate of these conflicts, track school discipline referrals, and examine conflict resolution strategies and endorsement of beliefs about aggression. Tracking disputant outcomes is an area that is grossly underrepresented in the current peer mediation literature, though arguably the most important method for tracking the effectiveness of the intervention for those who utilize it (Harris, 2005). This study utilized self-report surveys to examine disputant outcomes, examine student views about conflict and how they approach conflict situations both before and after participation in mediation. The scores on these measures

were then analyzed to determine whether participating in the mediation process changes the way students think about approaching conflict situations in the future. It was anticipated the peer mediation process can change core beliefs about conflict and the conflict resolution strategies utilized by children (who have been referred to mediation due to their difficulty resolving conflicts effectively); this study used empirical evidence to determine the issue.

A second goal of this study was to establish the use of recognized self-report measures with this population. The majority of evaluation research in peer mediation uses a variety of qualitative program data and school climate surveys to evaluate effectiveness (Burrell, Zirbel, & Allen, 2003). There are few, if any studies that use conflict resolution measures to assess outcomes (Harris, 2005). If self-report measures are used, they are typically designed for use at a specific school, minimizing the measures applicability and the results generalizability. This study used measures from the clinical psychology literature that examine conflict resolution strategies to assess outcomes in the peer mediation program. This study examined how these measures can be used reliably and effectively to assess mediation outcomes, as well as help establish a firmer base for peer mediation research.

In addition to these pre/post test measures, descriptive information was gathered about the mediations themselves and analyzed to determine whether this mediation program is typical of programs described in the literature. The data was used to describe the types of conflicts brought to mediation, the amount of mediations conducted each year, and compute a resolution rate. Discipline referral rates for the 3 years preceding the school's implementation of the peer mediation program and for the 3 years since

implementation were also examined and compared to the results in the existing literature.

A main objective of this study was to provide a validated model for program evaluation that can be implemented at any school across the nation. However, before discussing the specific evaluation components of mediation, a brief history of mediation programs and CRE programs in general is provided to set the stage.

Historical Foundations

Since the early 1970's, there has been an awareness of the need for violence prevention curricula in our nation's school systems. In order to respond to these needs, school systems began circulating ideas to address this problem from a prevention standpoint. This proactive approach was in contrast to the typical conflict resolution style employed by schools, which was to wait until there was a significant problem and then address it. The first attempt to incorporate nonviolence education into a school curriculum came in 1972 with a project spearheaded by the Quakers in the New York City school system (Maxwell, 1989; Sweeney & Carruthers, 1996). The goals of this initial project were to teach cooperation and conflict resolution to students and teachers school-wide. The project came to be called Children's Creative Response to Conflict (CCRC) and still continues today.

The second important contribution to the nonviolence education effort came with the Carter administration's push for communities to establish neighborhood justice centers. The goal of these centers was to provide community members with a place to solve problems individually or to solve problems that plagued the larger community through mediation. These neighborhood justice centers provided a way for community members to solve their problems by working through the mediation process and reaching

a compromise, instead of going through lengthy litigation wherein a judge would determine the final outcome. Out of these neighborhood justice centers came what would be called Community Mediation Centers. This idea readily spread to communities all over the country, and many communities began to see the benefit of mediation as a conflict resolution strategy.

In the early 1980's, school systems began to proposition Community Mediation Centers in their respective communities to teach conflict resolution strategies to their students. These partnerships led to the beginning of peer mediation programs in the school system. The main goal of these programs was to teach students how to manage conflicts more effectively without the intervention of school personnel. Mediation programs in the schools gained greater attention in 1984, with the founding of the National Association for Mediation in Education (NAME). This organization began to publicize these programs nationwide and provide training for schools interested in beginning mediation programs. After the founding of NAME, school mediation programs began to grow at a high rate with just a hundred or so schools nationwide having programs in 1984 which grew to several thousand programs by 1993 (Maxwell, 1989) When expanding the number to include CRE programs in general there are between 15-20 thousand programs nationwide within the nation's 85 thousand public schools (Jones, 2004).

The literature base related to peer mediation has also been growing mainly since the late 1980's when peer mediation became the "hot" CRE effort with 130 references listed on the topic since that time. This search was conducted by using the keywords "peer mediation" when searching PSYCINFO and including no restrictions on the search.

Of these references, only 28 of those found in PSYCINFO either have or discuss program evaluation components leaving much to be desired in that particular area. Upon closer examination of these 28 evaluation studies, 9 are unpublished dissertations and only 23 are directly applicable to peer mediation or accessible in English. Evaluation references were found by searching with the keywords “peer mediation and evaluation” in PSYCINFO without limitations on the search results. Though more references related in some way to evaluation can be found, they are not characterized as such in the database, making their location difficult for researchers without detailing each of the 130 total references on the topic.

Types of CRE Programs

Conflict resolution can be defined as follows, “a spectrum of processes that all utilize communication skills and creative thinking to develop voluntary solutions that are acceptable to those concerned in a dispute. Conflict resolution processes include negotiation (between two parties), mediation (involving a third process facilitator), and consensus decision-making (facilitated group problem solving)” (Crawford & Bodine, 1996; p.123). Mediation is further defined as, “intervention in a dispute by an impartial third party who can assist the disputants in negotiating an acceptable settlement.” (Crawford & Bodine, 1996; p.123). There are 4 types of programs which emerge in the school-based conflict resolution education (CRE) literature; the process curriculum approach, peaceable classrooms, peaceable school approach, and peer mediation programs (Crawford & Bodine, 1996; Jones, 2004).

In a process curriculum approach, the aforementioned conflict resolution techniques are infused into the school curriculum and supplemented by additional lessons

on decision-making, types of conflicts, and strategies for on the spot resolution of conflict. These programs conduct instruction on a daily or weekly basis as a separate class focused on acquisition of these skills by the entire student body (Jones, 2004). An example of a process approach is the “Second Step Program” which was adopted state and nationwide as part of the “No Child Left Behind Act” passed by the Bush administration in 2001 (Jones, 2004).

Peaceable classroom approaches implement CRE as outlined above as part of the curriculum of each subject within an individual classroom (Jones, 2004). In these programs, individual teachers integrate CRE into their lessons in history, science, reading, and even mathematics. These programs also target additional skills such as gender and racial biases, more detailed perspective-taking techniques, and at higher education levels strategies to reduce hate crimes (Jones, 2004).

Peer mediation programs teach the same basic set of core conflict resolution strategies but are heavily reliant on training a select group of students in specific mediation techniques. These programs are based largely on mediation techniques used in adult courts for years to resolve small claims disputes, divorce/custody disputes, and even union organizations disputes (e.g., United Mine Workers). In these programs, designated “mediators” serve to facilitate discussion between students involved in altercations. These programs rely solely on the formal mediation process as the manner for handling disputes. This constitutes the most distinct difference between the mediation programs and the other CRE programs, as other curriculum based programs employ a more diffuse manner of integrating conflict resolution into daily school life. Peer mediation programs train students ranging in age from kindergarten to high school.

Peaceable school programs incorporate each of the techniques described above in but add an additional step and teach these same skills to parents and school officials in order to provide for greater environmental impact of the CRE effort (Jones, 2004). These programs typically provide their students with a combination of each of the 3 previously described conflict resolution techniques in hopes of creating a venue for handling more difficult conflicts individually (through mediation) as well as teaching general skills to the entire school population.

Each of these 4 different CRE programs incorporates similar base techniques to a great degree. Of these 4 programs, peer mediation has been adopted most frequently by school systems nationwide (Jones, 2004; Sweeney & Carruthers, 1996). This is due to the ease of implementation of this program versus larger school curriculum approaches (Jones, 2004). Since these programs are the most widely used, they are also the most widely researched method of CRE. To say that peer mediation programs are the most widely researched should be put into a historical context, since all of this research is relatively new in comparison with other literatures.

Peer Mediation Program Structure

Peer mediation programs are typically implemented in one of two ways; a cadre approach, in which a small group (usually around 25 students) is trained in mediation techniques and provides mediation to students in the entire school, or a whole student body approach, in which all students are trained in mediation tactics and rotate being “assigned mediators” on a daily basis (Johnson & Johnson, 1995; Johnson & Johnson, 1995). Both types of programs have been found to be equally effective in reducing discipline referrals and having a high level of successful conflict resolution (Bickmore,

2002; Jones, Kmita & Vegso, 1998). It is left up to individual school systems to decide what type of program may best suit their school. The whole student body approach is less studied due to the preference of schools to manage a smaller cadre program before extending the program to include all students (Johnson & Johnson 1995).

Though there are two approaches for beginning a peer mediation program, the core training components remain the same. Peer mediation programs contain a curriculum that consists of around 15 hours of intensive training (Burrell, 2003; Burrell & Vogl, 1990; Jones & Brinkman, 1994) and includes the following elements; introduction to conflict training, negotiation training, and mediation training (Burrell & Vogl, 1990; Johnson, Johnson, Dudley, Ward & Magnuson, 1995; Johnson & Johnson, 2001; Johnson, Johnson, Cotton, Harris & Louison, 1995).

In the introduction phase of training, students are taught to define conflict, describe types of conflict experienced by their peers, and the importance of resolving conflict (Johnson & Johnson, 1995; Lupton-Smith & Carruthers, 1996). In the next phase of training students are taught a variety of negotiation techniques such as neutral conflict discussion, perspective taking, tactics for brainstorming possible solutions, strategies for reaching an agreement, and active listening skills (Hale & Nix, 1997; Johnson & Johnson, 1995; Lupton-Smith & Carruthers, 1996). In the final stage of training, students are taught specific mediation steps like laying the ground rules for the mediation, making sure both parties want to solve the problem (assessing commitment), facilitating successful communication and negotiation, handling difficult situations (arguing and stalemate), and completing the report form with the final solution and signatures (Johnson & Johnson, 1995; Lupton-Smith & Carruthers, 1996). While programs agree

on what essential elements to include in training, typically programs differ in the manner in which specific skills are taught during training, such as in written work or in role-play scenarios. They also differ with respect to length of training, with some schools teaching skills for a few minutes a day or a lesson a week, while other schools train all mediators in several days of intensive training (Bell, Coleman, Anderson, & Whelan, 2000). Both training lengths have been proven to be effective in implementing a peer mediation program (Bell, 2000; Casella, 2000; Roush & Hall, 1993).

Research has identified several important factors to consider and plan for before starting a new peer mediation program. Strategies such as designating a mediation coordinator for the school, determining when training will occur, specifying the amount of training, setting a regular schedule with a place and time when mediations will occur, and providing teachers and other school personnel with education about the program and the contribution they can make to its success have been shown to be important factors in sustaining a program (Araki, 1990; Bickmore, 2002; Hale & Nix, 1997; Humphries, 1999; Lupton-Smith & Carruthers, 1996; Sandy, 2001). Lindsay (1998) also recommended the general community, as well as the parents of students, are informed about the program so they can help reinforce the use of conflict resolution strategies outside of school.

Many studies also recommend follow-up training on a monthly basis to help mediators with problems encountered during actual mediation and to provide ongoing training related to effective communication and mediation skills (Bickmore, 2002; Humphries, 1999; Lupton-Smith & Carruthers, 1996; Lindsay, 1998). Once a program is up and running schools must build in a program evaluation component to determine

whether or not the program is being effective at reaching its goals of decreasing conflict in the school and increasing the ability of students to solve problems effectively and peacefully.

In order to achieve the goals of mediation, comprehensive program evaluation methods need to be in place to monitor the quality and usefulness of these programs. While numerous studies agree on the essential components of mediation (Burrell & Vogl, 1990; Johnson, Johnson, Dudley, Ward & Magnuson, 1995; Johnson & Johnson, 2001; Johnson, Johnson, Cotton, Harris & Louison, 1995), the literature leaves much to be desired regarding standardized methods for evaluating programs (Carruthers & Sweeney, 1996; Harris, 2005; Horowitz & Boardman, 1994; Smith, Duanic, & Miller, 2002; U.S. Surgeon General's Report, 2001). Without data and methods for standardizing and evaluating programs, it is difficult to determine whether or not this intervention is successful.

Program Evaluation

The impact of peer mediation programs is typically measured in one of four ways: examining descriptive program data, charting the number and frequency of discipline referrals or the number of suspensions/expulsions for a given year, by using self-reports to examine the school climate, and by examining the impact of the program on trained mediators (Carruthers & Sweeney, 1996; Farrell, Meyer & White, 2001; Harris, 2005; Horowitz & Boardman, 1994; Johnson, Johnson & Dudley, 1992; Roush & Hall, 1993; Smith, Daunic, & Miller, 2002). Table 1 categorizes the 23 evaluation studies referred to earlier in this paper when conducting a specific search for this literature with regard to the content areas for evaluation referred to above:

Table 1:

Evaluation Studies

Study (first author)	Unpub Diss	Disc Refer	School Climate	Mediator Outcome	Disputant Outcome	Prog Desc
<i>Nix, 2007</i>	No	No	No	No	Yes	No
<i>Harris, 2005</i>	No	No	Yes	Yes	Yes	No
<i>Durbin, 2003</i>	Yes	No	Yes	Yes	No	No
<i>Smith, 2002</i>	No	Yes	Yes	Yes	No	No
<i>Farrell, 2001</i>	No	Yes	No	No	No	No
<i>Johnson, 2001</i>	No	No	No	No	No	Yes
<i>Bell, 2000</i>	No	Yes	No	Yes	No	Yes
<i>Heerboth, 2000</i>	Yes	No	Yes	No	No	No
<i>Stewart, 2000</i>	Yes	No	No	Yes	No	No
<i>Oshaughnessy, 1999</i>	Yes	No	No	No	No	No
<i>Harris, 1999</i>	Yes	Yes	Yes	Yes	No	No
<i>Soutter, 1998</i>	No	Yes	Yes	No	No	Yes
<i>Nelson, 1997</i>	Yes	No	No	No	No	No
<i>Epstein, 1996</i>	Yes	Yes	No	Yes	No	No
<i>Thompson, 1996</i>	No	Yes	Yes	No	No	No
<i>Stevahn, 1996</i>	No	No	No	Yes	No	No
<i>Curruthers, 1996</i>	No	Yes	Yes	Yes	No	Yes
<i>Nelson-Haynes, 1996</i>	Yes	Yes	Yes	Yes	No	Yes
<i>Nance, 1996</i>	Yes	No	No	Yes	No	No
<i>New Mexico Center for Dispute Resolution, 1996</i>	No	Yes	Yes	Yes	No	Yes
<i>Johnson, 1995</i>	No	Yes	No	No	No	Yes
<i>Burrell, 1990</i>	No	Yes	Yes	Yes	No	No

Note: Unpub Diss = Unpublished Dissertation; Disc Refer = Discipline Referrals; Prog Desc = Program Description.

Many studies have looked at descriptive program data to determine how successful mediators are in resolving conflicts or to identify frequent types of conflicts and solutions seen in mediation. Studies have found that between 80-100% of conflicts referred to mediation result in an agreement between disputants (Araki, 1990; Bickmore, 2002; Burrell & Vogl, 1990; Burrell, Zirbel & Allen, 2003; Johnson & Johnson, 1996; Johnson & Johnson, 2001; Lupton-Smith & Carruthers, 1996). Studies have also found the most frequent types of conflicts referred to mediation involve name-calling or teasing, physical threats, verbal threats, and possession of item controversies (sharing or stealing property); (Casella, 2000; Johnson, Johnson, Cotten, Harris & Louison, 1995; Johnson & Johnson, 1994, Johnson & Johnson, 1996; Johnson & Johnson, 2001; Smith, Daunic, Miller & Robinson, 2002). While this data provides good descriptive information about the mediation process, this type of information does not examine outcomes directly on disputants who access peer mediation.

