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Emotional Intelligence & Conflict Resolution In Middle School Aged Children: The Early Effects Of An Emotional Literacy Intervention (ruler)

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Emotional Intelligence & Conflict Resolution in Middle School Aged Children: The Early Effects of an Emotional Literacy Intervention (RULER)

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Abstract
Emotional literacy interventions have been successful in increasing classroom organization and emotional climate. However, little has been reported on the effects of these interventions on conflict resolution and implications for youth violence and aggression. The aim of this thesis is to determine the early effects of an emotional literacy intervention (RULER) on conflict resolution skills in middle school aged children by examining the link between RULER and conflict resolution, including emotion regulation as a mediator. This was done using a multi-method, multi-level approach. Data from 57 sixth-grade classrooms (N=754) were analyzed and included conflict resolution scores and emotion regulation scores. Multi-level mediation analyses showed that there was no early effect of RULER on conflict resolution or emotion regulation, and therefore, there was no mediation. However, interaction analyses revealed that RULER significantly and positively impacted boys' scores but was less successful in increasing scores of Hispanic students. The discussion highlights the potential role of emotional literacy interventions in promoting emotion management and effective conflict resolution skills and reducing violence and aggression.

Introduction

Inspired by recent violent events that have been occurring frequently throughout the U.S., the present analysis examines the pathway by which an emotional literacy intervention (RULER) affects children's conflict resolution skills by acting first on their ability regulate their emotions. In the context of the present analysis, conflict resolution is defined as a student's ability to recommend appropriate solutions to interpersonal conflicts while considering both parties' positions. Emotion regulation is defined as a student's ability to regulate feelings in himself or herself and toward others in order to promote personal understanding and growth (Mayer et al, 2003; Brackett & Salovey, 2006). The following introduction seeks to help readers understand the link between these two important interpersonal and intrapersonal skills and the broader issues of violence and bullying.

On April 2, 2014, a mass shooting occurred at Fort Hood, Texas, that claimed the lives of four people, including the gunman, and injured 16 people. This incident is one in a string of tragic violent episodes that has taken place over the past few years. It is reported that there have been 93 mass shootings in 35 states between January 2009 and September 2013, including the tragic shooting that resulted in 20 child fatalities at Sandy Hook Elementary School in Newtown, Connecticut (Moya-Smith, 2013). Following the incident in Newton, CT, President Barack Obama called for meaningful action, saying that as a country, we had been through tragedies of its kind too many times (Wing, 2013). Yet, these tragedies have still continued to occur at alarming rates. Even more disappointing is that while the number of violent events gaining national attention is increasing, there are even more occurring daily in schools and neighborhoods that are too often overshadowed. According to the Center for Disease Control and Prevention, in 2010, there was an average of 13 victims of homicide between the ages of 10 to 24 each day in the U.S. In a 2011 nationally representative sample of youth in grades 9 through

12, 32.8% of students reported being in a physical fight in the previous year and 16.6% reported carrying a weapon in the 30 days prior to completing the survey (CDC, 2012).

It is important to note that violence and abuse do not always result in fatalities and are not always physical. Bullying, both physical and non-physical, can lead to depression, low self-esteem, isolation, anger, and extreme violent measures (stopbullying.gov, n.d.). In 2011, 20.1% of students in a nationally representative sample of youth in grades 9 through 12 reported being bullied at school in the previous year, and 16.2% reported being bullied electronically (CDC, 2012).

While socioeconomic background, gender, race, and exposure to violence in the media all influence behaviors and can facilitate violence (Thompson & Kyle, 2005), a commonly shared experience of those who act as the aggressor, bully, or attacker is that they themselves were once bullied. According to Kohlbergian stage development theory, bullying is a result of power differentials and marginalization of those deemed less powerful (as cited in Thompson & Kyle, 2005). Sometimes those who are bullied have been rejected by social hierarchy and are denied necessary exposure to social interactions that challenge them to build their moral reasoning skills (cognitive disequilibria). They may be rejected by social hierarchy because of ethical deficiencies they developed during primary socialization by parents, which influences their behavioral responses and makes their social discomfort apparent to their peers (Schonert-Reichl, 1999 as cited in Thompson & Kyle, 2005). Kohlberg's theory of stage development states that moral reasoning develops in stages throughout life, and changes that take place during puberty are physical, cognitive, and include moral reasoning, empathy and emotional responses (Fabes, 1999 as cited in Thompson & Kyle, 2005). Primary socialization, which occurs at the parental or guardian level, is a key factor that has been noted as deficient or missing in the lives of many aggressors. Children who lash out through violence are described as ill-prepared to handle stress and their deficiency in behavioral regulation highlights the need for interventions to prevent conflict in schools (Thompson & Kyle, 2005). An important fact to remember and that underscores the need for early intervention is that the strongest predictor of adolescent and adulthood aggression is the level of aggression displayed during childhood (Watson et al, 2004).