Discipline referrals and rates of suspensions/expulsions are an easy method for tracking incidents of violence because paperwork is normally kept regarding the incident, particularly when the incident has been severe enough to warrant the attention of teachers, principals, or other school personnel. Studies charting discipline referrals typically keep track of baseline data for at least one year preceding the implementation of peer mediation, and continue to track this data for at least one year after the program has been in place.

The results of these studies have shown mixed results. While some studies find significant differences between referrals in the years preceding and following implementation of peer mediation (Johnson & Johnson, 1994; Smith, Daunic, Miller &

Robinson, 2002), other studies find little to no differences between referrals before and after mediation programs are instituted (Bickmore, 2002; Burrell, Zirbel & Allen, 2003; Carruthers & Sweeney, 1996; Johnson, Johnson & Dudley, 1992; Roush & Hall, 1993). Perhaps the most impressive outcome in this area is found in Johnson and Johnson's (1994) study which found an 80% overall drop in discipline referrals after beginning peer mediation in an elementary school, with not one of these remaining discipline problems making it all the way to the principal in that school year. Such a dramatic reduction in referrals, even if just in one single study, certainly warrants thorough investigation as to the mechanisms that promote successful mediation programs, and methods for standardizing procedures so all mediation programs have the potential to see this same result.

Studies tracking school climate variables show consistently positive results. These studies commonly report students feel safer at school after the implementation of a peer mediation program, teachers feel safer and report spending less time dealing with conflict in the classroom, and parents feel there has been an improvement in the safety of their school (Farrell, Meyer & White, 2001; Horowitz & Boardman, 1994; Johnson, Johnson & Dudley, 1992; Jones, 2004; Roush & Hall, 1993; Smith, Daunic, & Miller, 2002).

With regard to mediators, studies have found that training in mediation has resulted in the acquisition of prosocial/collaborative conflict resolutions skills in comparison to their peers who have not received such training (Bickmore, 2002; Burrell, Zirbel, & Allen, 2003; Carruthers & Sweeney, 1996; Harris, 2005; Jones, 2004; Smith, Daunic, & Miller, 2002). Studies have also shown that mediators show an increase in academic achievement after their involvement in the program (Bickmore, 2002; Smith, Daunic, &

Miller, 2002). Finally, mediators have been shown to have demonstrated less involvement in conflict situations or decreased their own discipline referrals after being given instruction in mediation (Bell, Coleman, Anderson, & Whelan, 2000).

While these types of studies dominate the evaluation literature this author contends none of the previously described methods assess the effectiveness of the mediation curriculum per se, but instead measure many different school variables one of which is the implementation of a mediation program. The one factor that is most surprisingly lacking in the evaluation literature is evidence of disputant outcomes. Only two published studies examine the impact of the mediation process on disputants (Harris, 2005; Nix & Hale, 2007). Even these two disputant focused studies are different in their methodology. While Harris utilized interview and self-report measures to track change in disputants' conflict resolution knowledge, Nix utilized a qualitative design that tracked disputants' perceptions of their experience with mediation. Aside from these two studies, disputants are largely left out of the program evaluation literature and this author would argue disputants are the most important group researchers and implementers of these programs hope to impact but have not gone to the trouble to assess. Inherent in the voluntary nature of referrals to peer mediation, disputants are the group who struggle with resolving conflicts effectively, thus come to mediation seeking help in a conflict situation. Mediators themselves would be thought to have better developed skills to begin with, as they are nominated by their peers and school professionals as exemplary students, so change in mediator knowledge of conflict resolution strategies, while a benefit, does not demonstrate the effectiveness of mediation to change and aid in problem-solving to those are most in need.

By failing to examine disputant outcomes, it is difficult to determine whether or not mediation is successful at changing the way in which children conceptualize conflict and respond in conflict situations. If one can demonstrate a change in approach to conflict situations and/or acquisition of new skills after participating in mediation this would certainly demonstrate the effectiveness of the program. An identified goal of mediation is the acquisition of new conflict resolution skills and disputants are the ones who need this knowledge most of all, but are not being researched. More disputant outcome research is needed to enable school officials as well as researchers in the field to use this evaluation strategy in the future as an important component in program evaluation (Harris, 2005; Horowitz & Boardman, 1994).

Beyond the lack of disputant-focused evaluations there are several other problems with current lines of research. First, variables being measured in outcome studies are not sensitive enough to capture the specific effects of mediation, but instead measure areas that are so broad any number of school-based programs could be the cause. Discipline referrals, for instance, could and do fluctuate regularly each year as a function of things such as school composition, achievement level of students, changes in discipline policy, changes in teachers, or an increased level of monitoring from school officials (Bickmore, 2002; Carruthers & Sweeney, 1996; Horowitz & Boardman, 1994).

Evaluation studies that use discipline referrals rates to demonstrate success typically use data collected on the total number of discipline referrals for the year prior to and the year following implementation of a peer mediation program. The total rate of discipline referrals is subject to many other factors as outlined above and thus mediation may not contribute at all to the change in discipline referrals or, if it does, may only contribute to a

portion of the change that occurs over time. The specific portion of change that is accounted for by mediation is thus unable to be parceled out of the larger set of school variables (or has not been controlled for specifically in the current literature).

This line of evaluation research also does not consider that a certain amount of conflict will always be referred to the office due to the seriousness of the offense (e.g. physical altercations, drugs, alcohol, or weapons). Thus, even if a program was maximally effective there would still be a certain number of discipline referrals in a given time period. In addition, this line of research does not take into consideration that even if discipline referrals do decrease, these students may or may not have been involved in the mediation process. Students may just handle conflicts outside of school or are unable to resolve them effectively but do not seek help to remedy the situation. Keep in mind that discipline referrals are generated by school officials, thus a large number of conflicts could still be occurring and not come to the attention of school officials. Students who are having conflicts that go unrecognized or unreported amongst school officials may choose to engage in the mediation process and be successful in resolving their conflicts, but these successes would not be reflected in discipline referral rates. Peer mediation programs are targeted at the whole school population and not just at the “high risk” students who are more prone to engage in physical altercations that result in serious disciplinary action. Some studies have shown that in high risk populations (such as inner-city youth) that mediation is not as effective as it may be in lower risk populations (Casella, 2000; Jones, 2004)

The problem of generality with discipline referrals also plagues school climate research (Carruthers & Sweeney, 1996). While it is helpful to know whether or not

school personnel and students feel there has been a change in the climate of their school, this does not demonstrate the effectiveness of peer mediation specifically. School climate variables such as how comfortable children are in school, how safe they feel in their classrooms, how safe teachers feel with their students, etc. could fluctuate each year as a function of the same variables outlined above that impact discipline referral rates. This line of research does not demonstrate that mediation has had an impact on how children solve conflicts or how many conflicts occur. Just knowing that students and teachers feel safer in their school does not mean that mediation has been effective. This is especially the case with cadre mediation programs since only a select group of students receive mediation training and the large majority of students, while they may know the program exists, are not aware of the CRE techniques or have occasion to come into contact with the program directly.

A second and perhaps larger problem with evaluation research in mediation is the lack of standardized measures that assess conflict resolution beliefs or provide an assessment related to how individuals would respond to conflict situations (Horowitz & Boardman, 1994). This problem is also evidenced by the lack of dissemination of resources from individual school programs to the larger research literature. Even when looking at studies that use conflict resolution measures to track changes in mediator's views or examine school climate following the implementation of a program there is still no consistency within these studies as to how to assess these factors. Researchers that include an evaluative component predominantly create their own set of measures to track impact on school climate or mediator performance. With each study using a new set of measures specific to their program it does not foster collaborative research on peer

mediation. There are a fair amount of school districts that use some type of program evaluation component but the measures used in these evaluations are unpublished or are available only for a high price to consumers. Even in the two studies described above that assess disputant outcomes; these studies still utilize program specific measures making it difficult to duplicate results across programs.

As outlined previously, there are only 27 total references that appear in PSYCINFO related to evaluation, only three of these which use a similar set of measures to assess impact on school climate and mediator knowledge level. These studies are also conducted within the same school district and the measures used are available for a high cost to consumers. When searching the unpublished dissertation database, 19 studies are available that target evaluation of a mediation program. Each of these studies uses a different method to assess the effectiveness of mediation.

Another difficulty, not heavily reported in the literature, is the fact that many school officials and mediation program coordinators are hesitant to engage in evaluation projects because they are afraid about what the evaluation may find (Carruthers & Sweeney, 1996; Horowitz & Boardman, 1994). Many schools have some level of funding tied to mediation programs. Further, mediation coordinators for individual schools, school districts, and private mediation consultants from larger firms have salaries dependent on the ability to sustain these programs in the schools (Carruthers & Sweeney, 1996; Horowitz & Boardman, 1994). Thus, to conduct a program evaluation and find the program is not successful would be personally detrimental to their job security. Though this has not been stated in the literature base this author contends this is also a valid reason why the evaluation literature focuses on broad categories to assess effectiveness

rather than focusing on more specific issues related to disputant outcome. Assessing broad categories, which are affected by more variables, increases the chances one will find a positive impact of the program.

In addition to the difficulties highlighted above there is one final barrier that impedes program evaluation. This is the logistical difficulty of conducting research in a school setting (Carruthers & Sweeney, 1996). Most individuals who implement peer mediation programs are either school counselors or teachers who are largely unfamiliar with the types of methodology used in more rigorous research studies. Program coordinators are also not necessarily trained in implementation of peer mediation programs at all, much less how to conduct a rigorous program evaluation. A recent study highlights the lack of CRE focused training in colleges of education (Leighfield & Trube, 2005). This study found that professors in education programs felt training in CRE was necessary for new teachers but virtually no one was covering these topics in their curriculum. due to time constraints or lack of flexibility in curricular requirements (Leighfield & Trube, 2005).

Further, Carruthers and Sweeney (1996) report a lack of standardized methods to measure program success or failure. This makes it even more difficult for novice researchers to implement an evaluation component. The authors highlight the fact that school districts modify assessment tools, curriculum, and program structure to accommodate to the particular needs of their school. By doing so, this hinders the ability to replicate program effects or even determine what components of the program are successful. This is also highlighted by the lack of replicable measures used in the field, as many programs end up modifying or creating new measures for use only in their particular school (Carruthers & Sweeney, 1996).

Carruthers and Sweeney (1996) further contend that traditional methods of scientific research are often infeasible in a school setting and more specifically in a mediation program. Techniques such as random assignment, controlling for specific variables, creating a “no treatment” control group, and conducting research in a laboratory setting free from distractions are difficult to use in peer mediation research. The nature of mediation is voluntary, thus individuals who feel they need help resolving a conflict are encouraged to use the process when needed, making random assignment impossible. Schools are rampant with distractions for students and researchers that throw off the research schedule, thus rigid timed designs are not able to be conducted. Designs need to be flexible, minimize time taken away from academic instruction, and assess the entire school for outcomes. Also, many of the factors that impact discipline referral rates and school climate variables such as academic achievement, level of social skills, and SES cannot be controlled for systematically in a feasible manner. It is important not to forget that schools are first responsible for educating students. While some would argue that CRE is an important part of general education provided to students, the stiffening requirements on teachers to improve test scores in academic areas have an impact on the ability to conduct a thorough program evaluation (Leighfield & Trube, 2005). Though these factors do impact the ability to conduct research in a school environment, this should not prevent researchers from applying the most rigorous models feasible to mediation evaluation.

A recent article by Harris (2005) seeks to make up for some of the previously described limitations in the literature by specifically examining the impact of mediation on disputants. In this article, the focus is on assessing and evaluating disputant learning

that takes place as a function of peer mediator modeling during live mediation sessions. Harris (2005) applied historical research in the area of social learning theory, which contends that modeling of appropriate social behavior can result in changes in one's behaviors and in acquisition of new, in this case, social skills (Bandura, 1969). It seems peer mediation is a perfect example of social modeling applied to conflict resolution as disputants could acquire new skills to help them approach conflicts more constructively in the future.

Harris (2005) used a variety of self-report measures (developed to assess his specific program curriculum) related to conflict resolution style, pre/post test interviews, observation forms to code behavior in the actual mediation sessions, and a summary form related to the mediation process to examine disputant and mediator impact. The measures he used were developed for use in a North Carolina school system and used to evaluate a peer mediation program over a 9 year time period¹. The measures included an interview, in which participants were asked a variety of questions about mediation and to rate which skills they felt were the most useful and the strategies they would employ when placed in another conflict situation. Also included were several self-report measures that examined specific knowledge about mediation and conflict resolution skills, approach to conflict situations, and various others related to satisfaction with mediation and attitude towards the process.

Harris (2005) concluded that following a two-month lapsed time between mediation and post assessment disputants had learned the definition of mediation and could remember the specific steps of mediation. Disputants were also satisfied with the

¹ These measures were not able to be obtained for the current study because they are not published for public use.

mediation process and felt it helped them to resolve an important conflict. He further found disputants had significantly improved their attitudes towards school climate and more importantly toward their use of collaborative conflict resolution styles. Disputants also reported they felt they had increased their knowledge about effective communication skills and secondly about relationship-building and resolution skills.

During the post-test interview, disputants reported they most frequently utilized skills related to talking calmly, clarifying information, and active listening. Disputants also reported they were able to better understand the other disputant's perspective and could help one another to better discern what created the conflict in the first place. Each of these skills is heavily stressed in mediation training programs as well as other CRE programs targeting larger school groups. Prior to this study, there were no documented studies that specifically examined whether or not disputants learned anything by participating in mediation. This study was the first of its kind to be published and highlights the important effects mediation has on disputants.

A second study just published in the spring of 2007, also examined disputant outcomes (Nix & Hale, 2007). This study utilized a qualitative design and examined disputants' perceptions of the process after participating in a formal mediation session. Through interviews and observations of mediation sessions, these researchers concluded overall disputants endorsed favorable impressions of mediation. They reported these favorable impressions were mainly related to being able to and being encouraged to discuss their problems in the school setting rather than having to find time outside of school to resolve the conflict. Additionally, the absence of school officials determining the outcome of the conflict was an identified benefit. The favorable impressions of

mediation were found to increase in groups where disputants were friends prior to the conflict and in those that self-referred themselves to mediation, thus making the process completely voluntary. Those individuals who were referred by school officials to try mediation were found to provide less favorable evaluations of the process. These authors additionally found that when mediators deviated from the “mediation script”, indicating they were no longer adhering to the strict procedural outline of mediation, disputants became less satisfied with the mediation process. This finding was directly related to the perceived neutrality of mediators that was deemed compromised by disputants.

Each of these studies provides evidence that disputants feel mediation is helpful in resolving problems and allows disputants to resolve conflicts in a non-violent manner. More of these studies are needed to demonstrate mediation is effective at teaching these skills and providing a new perspective on conflict resolution to those students who struggle with it most (i.e., those referred to mediation in the first place). A fruitful resource that can be used to support researchers in this area is the, seemingly overlooked (though related), child clinical psychology literature.

Research Focus in Clinical Psychology versus School Psychology

The literature base for peer mediation is housed almost exclusively in the field of school psychology, though many of the techniques taught in CRE programs are frequently used in clinical psychology in the treatment of anger management, social skills deficits, and impulsivity (to name a few). Further, the field of social learning theory, used frequently as the basis for cognitive-behavioral therapy in children, draws heavily on the ability of an individual to learn from their peers and other individuals in their environment (Bandura, 1969; Harris, 2005). In this case, peer mediation is the perfect

place for this type of modeling to occur and for disputants to learn new conflict resolution skills much like they would in a social skills group or anger management group.

As a whole, research on treatment programs in clinical psychology focus on implementing a specific form of intervention and tracking subsequent symptom reduction as evidence of a successful intervention. This author believes research on disputant outcomes is in essence tracking “symptom reduction” related to use of unsuccessful conflict resolution strategies. Thus, the area of disputant outcomes is a topic that transcends the literature bases, opening the door for more clinical psychologists to provide research in this area. The focus of research in school psychology largely relates to identifying and tracking factors that influence schools as a whole, thus making disputant outcomes an area that is not as readily assessable by current research methods. It was anticipated this study would demonstrate this type of research can and should be conducted in schools that use peer mediation programs as the key evidence for program success. The studies outlined below are good examples of how outcome research can be conducted in a school (keeping in mind the limitations inherent in school research outlined above, such as time restrictions and intervening variables) while also examining individual outcome variables.

Evaluating other school-based programs

An example from the child clinical research literature that highlights the ability of school-based research to overcome some of the limitations stated previously is the evaluation of the Penn Resiliency Program (Gillham, et.al., 2007). The Penn Resiliency Program is a school-based intervention that utilizes a cognitive-behavioral depression prevention protocol to attempt to decrease rates of depression in middle school aged

children. This program employed a randomized control design by employing 3 schools and providing intervention through groups conducted after school for participants. This study had three groups such that there was one intervention group that received the CBT and social-problem-solving intervention, a no treatment control group, and one group received an alternative intervention that provided instruction aimed at stressors associated with adolescent depression but did not address depressive symptomatology directly. This study utilized self-report measures to demonstrate effectiveness of the intervention and found mixed success for the intervention such that a decrease in depressive symptoms was found in two of the three schools receiving the intervention over the 30 month assessment period. This study highlights ability to overcome the obstacles discussed previously and do rigorous research in a school setting.

There are also many other school-based high profile programs that conduct regular evaluations to determine the effectiveness of their intervention. One such study tracked the impact of the D.A.R.E. Plus curriculum (which supplements traditional D.A.R.E. curricula with lessons on the prevention of violent behavior) by using a randomized design to compare traditional D.A.R.E. programs to schools with both the supplemented curriculum and no treatment at all (Komro, et.al., 2004). They used self-report instruments employed nationally each year to track D.A.R.E. outcomes and supplemented these with measures of violent activity (used in other studies of this kind) to demonstrate the effectiveness of the D.A.R.E. Plus intervention to impact violent behavior specifically (Komro, et.al, 2004). This study evaluated a school based intervention while utilizing a randomized design and employing standardized assessment tools that were widely used in D.A.R.E. programs, as well as other studies that assess

violent activity.

A similar study evaluated the Going Places Program, which targeted children in grades 6-8 to prevent cigarette smoking (Simons-Morton, Haynie, Saylor, Crump, & Chen, 2005). This study tracked smoking behavior in this population by utilizing self-report measures in a pre/post test format and utilized random assignment to intervention conditions (Simons-Morton, Haynie, Saylor, Crump, & Chen, 2005). Through the use of self-reports they were able to control for the degree to which participants were influenced by peers or family members who smoked, leading them to conclude that participants who had friends that smoked were less impacted by the program than those who did not (Simons-Morton, Haynie, Saylor, Crump, & Chen, 2005).

While some may argue that these types of programs are assessing less complex and more readily identifiable behaviors than CRE programs, this author believes that is not the case. There are many measures used to assess propensities to violent behavior, agreement with engaging in physical or verbal aggression, beliefs about aggression more generally, and specific social skills measures which tap into the core domains targeted by mediation programs. Many measures used to assess aggression, anger management, social skills, withdrawal from social conflict, and other issues found within the large social learning literature could be helpful tools for assessing CRE disputant outcomes.

Summary

Peer mediation programs are the most widely used method of CRE in the United States (Jones, 2004). The literature in this area displays consistent findings related to key training components, length of mediation training, methods for implementing programs, importance of follow-up training for mediators, and the types of conflicts that are most

common in mediation (Casella, 2000; Johnson, Johnson, Cotten, Harris & Louison, 1995; Johnson & Johnson, 1994, Johnson & Johnson, 1996; Johnson & Johnson, 2001; Smith, Daunic, Miller & Robinson, 2002). The mediation literature is not well established in terms of identifying what features are important to include in program evaluations (Carruthers & Sweeney, 1996; Harris, 2005; Horowitz & Boardman, 1994; Smith, Duanic, & Miller, 2002; U.S. Surgeon General's Report, 2001). Problems related to lack of specificity in outcome variables, lack of consistent assessment measures and methods, difficulties implementing a rigorous methodology in a school-system, and the inability to control many variables that impact students are some of the problems that plague evaluation literature in this area (Carruthers & Sweeney, 1996; Harris, 2005; Horowitz & Boardman, 1994; Smith, Duanic, & Miller, 2002; U.S. Surgeon General's Report, 2001). There are also few studies investigating disputant outcomes, which is arguably the most important way to demonstrate the effectiveness of mediation (Harris, 2005).

Current Study

The current study provides an evaluation of a peer mediation program in an intermediate school serving students in grades 3-5, that addresses some of the shortcomings of previous research. First, this study was designed to target disputants and examined the direct impact of mediation on conflict resolution skills, beliefs about conflict, and solutions to perceived conflict. Since participation in mediation is voluntary, participants cannot be randomly assigned to control and disputant conditions. Thus, this study used a quasi-experimental design utilizing a pre/post test method to measure program effectiveness on disputants. The quasi-experimental design as described by Kazdin (2003) was the most appropriate given the volunteer nature of

mediation, as disputants will self-select into the experimental disputant condition. The measures used to assess conflict beliefs and conflict resolution strategies were chosen as the basis of their prior use in studies related to assessing conflict, though none have been previously used in mediation research. One measure, the *Social Problem-Solving Measure*, was first developed by Dodge, Bates and Petit (1990) to track social problem-solving skills in their Fast Track program, which is a highly recognized program in the child clinical literature. The other measure, *Normative Beliefs about Aggression*, was developed by L. Rowell Huesmann (1992) and has been used to assess beliefs about aggression and ways of responding in conflict situations in many community based elementary school population studies. By using this design it was believed disputants would demonstrate a change in their conflict beliefs and demonstrate more constructive problem-solving techniques after participation in mediation.

Finally, this study followed current literature trends in the area and tracked discipline referral rates. The data were tracked for the three years preceding implementation of the peer mediation program and three years following the program's implementation. Descriptive program information examined rate of referral to mediation, types of problems that come to mediation, and computed the resolution rate for this particular school.

Specific hypotheses for this study for each phase of the evaluation are as follows:

Hypothesis 1: Descriptive Data

Descriptive program data will demonstrate this school's program is commensurate with other peer mediation programs in terms of the type of conflicts brought to mediation and the rate of successful resolutions achieved through mediation.

Hypothesis 2: Discipline Referrals

Discipline referral will significantly decrease after the implementation of the peer mediation program.

Hypothesis 3: Differences between Groups

- a. Scores on the *Normative Beliefs about Aggression Measure* subscales will show a significant decrease in comparison to the control group in their endorsement of both retaliatory aggression and general aggression.
- b. Scores on the *Social Problem-Solving Measure Aggressive* subscale will show a significant decrease in comparison to the control group in their endorsement of aggressive strategies and scores on the *Competent* subscale will show an increase in comparison to the control group in their endorsement of competent strategies to resolve conflicts.

Hypothesis 4: Differences between pre and posttest assessments for Disputants

- a. Scores on the *Normative Beliefs about Aggression Measure* subscales will show a decrease in their level of endorsement of both Retaliatory Aggression and General Aggression between pre and posttest assessment for disputants.
- b. Scores on the *Social Problem-Solving Measure's Aggressive* subscale will demonstrate a decrease in disputants' endorsement of aggressive strategies between pre and posttest assessment after participation in mediation. Scores on the *Social Problem-Solving Measure's Competent* subscale will increase for disputants between pre and posttest assessment indicating a greater endorsement for use of competent strategies after participation in mediation.

METHODS

The current study was an evaluation of the peer mediation program at one intermediate school in the Opelika City School System. The first part of this evaluation provided descriptive information about the nature of conflicts that come to mediation and the frequency of reaching a resolution through the mediation process. The second portion of this evaluation tracked discipline referrals to determine whether the rate of discipline referrals has dropped over the course of the 3 years since implementation of the program in comparison with the years prior to its implementation. The final portion of the current study examined the effectiveness of the mediation program on disputants (through having participated in mediation) by examining conflict resolution strategies and beliefs about aggression. To determine the effectiveness of the peer mediation program on disputants, scores on self-report measures were examined for a control group of students (those who have not been through the mediation process as a disputant) and a quasi-experimental group of students (those who have formally utilized the mediation process).

School

Data collection for this study was conducted at Morris Avenue Intermediate School (referred to as Morris Avenue hereafter). Morris Avenue was an intermediate school serving children in grades 3-5 and enrolling 305 total students divided as follows: 96 students in 3rd grade, 108 students in 4th grade, and 101 students in 5th grade. The school was composed of 155 males and 150 females who conformed to the following

demographic characteristics: 34% Caucasian, 62.3% African-American, .03% Asian, and .01% American Indian. The SES of the school as a whole can most closely be represented by the percentage of children who are eligible via income level to obtain the governmental free lunch program. For Morris Avenue, 54.1% of children were eligible for this program. The statistics for Morris Avenue were similar to the demographics reported for the school system but contain more minority group representation. The Opelika City School system reported the following statistics regarding their elementary education programs; 52.7% Caucasian students, 45.3% African-American students, .01% Asian students, and .01% Indian students (Sperling's Best Places, Feb. 2006, <http://www.bestplaces.net/school/SchoolStats>). The average number of students per school in the Opelika City School System was 430.44 and the number of students eligible for the governmental free lunch program equates to 47% of the total number of students (Sperling's Best Places, Feb. 2006, <http://www.bestplaces.net/school/SchoolStats>). The state of Alabama reported the following statistics for public school enrollment for the 2003-2004 school year: 60% Caucasian, 36% African-American, .02% Hispanic, .01% Asian, and .01% American Indian (National Center for Educational Statistics, Feb. 2006, <http://nces.ed.gov/ccd/pdf/stNfis031agen.pdf>).

This school was selected as the primary data collection site for several reasons. First, Morris Avenue has been a participant in the peer mediation program for 3 years. They are the only school (that participates in peer mediation) that sustains a high level of referrals throughout the year and who conducts monthly re-training sessions for mediators. The school also sets aside a designated time for mediation each day to ensure that problems are handled in a timely manner. Morris Avenue also has an excellent

school counselor and principal who are invested in the program and foster staff support for the program throughout the year. Morris Avenue exemplifies the criteria set forth in the literature as necessary for supporting and implementing a successful peer mediation program, thus its selection as the data collection site seemed appropriate (Araki, 1990; Bickmore, 2002; Hale & Nix, 1997; Humphries, 1999; Lindsay, 1998; Lupton-Smith & Carruthers, 1996; Sandy, 2001).

Peer Mediation

Support Staff

Morris Avenue was fortunate to have a school counselor who was invested in their peer mediation program. She was responsible for running the program on a day-to-day basis in the school and responsible for conducting daily mediation sessions. One classroom teacher who specializes in special education was also available to serve as a supervisor while students are conducting mediations. The principal was also helpful in keeping the program going and bringing in referrals when appropriate. All teachers in the school as well as other school personnel were expected to provide referrals to the peer mediation program when they see conflict in their classrooms. They were encouraged by the principal and counselor to use the program to settle disputes they see impacting students.

The program was further supported by the volunteer program at the Lee County Justice Center. This set of 4 volunteers, one being the primary investigator, served to conduct monthly re-training sessions, provided on-site supervision of mediation sessions, handled questions as they arise, and spoke at teacher meetings to keep staff motivated about the program.

Curriculum

The training curriculum used to instruct mediators has been adapted from the BBB Community Mediation Center Manual in Harrisburg, Virginia. Their original curriculum was modified to streamline the curriculum for students (e.g. taking out games without relevance to teaching mediation skills, combining content areas where such a combination makes sense), provide students with ample time for role-play practice (about 4 total hours), and to include expansions on topics that have been found particularly difficult for students to comprehend and apply (e.g. active listening techniques, paraphrasing, and brainstorming solutions).

Organization and Training

The program at Morris Avenue operated under the “cadre” approach to mediation. They selected a group of students from the 4th and 5th grades to be trained as peer mediators (15 students from each grade were trained this year resulting in a total of 30 mediators). Consistent with literature suggesting the importance of selecting a qualified and diverse group of mediators (Araki, 1990; Day-Vines & Day-Harrison 1996; Hale & Nix, 1997; Lupton-Smith & Carruthers, 1996; Pastorino, 1997; Theburge & Karan, 2004), students who expressed interest in becoming a peer mediator were then required to obtain teacher recommendations. These students were then selected through the strength of their recommendations and because they demonstrated the interest and personality traits most conducive to being able to facilitate problem-solving with their peers. This group of 30 students consisted of both honor students and those served through individualized education plans. The program also had a racially diverse group of mediators with about ½ of the group of Caucasian descent and ½ of the group of African-

American descent.

Training was conducted for two full consecutive school days during the fall of 2005 (approximately 16 hours of total training). All training was conducted by the volunteers of the Lee County Justice Center's mediation services program. One volunteer was a retired Army Colonel, one volunteer was an employee of the public housing department, the lead investigator was a graduate student in Child Clinical Psychology at Auburn University, and the mediation coordinator was a local church deacon.

Consistent with research literature, training was organized by the primary investigator and consisted of a mixture of lessons in mediation skills, effective communication strategies, definitions of conflict, ways of handling conflict, written exercises practicing specific communication strategies, and role-plays (Burrell & Vogl, 1990; Johnson, Johnson, Dudley, Ward & Magnuson, 1995; Johnson & Johnson, 2001; Johnson, Johnson, Cotton, Harris & Louison, 1995). For an outline of the training schedule and a detailed list of topics covered, please refer to Appendix A. Training was conducted by 4 different volunteers who each took turns presenting on specific topics. Each instructor had a different teaching style. These styles ranged from strictly lecture format to detailed question and answer sessions related to topic material. Student mediators also had a workbook that they could follow along with handouts and worksheets to supplement direct instruction. All training was conducted in a single classroom and provided ample space and resources.

Training was heavily instructional for the first day and half, with the last half day set aside to participate in structured role-play practice. During role-play practice,

mediators were divided into small groups and each mediator participated in a structured role-play scenario. Mediators were instructed to serve as the primary mediator (thus they were responsible for conducting the entire process themselves). Mediators were then evaluated to determine to what degree they completed the designated steps of mediation and how well they were able to demonstrate use of “micro-counseling skills” such as the use of active listening techniques, paraphrasing, brainstorming solutions, and various nonverbal behaviors such as eye contact and tone of voice. Mediators were then provided with feedback about areas in need of improvement and allowed to practice their skills in another role-play scenario later that same day.

At the conclusion of training, student mediators were paired by the counselor and primary investigator into groups of 2 based on their grade, racial and gender characteristics. Each mediator pair typically consisted of one 4th and one 5th grade student, who were typically of different genders and races. These mediators pairs were thought to provide the most representative mixture of peer mediators to enable students who are referred to mediation (disputants) the opportunity to identify with one of the mediators to ensure they will feel comfortable going through the mediation process. These mediator pairs were then assigned to mediate conflicts on one particular day each week to ensure consistency and availability. Though efforts were made to keep a specific schedule for mediators, these pairings were always subject to change as absences and unavailability due to classroom responsibilities impact the daily selection of mediators. Referrals to mediation began immediately once training had been concluded.