Watson et al describe risk factors that lead to the breakdown of healthy development and result in aggressive and violent behavior as analogous to objects that a juggler must keep in the air simultaneously. When more objects are added, it becomes easier for the juggler to lose control. However, it is not simply the number of objects to be juggled that can cause a break down. The shape, size and weight of the objects also impact the control that the juggler is able to maintain. Similarly, the number and type of challenges that people face make the difference in how they cope and when or if they reach their breaking point. Further, it is possible that children do not master normative development because of allostatic load. Allostatic load refers to repeated cycles of change and perturbations in homeostasis from challenges and stressors that eventually cause children to have underdeveloped normative behaviors and react to challenges through aggression (Watson et al, 2004). This emphasizes the need for better emotion regulation skills and improved conflict resolution skills.

Research has shown that victims of bullying lack critical emotional skill, which contributes to risk for psychological dysfunction later in life (Olweus, 1994; Perry, Willard & Perry, 1990; Neary & Joseph, 1994 as cited in Wilton et al, 2000). The ability to cope with situations that produce negative affect is essential to adaptive functioning, and emotion regulation skill underlies the ability to regulate behavior and produce appropriate emotional responses (Kopp, 1989 as cited in Wilton et al, 2000). In early childhood, children are able to rely on parents to regulate their emotions and provide primary socialization. However, as they become older and spend more time in the absence of their parents, it is critical that they are able to regulate their own emotions and behaviors (Kopp, 1989 as cited in Wilton et al, 2000). Emotion regulation is of high importance to social competence and differences in ability to manage emotions lead to two groups of responders, which Wilton et al call passive and aggressive (in the context of bullying victimization). They report that differences in coping styles have implications for resolution of conflicts, and that it is more specifically the management of negative emotions that produces effective coping skills (Lazarus & Folkman, 1989 as cited in Wilton et al, 2000).

A study conducted by Wilton et al observed elementary school victims of bullying and categorized their conflict resolution strategies as either problem-solving with the goal of de-escalating the conflict or aggressive with the consequence of perpetuating the conflict. They found that the victims' observed styles of coping with conflict (bullying) were amplifications of their emotional displays, which infers that emotion and emotion regulation are determinants of coping and conflict resolution skills. The study also found that victims of bullying were deficient in emotional skills and thus made undesirable coping and resolution choices (Wilton et al, 2000).

Research has also shown that emotion regulation and control of impulses is supported by cognitive skills called higher order thinking. It also suggests that early higher order thinking plays a central role in social competence and is an important predictor of future socioemotional issues (Scott et al, 2013). A study conducted to examine the association between higher order thinking and specific components of social competence in black boys in prekindergarten programs across six states in the U.S. found that the boys who had more proficient higher order thinking exhibited better social competence in the areas of behavior regulation, emotion regulation, and social communication skills (Scott et al, 2013).

Given the extensive research that has linked cognitive skills and emotion regulation to better conflict resolution skills and social competence, emotional intelligence is widely recognized as being critically important. While there are various definitions and conceptualizations of emotional intelligence, it has been described by Mayer & Salovey as the intersection between the cognitive and emotional systems of the personality (Mayer & Salovey, 1995). According to their model, it is the ability to monitor one's own feelings and those of others, to discriminate among them, and to use those abilities to guide one's thinking and actions. An emotionally intelligent person is described as one who regulates his or her emotions according to a logical and consistent

model of emotional functioning (Mayer &Salovey, 1995). Emotional intelligence has been broken down into four abilities, called branches, that in aggregate define the skills necessary to be socially competent. The four branches are perceiving, using, understanding, and managing emotions.

The RULER Approach

One approach to emotional intelligence that has surged in popularity in recent years is called RULER. The RULER Approach to Social and Emotional Learning seeks to improve the quality of classroom interactions through professional development and incorporation of emotional intelligence into classroom curricula (Hagelskamp et al, 2013). RULER is based on the achievement model of intelligence and targets five important emotion skills: recognizing emotions in oneself and others, understanding the causes and consequences of emotions, labeling emotions with accurate vocabulary words, and expressing and regulating emotions appropriately. RULER targets emotions because of the growing evidence that links emotion skills to social competence and overall wellbeing (Hagelskamp et al, 2013).

The proximal outcomes of RULER are enhanced emotional literacy skills and enhanced emotional climate in the classroom, school, and at home. The primary distal outcomes are enhanced academic performance, relationship quality, and health and wellbeing. RULER is two-pronged and combines professional development for teachers and school leaders and curriculum for students based on literacy and building of social and emotional skills. In phase I of RULER implementation, teachers and students learn the anchor tools that serve the purpose of strengthening relationships within the classroom and building a foundation for learning and teaching emotional literacy (Brackett et al, 2011). The anchor tools are intended to prevent bullying and promote the proximal and distal outcomes of RULER and the core competencies of Social and Emotional Learning (SEL): self-awareness, self-management, social awareness, relationship skills, and responsible decision making.