Students were referred to mediation through several venues. Teachers, school counselors, and the principal referred students to mediation when they became aware of

problems that were creating difficulty in the classroom or in other social venues at school. These conflicts were nonviolent in nature (though they may relate to threats of physical violence), as all physical altercations and other violations of school policy were handled directly by the principal. Students were also able to refer themselves to mediation if they were having a problem they would like to have help solving. Referrals were placed in the mediation box in the front office. This referral box was checked daily and mediations were conducted if possible on the day that the referral came in. There were times when there were numerous mediation requests, or lengthy mediations occur, thus at times not all mediations were handled on the day the referral came in. Mediations were conducted each day at either 9:30 in the morning or 1:30 in the afternoon. Disputants and mediators were called out of class and were allowed to remain in mediation until the problem was either solved or it was determined an agreement could not be reached. Typically mediations lasted about 20 minutes, though this varied with the nature of the dispute and whether or not there were difficulties encountered in mediation.

At the conclusion of mediation, mediators completed a “peer mediation report form” that required them to describe the conflict, note the solution, and described any problems that were encountered during the process. Disputants and mediators both signed this report form before leaving mediation and they were kept on file with the school counselor.

Participants

Participants recruited for this study were children at Morris Avenue who were currently enrolled in the 4th or 5th grades for the 2005-2006 school year. Of the 209 total students eligible to participate in the evaluation, 99 received parental consent for data to

be used for research purposes. This sample was then further reduced due to absences during dates of data collection such that only 58 subjects in this total number had completed assessment packets and could be included in the third phase of the study examining disputant outcomes. Thus, the sample for this study included 58 subjects: 39 were males and 19 were females. Subjects consisted of 21 Caucasians, 31 African-Americans, and 6 of “Other” racial composition. Subjects consisted of 15 nine-year-olds, 29 ten-year-olds, and 14 eleven-year-olds.

There were 35 subjects assigned to the control group, of which, 21 subjects were males and 14 were females; 22 were African-American, nine were Caucasian, and four were of “other” ethnic descent; five were nine-year-olds, 19 were ten-year-olds, and 11 were eleven-year-olds. There were 14 subjects assigned to the experimental group (referred to as the disputant group hereafter). Of the 14 subjects in the disputant group, 13 were male and one was female; seven were African-American, five were Caucasian, and two were of “other” ethnic descent; five were nine-year-olds, six were ten-year-olds, and three were eleven-year-olds. The mediator group consisted of nine total subjects. Of these nine subjects, five were male and 4 were female; seven were Caucasian and 2 were African-American; five were nine-year-olds and four were ten-year-olds. It should also be noted that while the mediator group scores were utilized in the reliability analyses this group was excluded from all group comparisons due to the low number of total subjects in this group. Overall, the disputant group was dominated by male subjects in comparison to the control group but other demographic variables remained fairly consistent between groups.

Measures

Questionnaires examining conflict resolution strategies and beliefs about aggression were administered to all 4th and 5th grade students at Morris Avenue. The first self-report measure was the *Social Problem Solving Measure* developed by Dodge, Bates and Petit (1990). Please refer to Appendix B for a copy of all measures used in this study. This measure was one of the only measures related to conflict-resolution that was aimed at elementary school children. This measure contained 8 scenarios, each asking a child to imagine themselves in a perceived conflict situation and to identify the response they would utilize if placed in this situation. The measure also provided pictures that corresponded to each perceived conflict scenario, so the child could imagine how the scene would look if it were happening to them. There were 5 possible responses to each of the 8 scenarios and answers identified either an aggressive or competent response. Answers reflected responses that were grouped as either aggressive or competent and dichotomously coded as such. Scores that were aggressive thus received a score of 1 on items that reflected aggressive responding and vice versa responses that were competent received a score of 1 on items that reflected competent responding. Responses were then summed to yield two average composite scores. The Aggressive Strategy subscale determined the extent that a child utilized an aggressive action in response to the perceived conflict situation. The Competent Strategy subscale determined to what extent a child utilized a competent strategy in response to the perceived conflict situation.

This measure was demonstrated to have internal consistency estimates of .53 and .52 when administered at a pre-test and post-test assessment of the Resolving Conflict Creatively Program (RCCP) on 5,053 children in grades 2-6 (Aber, Jones, Brown,

Chaundry, & Samples, 1998). This study did not report any test/re-test reliability statistics though these would have been easy to obtain and useful to describe the psychometric properties of the measure in their sample. Finally, in a longitudinal study conducted by Aber, Brown, & Jones (2003), this measure was used to assess 11,160 children in the 1st-6th grades in the New York City School System and was found to have average internal consistency levels for the two scales of between .56-.59 when tracked across a two year time span. This study also failed to report any test/re-test reliability statistics for the measure.

The second measure was the *Normative Beliefs about Aggression* measure and it was developed by L. Rowell Huesmann at the University of Michigan (1992). This measure was selected due to its targeted population of elementary to middle-school aged children and its use in previous studies examining beliefs about aggression. This measure consisted of 20 questions that gauge children's beliefs about using aggressive strategies to resolve conflicts. Each item was answered by responding to one of 4 choices ranging from "It's really wrong" to "It's perfectly OK." These responses had corresponding point values that were summed to yield scores for two subscales; General Beliefs and Retaliatory Beliefs. The General Beliefs subscale was composed of 8 items, while the Retaliatory Beliefs subscale was composed of 12 items. This scale was copyrighted and approval to use it in this study was obtained from the author directly.

Reliability data for this measure tested on 1,550 elementary school children reported an internal consistency estimate for the General Beliefs subscale of .80 and an internal consistency estimate for the Retaliatory Beliefs subscale of .82 (Huesmann & Guerra, 1997). Data reported for test/retest reliability in this study was calculated on 846

elementary school children who remained in the school over the one-year test/retest period and was .20 for the General Beliefs subscale and .34 for the Retaliatory Beliefs subscale (Huesmann & Guerra, 1997). A second study examined data from 614 elementary school students and found the Retaliatory Beliefs subscale to have an internal consistency estimate of .83 and a one-year test/retest reliability of .34 (Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000). With regard to the General Beliefs subscale it was found to have an internal consistency estimate of .81 and a one-year test/retest reliability of .33 when used to assess 1,041 elementary school children (Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000). Another study using data from 4,458 children in grades 1-6 found the internal consistency for the measure to be .87 for the total score index (Guerra, Huesmann, & Spindler, 2003).

Though initially this study was designed to contain a free response measure tracking resolutions to a conflict scenario this data had to be removed from analyses due to a variety of factors impacting its reliable use. Namely, subjects misunderstood this conflict scenario to some degree and responded with solutions that were unrelated to the scenario. Additionally, coders could not reliably agree on the solutions produced on this measure. Thus, the measure had to be excluded from analyses.

Procedures

Descriptive Data

For the descriptive portion of the study, the peer mediation report form (described earlier and completed by mediators at the end of each mediation session) was used as the primary source of data collection. Data regarding the nature of disputes, the frequency of reaching solutions, and the numbers of mediations held each year were collected using

this form. Refer to Appendix C for a copy of this form. These report forms were obtained from the school counselor and coded by the primary investigator for frequency and by category to determine the nature of the descriptive mediation data.

The coding procedure used to track these descriptive data followed procedures used by other researchers in the field (Casella, 2000; Johnson, Johnson, Cotten, Harris & Louison, 1995; Johnson & Johnson, 1994, Johnson & Johnson, 1996; Johnson & Johnson, 2001; Smith, Daunic, Miller & Robinson, 2002). These data were grouped by dispute category such as a physical threat, rumor, or teasing, and were tallied for frequency. The resolution rate as well as the total number of mediations conducted were reflected as frequency data.

Discipline Referrals

As discussed in the introduction, the effectiveness of peer mediation programs was commonly assessed by tracking discipline referral rates over time. In keeping with the tradition in the field, data about discipline referrals were gathered and analyzed to determine whether any differences exist between the number of referrals before and after implementation of the mediation program. Discipline referral data were tracked annually by the school and reported to the Alabama Department of Education. These data were gathered by assessing the Alabama Department of Education's School Report Cards. Data gathered via the School Report Card were grouped by 4 discipline categories; bomb threat, assault, drug-related, or weapon-related. The data were also broken down into types of disciplinary action taken and included 3 categories; suspension, expulsion, or alternative school. These data were aggregated across categories and reported as a yearly discipline referral rate. Data for the 3 years prior to the implementation of the mediation

program as well as the years since implementation of the program were compared to determine if differences existed for the time period in question.

Disputant Outcomes

The final portion of this evaluation sought to determine the effectiveness of the mediation program by demonstrating disputants who utilize mediation services display a change in their endorsement of aggressive strategies to resolve conflict, their endorsement of competent conflict resolution strategies, and their general beliefs about aggression. This portion of the evaluation was conducted by administering two self-report questionnaires. Participants were surveyed in a pre/post test fashion and grouped into the following categories; disputants (the quasi-experimental group designated by individuals who participated in mediation during the 3 month test period), mediators (individuals who were selected and trained as mediators), and the control group (those who did not participate in mediation during the 3 months test period).

Students in the 4th and 5th grade were administered each of the two measures at the end of February and again in the second week of May, prior to the end of the school year. To determine if participating in the mediation process had an impact on the individual conflict-resolution strategies, the responses to the self-report measures were analyzed and compared between the disputant and control groups. Scores for mediators were not used in this portion of the current study due to not having a sufficient number of subjects to support the comparison. Though these data were to be collected as part of the program evaluation for Morris Avenue designed by the primary investigator, an IRB application was submitted to allow the data to be used for research purposes. All participants were required to obtain parental permission for their data to be used in the

current research study. After obtaining demographics and scores each participant was assigned a number for the purposes of this study so their data remained anonymous.

Self-report measures were administered by the primary investigator, the school counselor, and a graduate research assistant. For the pre-test portion of this study, all children in the 4th grade were tested on February 27th, 2006 and the 5th graders were assessed on February 20th, 2006, each during the school day. For the post-test portion of this study, all children in 4th and 5th grades were administered the measures on May 10th, 2006. Students were administered the measures in a group in their homeroom classroom. Each group consisted of between 20-30 students depending on the size of the particular class and absences for each given day. Students were read the questionnaires in their entirety in order to ensure reading level did not hinder their ability to complete the measures. Prior to beginning, investigators read a set of instructions to the students regarding the survey and read as follows:

“Today we are going to have you complete some surveys which will help us to understand how children solve conflicts. Some of the questions could be hard and some could be easy, but we want you to answer as best you can. These surveys will ask you to imagine how you would solve conflicts that happen at school and also how you feel about ways to solve conflicts. Even though you may never have had a problem like those that are asked about it is important that you answer with how you WOULD act if this happened to you. These surveys will not be graded and your teachers and parents will not know how you answer these questions. Please answer each question honestly, even if you think that other people may not approve of the answer you want to give. Please remember that no

one will see your answers and we will keep all answers confidential (or secret), so answer honestly. Do you have any questions before we start?"

After completion of both the surveys, data were kept and stored by class.

Design

Three different design techniques were employed within this evaluation study. The first portion of the study was purely qualitative and was utilized in the descriptive phase of the study. Using the peer mediation report form, qualitative data were obtained and coded to determine the total number of mediations conducted, compute a conflict resolution rate, and determine the types of disputes most commonly found in mediation. The second portion of the evaluation employed a longitudinal comparison between discipline referral rates prior to and following the implementation of the peer mediation program. If such a difference existed, it may be attributable to the mediation program.

The third design was quasi-experimental in nature and utilized a pre/post treatment comparison of beliefs about aggression and utilization of aggressive versus competent strategies. Since mediation was a voluntary process it was impossible to employ random assignment to the treatment condition in this study. As outlined in Kazdin (2003), any study that cannot utilize random assignment to groups was deemed to fall under the heading of quasi-experimental and was thus subject to potential threats to internal and external validity that must be attended to by the researcher. Thus, those individuals who enter into and complete a formal mediation during the evaluation period were classified in the experimental (disputant) group for purposes of this study. This group was then compared to a control group of subjects who have not participated in mediation.

Using a quasi-experimental design creates a condition where results are subject to multiple threats to both internal and external validity. Particular threats to the internal validity of this study were the impact of development on participants' responses to pre/post test measures, attrition of participants in all groups, inability to control for other problem-solving interventions both in and out of school (e.g. parent discussion about conflict resolution, reading about conflict resolution, student modeling of appropriate conflict resolutions skills), and any combination of each of these factors. While the design of this project was required to be quasi-experimental, each of these potential threats to internal validity was addressed to the extent possible in order to maintain the integrity of treatment effects.

With regard to developmental changes that may have impacted responses to the measures, care was taken to administer the measures in a relatively brief period of time to ensure the least amount of time elapsed between pre and post testing. The three month time period between when the pre and post testing occurred would hopefully minimize the impact of development on the results. Attrition of participants would likely be a difficulty of this study due to the limited amount of time available to survey participants and the unpredictability of absences from school. Controlling for other problem-solving interventions was difficult to manage in a school-based population since most of the child's day was spent engaged in a learning activity. Individual teachers and parents may have felt a discussion was necessary to help a child solve problems more effectively and this occurrence could not be controlled for in this evaluation. It was hoped the impact of these potential confounding "treatments" would not impact the results of this study and by including a large sample in each group; these individual treatment effects would be

minimized. Finally, a combination of any of the above threats to internal validity could present a problem when determining the impact of the intervention. It was hoped that by using multiple sources of data regarding self-reports that if any of these problems occurred, it would not occur with regard to each measure thus making it possible to determine the impact of mediation in one of the aforementioned ways.

When looking at threats to external validity there were few strong concerns that could jeopardize the results with regard to this particular study. Typical threats such as sample characteristics, experimental bias, priming regarding the focus of the study, and timing of testing were controlled for to a large extent or are largely eliminated due to the nature of the participants (Kazdin, 2003). The school composition for this study included a larger number of minorities than the state and national rates helping to make sample characteristics not an issue for this study. By using a curriculum based on research in the field, it was possible to replicate the exact curriculum model at another school in the future making specific treatment impact replicable. Participants were not informed as to the nature of the evaluation and many have had no prior interaction with the peer mediation program or the primary investigator, thus experimental bias was kept at a minimum. The pre-test portion of the study was not specific enough as to divulge the content or purpose of the evaluation, thus priming (or test sensitization as referred to by Kazdin, 2003) was minimized. The time pre and post tests were given could potentially impact the participants' ability to respond to the measures at their peak attention level. Timing could have also been either a benefit or hindrance to the treatment group given that participants in this group may have participated in mediation at the beginning of the

3 month test period and others may have participated in mediation just the day prior to administration of the post-test.

RESULTS

Hypothesis 1 stated the descriptive program data regarding the nature of conflicts referred to mediation, resolution rate, and number of conflicts generated from the program at the current school would be commensurate with outcomes of previous studies examining these same descriptive features. To test Hypothesis 1, the peer mediation report form was utilized to gather descriptive program data. Descriptive program data was examined for the entire school year, such that the total number of conflicts reflected in the data for Hypothesis 1 was larger than those occurring during the pre and posttest assessment period. Thus, only a small number of these total conflicts could be used to identify subjects within the disputant group for later analyses. Yearly peer mediation program descriptives were then coded and tallied by category, as reflected by notations made on the form itself (Name-calling, Argument, Physical Aggression, Rumor, Other). Data reported regarding types of conflicts were coded by the primary investigator to reflect the first category rated by subjects as a “best fit” for the conflict. Over the course of the 2005-2006 school year there were a total of 64 conflicts referred to mediation. Of these 64 conflicts, 61 were successfully resolved through mediation and two remained unresolved after participating in mediation. This yields a resolution rate of 95.31% for the year. Previous studies have found that between 80-100% of conflicts referred to mediation result in an agreement between disputants (Araki, 1990; Burrell, Zirbel, & Allen, 2003; Johnson & Johnson, 1996). Araki (1990) found a resolution rate of 91.9%.

Another study found a resolution rate of 98% (Johnson & Johnson, 1996). Finally, a meta-analysis conducted by Burrell, Zirbel & Allen (2003) found a resolution rate of 93% across twenty-three studies in the area.

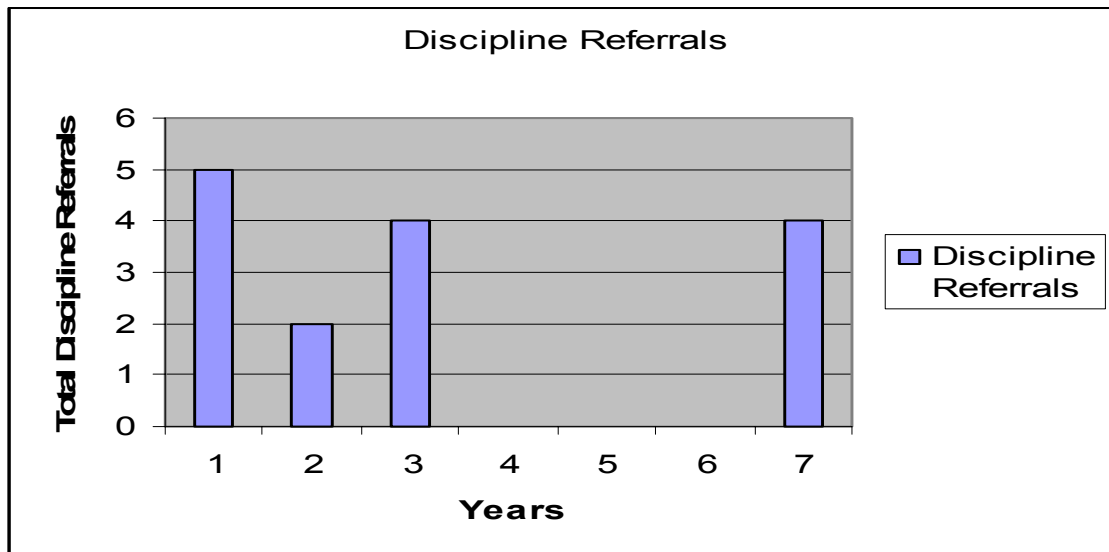
Further examination of the 64 conflicts found that 24 were the result of Name-calling or Teasing (38.10%), 13 were the result of an Argument (20.63%), six were the result of Physical Aggression (9.52%), six were the result of a Rumor (9.52%), and 15 conflicts fell into the category of “Other” (23.81%). Conflicts that were grouped in the “Other” category were identified as “other” on the mediation form and predominantly included conflicts such as being left out of a group, misunderstandings, irritating each other, and jealousy between friends. In future studies, inclusion of these specific categories may be beneficial to further extrapolate types of conflicts. Examination of other studies in the literature that reported descriptive data regarding types of conflicts referred to mediation found similar results indicating conflict regarding name-calling or teasing, physical threats, and verbal threats are the most commonly referrals for mediation programs (Araki, 1990; Johnson, Johnson, Cotton, Harris, & Louison, 1995; Johnson, Johnson, & Dudley, 1992). Johnson, Johnson, and Dudley (1992) found 36% of all conflicts at an elementary school for a given year were due to name-calling/teasing. Another study found Name-Calling/Teasing accounted for 25% of mediation referrals during a school year (Johnson, Johnson, Cotton, Harris, & Louison, 1995). Araki (1990) found that the most commonly occurring conflicts in one elementary school were Rumors (27.5%), Arguments (20.2%), and Harassment, which subsumed all name-calling/teasing events, (26%). Thus, Hypothesis 1 was supported and indicated this particular mediation program was commensurate with other data previously reported regarding types of

conflicts brought to mediation and resolution rates.

Hypothesis 2 stated discipline referral rates in the 4 years after implementation of the peer mediation program would be significantly lower than discipline referral rates in the 3 years prior to implementation of this program. Unfortunately, the number of discipline referrals in this seven year period was too low to allow for statistical analyses to be valid. The data were thus graphed to provide an indication of the decrease in referrals between these two time periods. Figure 1 demonstrates that in the three school years preceding the implementation of the peer mediation program (year 1 = 1999-2000, year 2 = 2000-2001, and year 3 = 2001-2002) there were a total of 11 discipline referrals, in contrast to the four school years after program implementation (year 4 = 2002-2003, year 5 = 2003-2004, year 6 = 2004-2005, and year 7 = 2005-2006) wherein only 4 discipline referrals were reported with all of these referrals coming in the same year period (see Figure 1).

Figure 1:

Discipline Referral Data



Results for Hypothesis 2 are thus inconclusive. No statement can be made as to whether or not discipline referrals were significantly different between time periods before and after implementation of the peer mediation program due to the overall low base rate of these referrals.

The next section of results examines data from self-report measures and analyzes disputant outcomes. Prior to detailing results related to Hypotheses 3 and 4, we will examine the reliability of these two measures. The *NBA* measure is comprised of two subscales; Retaliatory aggression and General aggression, with 12 and 8 items (respectively). A total of 49 subjects' ratings could be utilized to calculate these statistics due to incomplete ratings obtained from the other 9 potential subjects. The Retaliatory aggression subscale yielded a coefficient alpha of .87 at pre-test and an alpha of .88 at post-test. The General aggression subscale yielded a coefficient alpha at pre-test of .88 and a coefficient alpha at post-test of .72. Test-retest reliability was computed for the

NBA measure using only the 35 control subjects since it is hypothesized the disputant group would be expected to change from pre to post-test assessment time periods. For the Retaliatory aggression subscale $r = .78, p < .001$. For the General aggression subscale $r = .40, p < .05$ (see Table 2).

Table 2:

NBA Reliability Estimates

	Retaliatory Scale	General Scale
Pretest α	.87	.88
Posttest α	.88	.72
Test-Retest r^*	.78**	.40**

*Test-Retest r calculated using Control Group only; ** $p < .01$

The *SPSM* is also comprised of 2 subscales, Competent and Aggressive, which each contain 8 individual items;. A total of 57 subjects' ratings were utilized to calculate these statistics due to one subject providing an incomplete rating. The *SPSM* Aggressive scale yielded an alpha of .73 at pre-test and an alpha of .68 at post-test. The *SPSM* competent scale yielded an alpha of .46 at pre-test and an alpha of .50 at post-test. Test-retest for the *SPSM* was computed using only the control group as it is hypothesized that the disputant group will indicate a change in score from pre to post test assessment. For the Aggressive scale $r = .69, p < .01$ while the Competent scale yielded $r = .53, p < .01$ (see Table 3).

Table 3:

SPSM Reliability Estimates

	Aggressive Scale	Competent Scale
Pretest α	.73	.46
Posttest α	.68	.50
Test-Retest r^*	.69**	.53**

Note: Test-Retest r^* - Control Group only; ** denotes $p < .01$

The results that follow speak to Hypotheses 3 and 4. Note that 48 subject ratings were utilized to calculate these comparisons due to having to drop the mediator group from these analyses due to the small number of mediators in the sample and one additional subject provided incomplete ratings and was also dropped from further analyses. To insure the groups did not differ at pre-test, a series an independent samples t-test was conducted on the *NBA* measure using the pre-test data to make this determination. For the *NBA*, the Retaliatory aggression subscale mean score for control subjects was 21.46 with a standard deviation of 6.98, while the mean score for disputants was 18.79 with a standard deviation of 8.63. Results of the independent samples t-test yielded a t-value = 1.13 with 47 degrees of freedom and p-value = .264. For the *NBA* General aggression subscale, the mean score for control subjects was 11.23 with a standard deviation of 3.67, while the mean score for disputants was 11.57 with a standard deviation of 6.19. Results of the independent samples t-test yielded a t-value = -.24 with 47 degrees of freedom and a p-value = .81 (see Table 4).

Table 4:

NBA Pre-test Group Comparisons

	Control Mean (SD)	Disputant Mean (SD)	t	df	p
Retaliatory	21.46 (6.98)	18.79 (8.63)	1.13	47	.26
General	11.23 (3.67)	11.57 (6.19)	-.24	47	.81

Similarly, an independent samples t-test was run for the *SPSM* to determine whether any differences between groups existed at pre-test. At pre-test, the *SPSM* Aggressive subscale mean score for control subjects was 1.17 with a standard deviation of 1.44, while the mean score for disputants was .86 with a standard deviation of 1.92.

Results of the independent samples t-test for the aggressive strategies yielded a t-value = .63 with 47 degrees of freedom and a p-value = .54. For the *SPSM* Competent subscale the mean score for control subjects was 4.20 with a standard deviation of 1.55, while the mean score for disputants was 4.62 with a standard deviation of 2.18. Results of the independent samples t-test yielded a t-value = -.74 with 46 degrees of freedom and a p-value = .47 (see Table 5).

Table 5:

SPSM Pre-test Group Comparisons

	Control Mean (SD)	Disputant Mean (SD)	t	df	p
Aggressive	1.17 (1.44)	.86 (1.92)	.63	47	.54
Competent	4.20 (1.55)	4.62 (2.18)	-.74	46	.47

Examination of pretest comparisons on both the *NBA* and the *SPSM* indicates the control and disputant groups did not significantly differ from one another at this time period. Thus, it was proposed that any changes between the groups that appear at posttest may be the result of the experimental manipulation, participation in the mediation program.

Hypothesis 3a stated there would be a significant reduction in scores on both the *NBA* General Aggression subscale and the Retaliatory Aggression subscale for disputants in comparison to control subjects. To test Hypothesis 3a, an independent samples t-test was conducted to determine whether differences existed between the control and experimental group at posttest. For the *NBA* Retaliatory Aggression subscale, the mean score for control subjects was 21.54 with a standard deviation of 6.55 while the mean score for disputants was 17.86 with a standard deviation of 7.91. Results of the t-test yielded a t-score = 1.68 with 47 degrees of freedom and a p-value = .100. For the *NBA*

General Aggression subscale, the mean score for control subjects was 12.03 with a standard deviation of 4.14, while the mean score for the disputant subjects was 15.36 with a standard deviation of 4.50. Results of the t-test yielded a t-score = -2.481 with 47 degrees of freedom and a p-value < .05 (see Table 6).

Table 6:

NBA Posttest Group Comparisons

	Control Mean (SD)	Disputant Mean (SD)	t	df	p
Retaliatory	21.54 (6.55)	17.86 (7.91)	1.68	47	.100
General	12.03 (4.14)	15.36 (4.50)	-2.48	47	.017

Results indicated there were no significant differences between control and disputant groups on the Retaliatory Aggression subscale at posttest. Results for the General Aggression subscale indicated a significant difference between groups at posttest but this finding was in the opposite direction as hypothesized such that disputants increased their endorsement of General Aggression at posttest in comparison to the control group.

Hypothesis 3a was thus not supported.

Hypothesis 3b stated scores on the *SPSM* Aggressive subscale would decrease for disputants in comparison to control subjects at posttest. Hypothesis 3b also stated scores on the *SPSM* Competent subscale would increase for disputants in comparison to control subjects at posttest. To test Hypothesis 3b an independent samples t-test was performed. Results for the *SPSM* Aggressive subscale indicated a mean score for the control group of 1.20 with a standard deviation of 1.39 and a mean score for the disputant group of .36 with a standard deviation of .84. An independent samples t-test yielded a t-value = 2.59 with 39.03 degrees of freedom and a p-value < .05. For the *SPSM* Competent subscale,

the mean score for control subjects was 4.29 with a standard deviation of 1.74 and the mean score for disputants was 4.86 with a standard deviation of 1.41. Results of the independent samples t-test yielded a t-value = -1.09 with 47 degrees of freedom and a p-value = .28 (see Table 7).

Table 7:

SPSM Posttest Group Comparisons

	Control Mean (SD)	Disputant Mean (SD)	t	df	p
Aggressive	1.20 (1.39)	.36 (.84)	2.59	39.03	.01
Competent	4.29 (1.74)	4.86 (1.41)	-1.09	47	.28

Results for Hypothesis 3b indicated there was a significant decrease in scores on the Aggressive subscale of the *SPSM* for disputants in comparison to control subjects at posttest. Data for the Competent subscale indicated there were no significant differences between disputant and control subjects at posttest. Thus, Hypothesis 3b was partially supported.

Hypothesis 4a stated scores for disputants on the two *NBA* subscales would decrease from pre to posttest assessment. To test Hypothesis 4a a paired samples t-test was completed. The *NBA* retaliatory aggression subscale the pre-test mean score for disputants was 18.79 with a standard deviation of 8.63 and the post-test mean score for disputants was 17.86 with a standard deviation of 7.91. Results of the t-test yielded a t-value = .38 with 13 degrees of freedom and a p-value = .71. For the *NBA* general aggression subscale the pre-test mean score for disputants was 11.57 with a standard deviation of 6.19 and the post-test mean score for disputants was 15.36 with a standard deviation of 4.50. Results of the t-test yielded a t-score = -2.14 with 13 degrees of

freedom and a p-value = .052 (see Table 8).

Table 8:

NBA Pre - Posttest Comparisons, Disputant Group

	Pre-test Mean (SD)	Post-test Mean (SD)	t	df	p
Retaliatory	18.79 (8.63)	17.86 (7.91)	.38	13	.71
General	11.57 (6.19)	15.36 (4.50)	-2.14	13	.052

Results indicated scores for disputants were not significantly different between pre and posttest assessments on either *NBA* subscale. Thus, Hypothesis 4a was not supported.

Hypothesis 4b stated scores on the *SPSM* Aggressive subscale would decrease for disputants from pre to posttest assessment, while scores on the Competent subscale would increase for disputants from pre to posttest assessment. To test Hypothesis 4b a paired samples t-test was utilized. The *SPSM* aggressive strategies subscale pre-test mean score for disputants was .86 with a standard deviation of 1.92 and the post-test mean score for disputants was .36 with a standard deviation of .84. Results of the paired samples t-test yielded a t-score = .94 with 13 degrees of freedom and a p-value = .36. On the competent strategies subscale the pre-test disputant mean score was 4.62 with a standard deviation of 2.18 and the post-test disputant mean score was 4.86 with a standard deviation of 1.41. Results of the paired samples t-test yielded a t-score = -.27 with 12 degrees of freedom and a p-value = .79 (see Table 9).

Table 9:

SPSM Pre - Posttest Comparisons, Disputant Group

	Pre-test Mean (SD)	Post-test Mean (SD)	t	df	p
Aggressive	.86 (1.92)	.36 (.84)	.94	13	.36
Competent	4.62 (2.18)	4.86 (1.41)	-.27	12	.79

Results for Hypothesis 4b indicated there were no significant differences between disputants on either *SPSM* subscale between pre and posttest assessments. Thus, Hypothesis 4b was not supported.

To better understand the unexpected results for disputants, analyses were run on control subjects to determine whether any differences existed between pre and posttest assessment. To examine whether the control subjects experienced any significant changes from pre to post-test assessment, paired samples t-tests were conducted. For the *NBA* retaliatory aggression subscale, the mean pre-test score for control subjects was 21.46 with a standard deviation of 6.98 and the post-test mean score for control subjects was 21.54 with a standard deviation of 6.55. The result of the paired samples t-test yielded a t-value = -.11 with 34 degrees of freedom and a p-value = .91. For the *NBA* general aggression subscale, the mean score for control subjects at pre-test was 11.23 with a standard deviation of 3.67 and the post-test mean score for control subjects was 12.03 with a standard deviation of 4.14. Results of the paired samples t-test yielded a t-value = .1.10 with 34 degrees of freedom and a p-value = .28 (see Table 10).

Table 10:

NBA Pre-Posttest Comparisons, Control Group

	Pre-test Mean (SD)	Post-test Mean (SD)	t	df	p
Retaliatory	21.46 (6.98)	21.54 (6.55)	-.11	34	.91
General	11.22 (3.67)	12.03 (4.14)	-1.10	34	.28

Similarly, a paired samples t-test were also run on the *SPSM* scales to look for differences between the pre and post-test assessment times for control subjects. For the aggressive strategies subscale, the mean pre-test score for control subjects was 1.17 with

a standard deviation of 1.44 and the post-test mean score for control subjects was 1.20 with a standard deviation of 1.39. Results of the paired samples t-test yielded a t-value = -.15 with 34 degrees of freedom and a p-value = .88. For the competent strategies subscale, the mean pre-test score for control subjects was 4.20 with a standard deviation of 2.18 and the mean post-test score for control subjects was 4.29 with a standard deviation of 1.74. Results of the paired samples t-test yielded a t-value = -.32 with 34 degrees of freedom and a p-value = .75 (see Table 11).

Table 11:

SPSM Pre-Posttest Comparisons, Control Group

	Pre-test Mean (SD)	Post-test Mean (SD)	t	df	P
Aggressive	1.17 (1.44)	1.20 (1.39)	-.15	34	.88
Competent	4.20 (1.55)	4.29 (1.74)	-.32	34	.75

Results for control subjects indicated there were no significant differences between scores on either measure between pre and posttest assessment time periods.

DISCUSSION

Peer mediation programs are frequently employed by school systems to reduce rates of discipline referrals and promote healthy problem-solving in its students. While regularly utilized by school systems, peer mediation programs are not consistently evaluated to track outcomes for participants. There are estimated to be between 15-20 thousand peer mediation programs nationwide but there are only 23 research studies that provide evidence of program evaluation (Jones, 2004). Within this set of studies, typical program evaluation consists of examination of discipline referrals, descriptive program data (e.g. rates of resolution and types of conflicts mediated), school climate variables (whether students and teachers feel the school is safer after the program), and examining mediator outcomes (Carruthers & Sweeney, 1996; Farrell, Meyer, & White, 2005; Horowitz & Boardman, 1994; Johnson, Johnson, & Dudley, 1992; Roush & Hall, 1993; Smith, Daunic, & Miller, 2002). This author contends none of these methods measure at a level of specificity necessary to provide an accurate assessment of the program's effectiveness. Instead, these methods measure change that is likely to be influenced by multiple factors in a school system, with possibly one factor being the presence of a peer mediation program.

Tracking outcomes for disputants is one way to evaluate the effectiveness of peer mediation specifically on those who use the program. Thus, if disputants demonstrate positive outcomes after participation in mediation the program could be deemed

effective. Individual level criteria would enable researchers to better estimate the proportion of variance accounted for by implementing a peer mediation program in comparison to or controlling for other factors. Current research has placed the cart before the horse, choosing to assess macro organizational factors, such as discipline referrals, before individual level criteria. Currently, assessing disputant outcomes is a method grossly underutilized in current research. To date, research in program evaluation for peer mediation has produced only two other studies examining disputant outcomes (Harris, 2005; Nix & Hale, 2007).

Other problems plaguing current research are the lack of standardized measures, lack of consistency in measurement, and lack of standard methods for evaluating programs. Difficulty defining control groups and the inability to control for other interventions that may impact results are also problems in this line of research. The current study sought to address several of these shortcomings while providing a program evaluation model that could be adopted by other school systems using peer mediation programs. By tracking descriptive program data, discipline referral rates, and assessing disputant outcomes this study attempted to incorporate standard practices in the current research while also introducing new areas of assessment.

Hypothesis Review

The current study sought to test 4 main hypotheses. Hypothesis 1 was supported indicating this particular mediation program is in fact very similar to other programs of this type in schools across the nation. Hypothesis 2 examined discipline referral data. This hypothesis was not supported largely due to the overall low base rate of discipline referrals and the inability to evaluate this question statistically. Results for Hypotheses 3

and 4 produced mixed evidence. Hypothesis 3a examined differences between groups on the *NBA* measure. This hypothesis was not supported in the current study. When examining differences between controls and disputants there was no difference on the *NBA* Retaliatory aggression subscale while there was a significant difference on the *NBA* General Aggression subscale. Unexpectedly, this difference was found to be in the opposite direction as predicted such that disputants endorsed higher rates of general aggression after participation in mediation. Hypothesis 3b examined differences between groups on the *SPSM*. This hypothesis was partially supported. Results of analyses between controls and disputants indicated there were no differences on the Competent subscale but there was a significant difference between control and disputants on the Aggressive subscale. This difference indicated disputants endorsed lower rates of aggressive responses in comparison to control subjects at posttest after participation in mediation. Finally, Hypothesis 4 examined differences within disputants between the pre and posttest assessments on the two measures. This hypothesis was not supported. Disputants did not demonstrate a significant difference on either the *NBA* or the *SPSM* between the pre and posttest assessments.

Descriptive Data and Discipline Referrals

Hypothesis 1 examining descriptive similarities indicates this program was consistent with other peer mediation programs in the nation with regard to types of conflicts mediated and rates of resolution. Children who utilized the mediation process were able to find a solution to their conflict on average 95.31% of the time. This figure falls within the range of successful resolution rates cited by other researchers in the area. Araki (1990) found a resolution rate of 91.9%. Another study found a resolution rate of

98% (Johnson & Johnson, 1996). Finally, a meta-analysis conducted by Burrell, Zirbel & Allen (2003) found a resolution rate of 93% across twenty-three studies in the area.

In the current study, examination of the types of conflict presented during mediation found the majority involved Name-Calling/Teasing or other types of verbal affronts. Less than 10% of the conflicts involved physical aggression. These findings are also consistent with other research citing the most frequent types of conflict that come to mediation. Johnson, Johnson, and Dudley (1992) found 36% of all conflicts at an elementary school for a given year were due to name-calling/teasing. Another study found Name-Calling/Teasing accounted for 25% of mediation referrals during a school year (Johnson, Johnson, Cotton, Harris, & Louison, 1995). Araki (1990) found that the most commonly occurring conflicts in one elementary school were Rumors (27.5%), Arguments (20.2%), and Harassment, which subsumed all name-calling/teasing events, (26%). A similarity between the descriptive program data obtained in this study and in the larger literature thus sets the context for applying the current study's peer mediation program evaluation model to other school settings.

Hypothesis 2 examining discipline referral data was not supported. Overall, discipline referrals are fewer in the 4 years following the implementation of the peer mediation program. This being said, the overall number of referrals was too low to render statistical analyses valid to confirm the significance of this reduction. Though unable to make any statistical comparisons, it is noteworthy that for the 3 years after implementation of the peer mediation program there were no discipline referrals. For the year in which this study was conducted, however, there were 4 discipline referrals in one single year. This data highlights the problem with using discipline referrals as a yardstick

to measure success. Data for this study indicates discipline referrals are indeed likely to fluctuate on a yearly basis with or without intervention in place to address conflict resolution.

As noted, discipline referrals are likely to be influenced by many factors that are experimentally difficult to control, diminishing their utility as an evaluative measure. Factors such as school composition, academic achievement, changes in school administration, increased level of monitoring by staff, and changes in discipline policy are all likely to impact the rate of discipline referrals (Bickmore, 2002; Carruthers & Sweeney, 1996; Horowitz & Boardman, 1994). Any of these factors could certainly have been present during this study. It is nearly impossible to determine and control for each of the factors that contribute to reduction in discipline referrals. Thus, to evaluate the effectiveness of peer mediation, the use of discipline referrals as an outcome measure is not recommended.

Aside from factors that influence overall discipline referral data, the aggregate referral data used in this study is likely not detailed enough to provide an accurate assessment of program impact. To accurately examine this question, one would need to define discipline referrals more specifically and track instead what could be termed “discipline problems.” There are finer levels of discipline problems handled regularly by teachers as well as the principal that do not result in disciplinary action. These types of referrals could be discussions about behavior or arguments that warrant intervention from an authority figure but are not sufficient to warrant more serious disciplinary action. These types of more regularly occurring conflicts could be a more appropriate method for measuring a peer mediation programs’ impact on discipline rates. This type of referral

data could be tracked easily through a frequency tally sheet of daily conflict occurrences kept by the teacher or by randomly assigning behavioral coders to classrooms to track the amount of time teachers spend dealing with conflicts in the classroom.

Thus, if studies were able to track the amount of time faculty spent dealing with conflict in the classroom or the number of conflicts diverted from the principal and handled through mediation this could better demonstrate the specific impact of the mediation program on discipline referrals. If this type of data were tracked, peer mediation programs' impact on discipline referrals could be assessed more directly. Furthermore, quantifying this criterion in hours would enable researchers to extend current literature to include a cost benefit analysis of the program. Such research could thus estimate time saved by faculty through implementation of the program and estimate the amount of money spent each year dealing with conflict rather than focusing on academic instruction.

A cost-benefit analysis published by Batton (2003) estimated the cost to implement a conflict management program (defined as any form of CRE program) one time was \$8,441.43, this was compared with the average costs a school will spend each year dealing with serious discipline referrals (e.g. out-of-school suspensions or expulsions), which costs \$12,437.20 per year. Following with the previous point about time spent dealing with "other" conflicts that occur but do not warrant a serious intervention, Batton (2003) indicated there are no estimates available as to what these "other" discipline incidents (such as detentions, Saturday schools, or in-school suspensions) may cost each year. Thus, future studies should seek to quantify these "other" discipline referrals and time spent dealing with conflicts to both demonstrate

effects of peer mediation programs and estimate total educational costs that may be saved by having such a program. Though assessing discipline referrals at this level may be costly, if conducted through behavioral observations, this line of research may end up saving schools money in the long run.

Another problem with utilizing discipline referral data is the short time period this information is tracked. Given that discipline referrals are subject to variation over time as a function of differing school composition each year, referral data tracked for a short period would not provide a stable assessment of discipline referrals over time. By increasing time periods for tracking, the impact of school composition factors and policy changes within the school could be minimized, thus, allowing researchers to parcel out these effects. Most programs that use discipline referral track data for several years before and after program implementation. Over a period of 10-15 years, there would be a sufficient amount of referral data to examine, leading one to make stronger statements about a positive overall reduction trend. Longitudinal data provides an opportunity to parcel out other sources of influence as outlined previously which may impact referral rates.

Measure Reliability

One of the problems in previous research has been the use of assessments without any reliability and/or validity information. The present study introduced measures borrowed from clinical psychology research that had previously produced valid and reliable results. Demonstrating the ability of these measures to perform adequately in this study, could lead to these or similar measures being used to evaluate outcomes in similar programs nationwide. The two measures chosen for this study, *Normative Beliefs about*

Aggression (NBA) and the *Social Problem-Solving Measure (SPSM)* were selected due to their fit of content with the topics targeted in a peer mediation program, their use with a school-age population, report of previous reliability estimates, and the likely ease of administration in a school setting.

First for the *NBA* measure, sufficient internal consistency levels at both pre and posttest for the Retaliatory aggression and General aggression subscales were obtained. Internal consistency estimates over .70 for all scales at each assessment point demonstrate this measure can be used reliably within this population. Overall, internal consistency levels for the Retaliatory subscale were higher (over .85) at both assessment points. This could be largely due to the number of items that comprise this scale (12 items versus 8 items on the General aggression subscale). We can thus conclude the *NBA* measure can be used reliably to assess beliefs about retaliatory aggression and general aggression in school-aged children.

When examining the test/re-test reliability of the *NBA*, only control subjects were used due to the hypothesized change in disputant scores as a function of participation in mediation. Scores for the Retaliatory subscale indicate a strong correlation between pre and posttest assessment ($r = .78$). This correlation indicates children responded very similarly on this measure at both assessment points. The correlation for the Retaliatory subscale is greater than for the General Scale indicating that endorsement of Retaliatory aggression might be a more stable construct over time.

For the General aggression scale, the test-retest statistics were lower than expected ($r = .40$). The low levels could be caused by an actual change in children's endorsement of general aggression or could be due to other factors such as distractibility

during administration, learning experience between assessment times, or the time of day the assessment occurred. Note that for both controls and disputants, scores on this scale increased for the posttest in comparison to the pretest. Consequently, this low test-retest reliability could be one contributing factor in this unexpected increase in endorsement of general aggression found in the disputant group at posttest.

Qualitatively, when administering items within the General aggression beliefs scale, children asked significantly more questions to seek clarification of the terms “usually” and “in general.” Subjects seemed to encounter difficulty defining these terms and, consequently, might have had trouble determining how these terms should or could impact their answers. Five out of the eight items within this scale had either “usually” or “in general” in their wording. Also, several additional items within this scale used double negatives in their wording, which could be confusing to elementary school aged children. The other three items within this scale used double negatives in their wording. Each of these wording difficulties could certainly have been a factor influencing the lower test-retest reliability statistics for this subscale. When examining individual subject data related to this “wording” hypothesis there was not a conclusive pattern of responses that indicated change related to inclusion of the word “in general” or “usually.” Responses instead reflected variability across items between assessment time periods.

Another possible explanation of this finding is that retaliatory aggression is a relatively more stable construct for children over time than their beliefs about general aggression. Thus, children may be more likely to respond similarly when asked about retaliatory aggression versus endorsing they would initiate aggressive action in the first place. Items within the Retaliatory aggression subscale did not include difficult to define

terms or double negatives and were thus likely more easily understood by the majority of children.

For the *SPSM*, internal consistency varied as a function of each subscale. The Aggressive subscale provided moderate internal consistency estimates for each administration. The internal consistency found for the aggressive subscale is consistent with or exceeds levels obtained in other studies using this measure (Aber, Jones, Brown, Chaundry, & Samples, 1998; Aber, Brown, & Jones, 2003). The Competent subscale yielded lower than expected levels of internal consistency in comparison to the aggressive subscale and in comparison to what has been found in previous studies using this measure. Results related to test-retest reliability indicate moderate to low correlations between scores on pre and posttests ($r = .69$ for Aggressive subscale and $.53$ for Competent subscale). No prior data regarding test-retest reliability were reported in the literature for this measure, thus it is difficult to determine whether these scores indicate agreement with previous research. It is surprising though that test-retest reliability remained so high given the lower than expected levels of internal consistency.

Overall, the *SPSM* demonstrated lower levels of internal consistency than the *NBA*. There are several factors that could potentially provide an explanation. Lower levels of reliability for this measure could be attributed in part to the low number of items making up the each scale (8 items for each) versus 12 items comprising the *NBA* Retaliatory scale. Another factor warranting consideration is that the *SPSM* may measure individual states (thus more easily influenced by situational variables) versus traits (that are enduring qualities of an individual and thus more likely to be stable over time). The

NBA may be a better example of a trait type measure, as one would expect aggressive beliefs to be more stable over time than aggressive strategies chosen to fit a specific vignette.

The *SPSM* provides eight different vignettes that describe a variety of social conflict situations. One may expect that if a child chooses an aggressive answer on one item they are more likely to choose an aggressive answer on additional items. While this tenet would hold true when discussing a measure like the *NBA* that measures aggressive beliefs, this would not necessarily be true for the *SPSM* since it measures use of aggressive strategies in response to specific situations. The scores on the *SPSM* may then measure strategies that are situationally dependent and thus more likely to change over time. Thus, answers could be vignette specific and not reflect a more generally aggressive belief, as would be the case with the *NBA* measure. For example, a child who chooses an aggressive answer to a vignette depicting someone cutting in a line may not be as likely to endorse an aggressive answer to a verbal teasing vignette if they have had experience handling this type of situation non-aggressively.

The potential differences between the two measures with regard to the assessment of states versus traits could help explain the results in both the reliability analyses as well as the disputant outcomes. One would expect traits such as endorsement of overall aggressive tendencies or agreement with use of retaliatory aggression, as is the case on the *NBA*, to be more stable over time. Thus, these traits would like not vary much over short periods of time such as the 3 month assessment window for this study. In contrast, the *SPSM* may not measure aggressive or competent traits in children but rather responses that are state dependent and triggered by factors specific to each vignette. For

example, a child who has experience dealing with teasing may be more likely to choose a competent response based on either recent or previous experience with a similar situation versus the same child who has no experience dealing with a child cutting in line and thus chooses a different perhaps less competent response. This child may not have displayed more aggressive traits overall from pre to post-test but rather could be either less or more likely to choose an aggressive response to a specific vignette based on learning history.

These vignette specific variables, inherent in the design of the *SPSM*, may be the factor having the most degree of influence on the internal consistency and test/re-test reliability statistics for this measure. When factoring in this hypothesis to aid our understanding of the measure we would not necessarily expect to see the same levels of internal consistency and test/re-test reliability as is expected with other measures. Though, typically, measures that yield lower levels of internal consistency and test-retest reliability are not as desirable, this could make the *SPSM* a very useful tool in peer mediation research since one would expect to see responses change in reaction to specific situations brought to mediation.

Mediation occurs when children have difficulty dealing with specific social conflicts. Thus, if this type of social conflict appears on the *SPSM* one would hope if a child chose an aggressive response initially in relation to a teasing vignette, this same child would be less likely to choose an aggressive response after participating in mediation. Examination of individual disputant data in this study did not result in specific items being most indicative of change from pre to posttest on this measure. The item variation instead reflected a degree of variation that is likely associated with personal experiences of conflict. Thus, individual disputants changed their responses to a

variety of conflicts and not just in relation to one specific type of scenario. This makes sense given the varied nature of conflicts brought to mediation. This change in individual responses lead to lower reliability scores for the *SPSM* in this study but reflected a positive change in conflict resolution.

This specificity in measurement would be highly desirable to evaluate outcomes in a peer mediation program. A measure like the *SPSM* could thus be utilized by researchers in the field to examine the differences in strategies endorsed from pre to posttest. A measure that could detect these finite differences would yield fruitful information as to the learning that takes place in mediation. Further, it can shed light on how to improve training programs to facilitate both less aggressive and increasingly more competent responding. In contrast, this type of measure would also be sensitive enough to determine whether mediation is not resulting in expected changes thus helping to determine how to improve the quality of future training programs.

Disputant Outcomes

Tracking disputant outcomes was the primary focus of the current study. This is arguably the most useful and important method for demonstrating success of peer mediation programs and is grossly underutilized by researchers in the field. The current study sought to examine both differences between disputant and control subjects on self-report measures as well as within disputants themselves after participation in mediation.

Hypothesis 3a examined differences on the *NBA* measure between disputant and control subjects at posttest. Results for Hypothesis 3a were mixed. Data regarding the *NBA* Retaliatory aggression subscale indicated there were no significant differences between control and disputant groups at posttest. Results for the *NBA* General

Aggression subscale did indicate a significant difference between control and disputant groups between pre and posttest. Unfortunately, this finding was in the opposite direction as expected such that disputants endorsed higher levels of general aggression at posttest. There are a few plausible reasons to explain this finding.

One factor possibly producing this result was eluded to earlier in the discussion of test-retest reliability. The General aggression subscale might not have adequate stability over time. Measurement error is another possible explanation for this finding thus; scores may not indicate a true increase in endorsement of generally aggressive strategies for disputants. A closer examination of individual disputant data indicated there were only 4 disputants that exhibited a significant change in responses on the *NBA* General scale between pre and posttest assessment. These individuals certainly unduly contributed to the increase in average scores at posttest for disputants. These particular disputants changed their answers to 4 items by 3 points between assessment time periods. These particular items were not exclusively those that contained “usually” or “in general” in the wording (as referred to earlier in the reliability discussion) and no other markers in the data were helpful in determining specific factors in these participants that contributed to the unexpected results.

Another factor to consider could be the failure of solutions reached in mediation to yield a rewarding outcome for disputants. While mediations frequently result in a solution (with rate of resolution for this study at 95.31%), the current study had no method to track whether or not the solutions reached in mediation actually resolved conflicts or yielded positive outcomes. Thus, if a disputant utilized a solution that did not result in a successful resolution or a desirable outcome, they may conceivably want to act

out aggressively in the future to resolve similar problems. If we assume disputants were referred to mediation due to poor or inappropriate conflict resolution skills, they may be more likely than their peers to endorse generally aggressive conflict resolution strategies. If disputants then try a non-aggressive solution and it does not work, their reliance on an aggressive strategy might be strengthened (e.g. being nice does not get me what I want but being a bully always has).

An additional factor to consider when thinking about the results from the *NBA* measure is the potential differences between the two disputants that come to mediation. Mediation is a process where conflicts are identified and both parties involved in the dispute meet to discuss resolutions. In many cases, both disputants have played a role in the conflict such that their use of verbally aggressive or physically aggressive strategies is the reason for the referral. This is not, however, the case with all mediations.

Some cases involve only one aggressive participant and another who could be deemed a victim of the aggressive action. In this case, the disputant who is the victim may not necessarily possess a high level of aggressive beliefs at pretest. These disputant victims may then have two different scenarios that play out after mediation ends. Disputant victims may retain their less aggressive beliefs after mediation or if the non-aggressive strategies persist in unsuccessful resolution of conflict they may resort to using aggressive strategies in the future. Each of these paths would then result in potentially different responses on the *NBA* measure. In this second case, the subgroup of disputant victims may endorse higher levels of aggression at posttest due to failure of their non-aggressive beliefs to yield a positive outcome. Since there was no follow-up to

assess whether or not conflict resolution strategies did work for disputants these differences could not be parceled out in the current study.

Though not a direct measure of the potential impact of “disputant victims,” one previous study discussed the impact of differences between disputants that lead to divergent outcomes after mediation. Harris (2005) measured a variable called “willingness to participate in mediation” and found this factor mediated the effect of the intervention such that disputants who judged themselves as less willing to participate reported less satisfaction with the process, judged themselves to have been provided with lower amounts of peer modeling of behavior, and had more discipline referrals following mediation than their more willing counterparts. This finding speaks to the potential differences between disputants that could lead to discrepant outcomes between disputants participating in mediation. This factor was also not assessed in the current study, but could also have contributed to the unexpected finding on the *NBA* measure.

Additionally, it is near impossible, to parcel out responsibility between disputants to thus identify “disputant victims.” The mediation process is meant to encourage both parties to accept their part in the conflict, no matter how insignificant, and work toward resolution (Nix & Hale, 2007). Further, the greater degree to which mediators are perceived as creating neutrality in the mediation session has been shown to lead to higher disputant satisfaction with the process of mediation (Nix & Hale, 2007). Thus, the possibility that several of these disputant victims are in the sample of the current study is highly likely but it is impossible to determine who these individuals may be. Ratings related to responsibility in the conflict could perhaps be provided by mediators in the future to determine whether a class of “disputant victims” does exist and whether or not

this plays into outcome measures could then be determined. This may then enable researchers to further examine subtypes of disputants and any impact these subtypes may have on outcomes.

Hypothesis 3b examined results for the *SPSM* between disputant and control subjects at posttest. Results for this hypothesis were mixed. A significant difference between control and disputant groups was found on the Aggressive subscale at post-test assessment, indicating disputants reduced their endorsement of aggressive strategies in comparison to the control group. Results for the Competent subscale failed to find any significant differences at posttest. This provides partial support for Hypothesis 3b and is important for two reasons. First, it establishes the fact that after participation in mediation disputants were less likely to endorse aggressive strategies in comparison to a group of their peers that did not participate in mediation. Second, this finding indicates the powerful and important need to assess disputant outcomes to demonstrate success of peer mediation programs.

Perhaps this single, positive finding provides the most powerful support for peer mediation. Though mediation might not be successful at reducing core beliefs about aggression (e.g. Hypothesis 3a), disputants exhibit a decrease in the likelihood they would act on their aggressive beliefs after participating in mediation. Results indicate disputants change their previously aggressive responses to conflicts situations after participation in a mediation session that provided disputants with alternatives to aggressive action. This finding is supported by previous research by Harris (2005), which found an overwhelming majority of disputants felt they learned important skills after participation in mediation. Thus, the mediation experience taught them responding

aggressively in certain situations (such as the ones that brought them to mediation) is inappropriate; though this understanding does not necessarily translate to other conflict situations or increase appropriate responding. This speaks more to the generalizability of the mediation intervention rather than to its relative success or failure in the short-term.

One mediation session should not impact a core belief system. Beliefs about aggression are formed over a significant course of time due to a variety of influences including the culmination of related learning experiences and environmental feedback. This maps onto previous research that found beliefs about aggression demonstrated a trend such that in earlier elementary grades (e.g. 1st-3rd) beliefs were likely to show more change over time in contrast to students entering the upper elementary school grades (e.g. 4th-6th), which were found to demonstrate more stability in beliefs about aggression (Huesmann & Guerra, 1997) Thus, a single, short, focused intervention (such as a 20 minutes peer mediation session) is unlikely to change aggressive beliefs that have taken years to develop and stabilize. This finding illustrates disputants did not change core beliefs about aggression, after participation in mediation, but mediation makes it less likely a disputant would act on these aggressive beliefs in future similar situations. This finding alone is perhaps enough to demonstrate the effectiveness of a peer mediation program. One of the goals of peer mediation is to reduce violence in schools and this finding demonstrates peer mediation is successful at reducing aggression.

During mediation sessions, disputants are provided with direct feedback that aggressive strategies are not acceptable and negatively impact the behavior of others in their environment. This method gives disputants an opportunity to realize how their aggressive behavior impacts others. Mediation can thus be conceived as a short, direct

feedback session where an individual is provided with evidence to dispute the successfulness of their particular strategy (many times either a verbally or physically aggressive strategy) and weigh other more appropriate alternatives. Previous research conducted by Harris (2005) supports this type of learning does take place in mediation. Harris found disputants rated skills such as learning to take another person's perspective and identifying the source of the conflict as two of the most helpful tools learned in mediation. This opportunity for feedback and subsequent learning would not present itself in a natural classroom setting. Thus, disputants learn that forms of aggression are not appropriate methods for resolving conflict and results of this study support disputants decrease use of aggressive strategies after participation in mediation.

Following this same paradigm, the inability of mediation to increase the use of competent strategies may be due to similar mechanisms. In addition to learning histories that have reinforced aggressive strategies, disputants participating in mediation also lack skills necessary for successful conflict resolution. Thus, teaching use of competent strategies, like changing core beliefs, takes more time than just a one-time, short, focused intervention. Teaching these strategies can be likened to a skill building task. To improve skills in this area, it takes more time to develop and hone these skills than would be reasonable for an intervention like peer mediation. Research by Harris (2005) indicated the length of mediation sessions was a moderating variable that influenced disputant learning. Harris (2005) found when mediation sessions lasted longer than 90 minutes disputants reported greater satisfaction with mediation, judged a higher level of peer mediator modeling of behavior to have taken place, and had fewer discipline referrals at post assessment. Thus, this past research and the current study indicate

repeated exposure to (or elongated exposure) and reinforcement for using competent strategies would help shape more appropriate skills post mediation.

In summary, disputants are less likely to respond aggressively in conflict situations after participation in mediation. This finding demonstrates mediation provides a powerful intervention in a short period of time. Further, highlighting the behavioral mechanisms that are likely fundamental to peer mediation programs, these findings are the most realistic. Current research that tracks discipline referrals and school climate variables cannot parcel out the specific impact of mediation on these larger school goals. Measuring disputant outcomes and setting realistic goals for mediation programs is a way to both measure the success of mediation programs as well as demonstrate impact on larger school-wide systems.

Research literature has to this point tried to measure larger school variables that are not sensitive enough to determine the specific impact of mediation. By starting with research examining the impact of mediation on aggression in disputants, there would certainly over time be ways to measure larger school variables that are of interest to administrators. This would provide a method for assessing the proportion of variance that is accounted for by implementation of the mediation program specifically. Pinpointing this specific factor has arguably been the largest problem with current research in the area and greatly diminishes the findings that currently purport to provide evidence for the effectiveness of peer mediation programs.

Results of analyses on the *NBA* (Hypothesis 4a) and the *SPSM* (Hypothesis 4b) did not demonstrate significant differences within the disputant group between the pre and posttest assessments. This author hypothesized disputants would endorse overall

lower rates of general aggression, retaliatory aggression, and use fewer aggressive strategies at posttest. It was also anticipated disputants would endorse higher rates of competent strategies. This was not the case. These results are thought to be a continued reflection of the above mentioned points, such that impacting beliefs about aggression and increasing competent strategies, are likely too lofty goals for a short, focused intervention.

Though disappointing, the lack of results to support Hypothesis 4 does not discredit the significant differences found between the control group and disputants. The reduction in endorsement of aggressive strategies for disputants in comparison to the control group supports the ability of mediation to change disputants' endorsement of using aggressive strategies. Thus, while mediation does not produce a significant change in scores for disputants themselves, it does create a reduction in use of aggressive strategies for disputants after mediation.

Limitations

While there was one positive finding in the current study there are also limitations that prevented more robust results and impacted design. As discussed in the introduction, there are many difficulties that plague research in school settings. The most significant factors that impacted the current study were the lack of flexibility in conducting assessments, high attrition of participants, and inability to control for other problem-solving interventions. School systems are a difficult setting to conduct research due to these limitations as well as additional difficulties such as obtaining approval, scheduling assessments, and implementing interventions. Often the result of these impediments is a smaller than desired and often planned for sample size.

The potential subject pool for this study was 200 students, of which only 99 were able to obtain parental consent for the results to be used in this study, from this subset only 58 total subjects provided complete self-report data. As there was only one opportunity to conduct the pre and posttest assessments for this study, individuals who were absent on those days, involved in activities outside of the classroom, or whose teachers did not support participation could not be included in the study. These factors significantly limited the number of children able to complete both data packets. Furthermore, within this small sample, some participants failed to fully complete some of the measures, leading to their results being removed from those particular analyses.

As low sample size results in low statistical power the ability to detect a difference between groups when one may really exist was decreased as a result of the aforementioned sampling limitations. With such low power to detect differences it was difficult to determine whether results from this study accurately reflect the magnitude of changes that may occur with regard to conflict resolution strategies and beliefs about aggression in the peer mediation population.

These issues should not, however, deter other researchers from embarking on this line of research. While many of the logistical difficulties inherent in conducting school-based research can be overcome with patience and persistence, small sample size may always be an issue with such studies. The current study provides the third sample of disputant outcomes in the peer mediation literature; if other researchers persist in examining this line of research it will be possible in the future to ultimately overcome the shortcomings of small sample sizes by providing enough primary studies to support a meta-analysis on this topic. With a meta-analysis it is possible to overcome both the

shortcomings of small sample sizes (e.g. power) as well as measurement error (such as those issues previously discussed). This study makes two contributions. First, it provides another primary study in the area of disputant outcomes. Second, this study introduces measures with demonstrated psychometric properties. Patient researchers who use more sound tools are thus more likely to find satisfactory answers to the question proposed herein related to disputant outcomes and mechanisms impacting change in the mediation process.

Future Directions

Disputants were found to significantly decrease their use of aggressive strategies after participation in mediation in comparison to control subjects who did not participate in mediation. This finding highlights the importance of assessing disputant outcomes as part of a thorough program evaluation. The finding in the current study support the conclusions of Harris (2005) that disputants learn different ways of responding to conflicts through participation in mediation. Actual reduction in disputants' use of aggressive strategies to resolve future conflicts provides evidence of success for a peer mediation intervention.

Even if children do not change their core beliefs about aggression or increase their use of competent strategies, their ability to inhibit use of aggressive strategies is beneficial to the school as a whole. These results are thought to demonstrate the equivalent of "symptom reduction" which is often used to track outcomes in clinical psychology literature. Future use of these techniques to evaluate mediation programs and specifically examine disputant outcomes should certainly be employed in program evaluation designs. The types of methods currently used to assess mediation programs in

the larger evaluation literature are not providing enough methodological specificity to appropriately assess and understand the mechanisms involved in mediation. By developing a greater understanding of underlying behavioral mechanisms and examining how children (mainly disputants) directly benefit from this intervention, programs can better plan and grow to focus more on these methods during mediation.

Perhaps the best place to begin addressing these lines of research is to restructure goals for peer mediation interventions to include these factors. Each program should define very specific behavioral goals they hope to achieve through the peer mediation program. Program evaluations can then build an assessment model to fit these goals. The goals of peer mediation, as identified by the larger literature, are to reduce discipline referrals, increase problem-solving ability, and decrease aggression. This author contends these goals are too broad and thus difficult to measure. With goals this broad, it is impossible to find a standardized measure that could reliably assess outcomes. By narrowing the goals to target specific types of aggression or to target time sent by teachers dealing with conflict more refined and thorough assessment of outcomes in peer mediation could be conducted. This would also allow researchers and implementers of these programs to make specific statements about the impact these programs have on schools.

Another artifact of poorly defined goals is that smaller sometimes more powerful measures of demonstrating effectiveness are overlooked. Factors such as changing conflict resolution ability and decreasing overall aggression are too lofty for such a specific, focused intervention such as peer mediation. It is prudent to identify a specific target such as reduction in aggressive strategies through peer mediation. This type of

target would still have a larger impact on the school as a whole, would demonstrate children are responding more appropriately to conflict after mediation, and is more reasonable when thinking about a potentially one-time intervention that lasts 20 minutes or less the majority of occasions. By lacking specificity in methodology, the outcome literature cannot lead one to conclude definitively whether or not peer mediation is effective for schools. This certainly does not mean methodology could not be put in place to assess the benefits of peer mediation programs but the current literature has largely failed to focus on measurable goals with rigorous methodology. The current study is a good example of a way to conduct this specialized type of focused goal assessment.

This study also introduced the use of standardized problem-solving measures to reliably assess mediation outcomes. Current research in the area lacks use of standardized measures, which leads to the continued propagation of poor evaluation studies and low generalizability of results. This study demonstrates standardized measures can and should be used to assess programs. Further, this author argues a need for standardized measures to be used to assess outcomes in peer mediation in order to establish strong research support for the intervention.

Conducting focused outcome assessments that utilize reliable, standardized measures to assess program outcomes should be the goal of peer mediation program evaluations. Though it is easy to discuss what should be done it is not always easy to implement these studies. This difficulty is compounded by the fact that those individuals who implement peer mediation programs are likely teachers or school counselors that may not have any training in conflict resolution techniques or research methodology. A

recent study found that though professors of education thought teaching conflict resolution training was necessary to prepare new teachers virtually no one was covering these topics in their curriculum (Leighfield & Trube, 2005).

One reasonable answer to this dilemma could be for child clinical psychologists to join forces with schools to develop plans to assess intervention programs, specifically in peer mediation. Peer mediation programs utilize many of the same techniques child clinical psychologists use in daily practice. The mechanisms involved in providing feedback through peer mediation are similar to those at the heart of cognitive behavioral therapy (CBT). One main feature of CBT is identifying negative thoughts and analyzing how they impact behavior in various situations. The cognitive triad is frequently used to make this link between thoughts, feelings, and behaviors. When negative thoughts are identified and targeted for change, an individual is instructed to search for evidence to support and refute these thoughts to examine impact on behavior. Evidence is then collected and a judgment can be made to engage in a different strategy in the future. When CBT is effective and follows with the theoretical model this process creates cognitive dissonance in an individual, thus creating the context for change to occur.

This can be translated nicely to a mediation session. Typically, disputants are referred to mediation due to a negative thought that lead to a specific inappropriate behavior. In the mediation process, the first step is identifying feelings and thoughts that lead to the inappropriate behavior. After these thoughts are discussed and the connection between subsequent behavior is pointed out, disputants work together to decide on a more appropriate conflict resolution strategy. Thus, just as in CBT, thoughts and behaviors are identified and then evidence is provided to support or refute the use of the strategy that

lead them to mediation in the first place.

Mediation is not always easy or pleasant for disputants since receiving this feedback often creates cognitive dissonance for the disputants similar to the process utilized within CBT. Arguably, it is this evidence provided in the context of mediation that creates the context for change in disputants. Again, though this may not change the inherent beliefs about aggression or ability to generate competent solutions to problems, it does provide motivation to change behavior, thus inhibiting aggressive responses. As is also the case with CBT, change in belief systems does not occur overnight and may take repeated exposure to the intervention to significantly impact behavior in multiple situations. The current study provides an excellent example of how these processes may play out with mediation.

Given the many similarities between CBT and mediation it is unusual that more child clinical psychologists do not study peer mediation programs and their outcomes. There would be many benefits to such an endeavor. The skills used in CBT treatments are not prevalent in the school psychology literature and are not frequently taught in teacher training programs (Leighfield & Trube, 2005). Thus, child clinical psychologists can provide unique background knowledge in order to help these programs become more successful in our schools.

Research in peer mediation suggests a positive growth trend for these types of programs (Jones, 2004). There are also many other variants of conflict resolution education programs that use similar skills to teach students. The knowledge of the mechanisms of change in CBT and learning principles could greatly aid in creating the most successful peer mediation programs or other conflict resolution education

curriculums. Clinical child psychologists should reach outside their discipline to aid in implementation and evaluation of these programs. Their knowledge in research design, statistical analyses, as well as CBT interventions make the marriage between the disciplines a natural fit. Perhaps more thorough evaluation studies could be constructed by utilizing child clinical psychologists as consultants to peer mediation programs. With more thorough evaluation methods in place, these programs can continue to evolve and develop into more successful interventions and reach a wider range of students.

Summary

The current study demonstrates the importance of targeting disputants to demonstrate program success as well as the importance of utilizing standardized measures to conduct a thorough program evaluation. All results of the current study were not positive and did not support the ability of peer mediation programs to change core beliefs about aggression or increase competent strategies. The lack of results in these areas should not be discouraging to researchers but instead serve to better define goals of mediation, provide evidence to support introducing additional problem-solving interventions, and conducting thorough program evaluations. By using mediation as a first step in teaching and modeling appropriate problem-solving, subsequent interventions could then be added to build on learning that takes place in mediation and foster growth in other areas. Results obtained in the current study provide support for the ability of peer mediation programs to decrease use of aggressive strategies to resolve conflicts. This finding alone attests to the potential of these programs to impact students' conflict resolution strategies. With further research into the behavioral mechanisms at play in mediation sessions, better goal refinement, and extensions of the mediation curriculum to

allow for more thorough skills-training it may be possible to establish an intervention that creates a large impact on reduction of aggression in schools.

The current study provides a model for program evaluation that is feasible for a school system, is able to be replicated by similar programs, provides a manner for defining specific goals, and examines disputant outcomes. These factors should continue to be used in future research to establish the direct impact of peer mediation on disputants as well as the school as a whole. Though this line of research is time-consuming, costly, plagued with numerous logistic difficulties, high attrition, few outcome measures, and low power this should not deter researchers from employing these techniques in the future. It is only through future research on the topic that more clear conclusions can be drawn, more reliable measures obtained, costs can be justified in terms of outcomes, and low power can be overcome by meta-analytic techniques. This study also provides a strong link between skills used in child clinical psychology and peer mediation. By joining the knowledge of child clinical psychologists to peer mediation programs it is more likely thorough program evaluations could be conducted. Though there will always be obstacles in school systems that make research difficult this should not dissuade researchers from attempting rigorous evaluations. Through continued research we will learn factors that make programs most successful and further the effort toward reducing violence in our nation's schools.

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APPENDICES

Appendix A

Peer Mediation Training Schedule

DAY 1

8:30-9:00 Name Tags, Introduction, Overview of Training

Overview:

- How you were chosen
- Schedule for training (different skills addressed)
- Responsibilities of mediators
- Benefits of being a mediator

9:00-9:15 Conflict and How people deal with it

- Define conflict
- Words associated with conflict (participation)
- Conflict Resolution Styles
- Skit illustrating 3 ways of dealing with conflict

9:15-10:00 Feeling Wheel, Active Listening, Nonverbal Communication and Paraphrasing

- Feeling wheel (participation)
- Active Listening
 - Define listening and ways of listening
 - Rules of active listening
 - Restate, reflect, ask questions
- Nonverbal Communication
 - Go over definition and different ways of expressing emotions nonverbally
 - Explain how these effect communication
 - Role-play demonstrating a few nonverbal postures
- Paraphrasing
 - Definition
 - Tips for paraphrasing
 - Worksheet

10:00-10:20 Point of View, Feelings vs. Thoughts, I messages

- Point of view
 - Worksheets
 - Explain importance
- Feelings vs. Thoughts
 - Explain difference between thoughts and feelings
 - Go through different scenarios and label
- I messages
 - Do skit with I, skit with you
 - Make up I-messages in the scenarios to point out and label
 - Importance of using these statements and why they are different

10:30-11:30 Mediation Process Checklist, Rules of Mediation

- Go over each item on checklist
- Explain the importance of the steps and sticking to them
- Explain the rules and adherence to the rules
- What to do when there are rule violations

11:30-12:00 Lunch

12:00-1:00 Discussion of Conflicts Found, Control of Difficult Situations

- Steps in mediation
- Purpose of each step
- Ground rules
- Specifics of agreements
- What to do when hearing different stories
- Name-calling, putdowns, interrupting
- Assertiveness
- If working with younger students

1:00-1:10 Peer Mediation Report Form

- Explain each blank
- Go through a problem scenario and fill out an example form

1:10-2:00 VIDEO, then Do's and Don'ts for Peer Mediators

- Adults role-play if necessary, or begin to break up kids into groups

2:00-2:30 Role-plays for kids (with instructors giving feedback)

- Break into groups and give kids several practice role-plays giving them feedback on how they are doing and helping to instruct them about how to do role-plays

DAY 2

8:30-10:00 Review of Mediation skills, active listening, peer mediation form

- Briefly review each of these areas from the day before with students participating and giving ideas and responses
- Ask for any questions, and explain how role-plays are going to work for the day
- All of day 2 will be focused on role-plays, with follow-up instructions on specific topics as needed

Appendix B

Measures

Social Problem Solving Measure (SPSM)

1. Pretend this is YOU and that this is a boy or girl in your class. The other child has been on the swing for a long, long time and doesn't seem to want to share the swing with you. You would really like to play on the swing. What would you say or do so that YOU could play on the swing? Would you:

- A. say, "You'd better let me play?"
- B. ask them to share the swing?
- C. ask the teacher to make him get off the swing?
- D. tell the teacher to not let them play anymore?
- E. just leave?

2. Pretend that this is YOU and that this is another boy or girl in your class. Let's also pretend that this is your first day at school and YOU would like to be friends with them, but they don't say anything to you. What would you say or do so that YOU could get to be friends with this boy or girl? Would you:

- A. wait until they talked to you?
- B. let them ride your bike so that they'd be your friend?
- C. ask the teacher to make them play with you?
- D. say, "You'd better play with me?"
- E. ask the teacher to make them sit alone?

3. Pretend that this is YOU and that this is another boy or girl in your class. YOU just got a good spot near the front of the line to go outside and someone pushes you out of line and takes your place. What would you say or do so that YOU could get your place back in line? Would you:

- A. ask the teacher to make them give you your place back?
- B. push them back?
- C. go to the back of the line?
- D. ask the teacher to make them go to the back of the line?
- E. say, "Can I have my place back?"

4. Pretend that this is YOU and that this is another boy or girl in your class, who is racing with other kids on their bikes. YOU would like to play with them, but they haven't asked you. What would you say or do to get to play with them? Would you:

- A. ask your mom or dad to make them play with you?
- B. tell them they'd better play with you?
- C. ask them if you could play?
- D. watch them play?
- E. ask your mom or dad to make them stop racing?

5. Pretend that this is YOU and that this is another boy or girl in your class. YOU are playing a game and you realize that they have taken your turn. What would you say or do so that YOU could get your turn? Would you:

- A. skip their turn?
- B. just forget about it?
- C. tell your mom or dad to let you win because they skipped your turn?
- D. ask if they skipped your turn?
- E. tell your mom or dad to make them give you your turn?

6. Pretend that this is YOU and that this is another boy or girl in your class, who is playing tag with some other kids. YOU would really like to play with them, but they haven't asked you. What would you say or do to get to play with them? Would you:

- A. tell the teacher to make them stop playing?
- B. just start playing with them?
- C. ask the teacher to make them play with you?
- D. go sit by yourself?
- E. call them bad names?

7. Pretend that this is YOU and that this is another boy or girl in your class. YOU are both on the playground and the person starts calling you names and making fun of you. What would you say or do to get them to stop teasing you? Would you:

- A. cry?
- B. call them names too?
- C. ask them to stop?
- D. tell the teacher to make them stop?
- E. tell the teacher to make them sit alone?

8. Pretend that this is YOU and that this is another boy or girl in your class, who is choosing sides for kickball with some other kids. YOU would really like to play with them, but they haven't asked you. What would you say or do to get to play kickball? Would you:

- A. offer to keep score if you could play the next game
- B. go sit with the teacher?
- C. take the ball so that they couldn't play?
- D. ask the teacher to take the ball away?
- E. ask the teacher to put you on a team?

Normative Beliefs about Aggression Measure (NBA)

Suppose a boy says something bad to another boy, John.

1. Do you think it's OK for John to scream at him.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

2. Do you think it's OK for John to hit him?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a boy says something bad to a girl.

3. Do you think it's wrong for the girl to scream at him?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

4. Do you think it's wrong for the girl to hit him?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a girl says something bad to another girl, Mary.

5. Do you think it's OK for Mary to scream at her?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

6. Do you think it's OK for Mary to hit her?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a girl says something bad to a boy.

7. Do you think it's wrong for the boy to scream at her?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

8. Do you think it's wrong for the boy to hit her?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a boy hits another boy, John.

9. Do you think it's wrong for John to hit him back?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a boy hits a girl.

10. Do you think it's OK for the girl to hit him back?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a girl hits another girl, Mary.

11. Do you think it's wrong for Mary to hit her back?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Suppose a girl hits a boy.

12. Do you think it's OK for the boy to hit her back?

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

13. In general, it is wrong to hit other people.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

14. If you're angry, it is OK to say mean things to other people.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

15. In general, it is OK to yell at others and say bad things.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

16. It is usually OK to push or shove other people around if you're mad.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

17. It is wrong to insult other people.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

18. It is wrong to take it out on others by saying mean things when you're mad.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

19. It is generally wrong to get into physical fights with others.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

20. In general, it is OK to take your anger out on others by using physical force.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

Appendix C

Peer Mediation Report Form

Date: _____

Disputant 1: _____

Disputant 2: _____

Mediator 1: _____

Mediator 2: _____

What kind of conflict?

Name-Calling

Pushing

Hitting

Argument/Rumor

Other: _____

Was the conflict resolved? YES NO

Do you think the agreement will work? YES NO

Mediation Agreement

Disputant 1 agrees to: _____

Disputant 2 agrees to: _____

Signatures:

Disputant 1

Disputant 2

Mediator 1

Mediator 2