The first of the four anchor tools is the Charter. The Charter is a mission statement developed by students and teachers that outlines the feelings that each member of the learning community (classroom, school, etc.) wants to experience. The Charter identifies the behaviors that promote those feelings and provides strategies for coping with conflict or uncomfortable feelings (Brackett & Rivers, 2014). The second anchor tool is the Mood Meter. The Mood Meter is a tool that helps students and other community members accurately identify their feelings, build self and social awareness, expand their emotion vocabulary, set goals for how they would like to feel each day, and create strategies to achieve those goals. Teachers also use the Mood Meter to determine how to instruct the class depending mood state of the class. The third anchor tool is the Meta-Moment. The Meta-Moment helps students and other community members enhance self-regulation and reflective skill by teaching them to recognize “triggers” and respond to them effectively. It teaches teachers and students to be their best selves, and also helps them react more positively to triggers by aiming to be more preventative than reactive. The last anchor tool is the Blueprint. The Blueprint helps students and stakeholders learn how to manage interpersonal conflicts. It helps them to become effective problem

solvers and develop empathy for others, which leads to a decrease in violence and bullying (Brackett & Rivers, 2014).

In phase II of RULER implementation, teachers and school leaders are trained in the Feeling Words Curriculum that is administered to students. The curriculum encourages students and their educators to examine the emotional aspects of personal experiences, academic work and societal issues. The Feeling Words Curriculum consists of 12 units that are to be implemented over the course of one academic year. Each unit focuses on one feeling word, such as commitment, and includes five lessons or steps that familiarize students with the feeling word. Teachers are instructed to incorporate the five lesson units into regular class instruction and are allotted two weeks per unit. The five steps in order of application are: teachers introduce the feeling word to the students through a personalized connection, students connect the feeling word to current issues or academic material, students display their understanding of the word through a visual activity or performance, students talk with their family members about the feeling word and write a summary about their conversations, and lastly, the class as a whole discusses methods by which to manage emotions associated with the feeling word or that surface during conversations with their families. The two main targets of RULER are quality of classroom social and emotional interactions and emotional literacy skills of students and teachers. RULER has been implemented in kindergarten through 8th grade classrooms and is in the process of being implemented at the high school level. It provides curricular components to be utilized throughout the academic year and daily teaching tools for educators (Hagelskamp et al, 2013).

There have been large randomized controlled trials and reviews of the RULER approach that have assessed its effectiveness in improving classroom environments, emotional support and instruction, and academic achievement (Rivers et al, 2013; Hagelskamp et al, 2013). The present analysis focused on the impact of emotional intelligence education through the RULER approach on conflict resolution skills, which as previously discussed are vital to maintaining social competence and avoiding violent conflicts. My primary hypothesis is that the RULER approach is positively associated with conflict resolution skills through emotion regulation skills. In other words, the RULER approach influences emotion regulation, which impacts conflict resolution ability and acts as a mediator between RULER and conflict resolution. Based on the previously mentioned studies that suggest minorities are more often involved in fights and victims of violence, and that boys react more aggressively to conflict than girls, my secondary hypothesis is that the changes in emotion regulation and conflict resolution as a result of the RULER intervention will be greater for girls and non-minority students (Scott et al, 2013; Wilton et al, 2000).

Present Analysis

The present analysis is a secondary analysis of data collected as part of a 2 year, cluster randomized controlled trial of the RULER approach in fifth and sixth grade classrooms that was conducted from 2008 to 2010. It builds upon previous findings that RULER has been successful in improving classroom organization and emotion and instructional support (Hagelskamp et al, 2013). It extends those findings by examining

the impact of RULER on students' conflict resolution skills, and by testing whether those impacts are mediated by improvements in emotion regulation skills.

Methods

Participants

In the original study, the sample consisted of teachers and students from schools in the Roman Catholic Diocese of Brooklyn and Queens, NY. There were 62 schools, 155 English Language Arts (ELA) classrooms, and 3,824 students in the sample after randomization. School size ranged from 178 to 656 (M=325.92, SD=97.06) and an average of 66.85% (SD=32.30%) of students were minorities (Rivers et al, 2012).

In the present analysis, participants included 1127 students from 66 fifth and sixth-grade English Language Arts (ELA) classrooms from 52 schools. Of the 52 schools, 28 were randomized to the comparison condition and 24 to the RULER condition. Three hundred seventy-three (33.0%) of the students did not have scores for at least one of the variables of interest (conflict resolution skill, emotion regulation) for at least one of the time points of interest (baseline, Year 1 fall, Year 1spring). The 373 students with missing scores were excluded from the present analysis, leaving 754 students within 57 classrooms and 45 schools to be considered (24 schools were in the comparison condition, and 21 were in the RULER condition).

At baseline, these schools ranged in size from 7 students to 37 students. The average number of students per school was 16.76 (SD=6.495). The classrooms ranged in size from 5 students to 26 students, with an average of 13.23 (SD=4.629) students per classroom. 51.3% of the included sample was female. Black/African-American and Hispanic students made up 59.7% of the included sample, White/non-Hispanic students made up 25.7%, and Asian students comprised 11.8% of the included sample. The average baseline emotion regulation skill and conflict resolution skill scores of the included sample were 105.7(SD=13.1) and 3.0 (SD=0.9), respectively.

Procedures

Recruitment of schools took place in January 2008, and baseline data collection occurred in April and May of 2008. Conditions were assigned randomly to schools in July 2008. Training for the RULER schools began in October 2009 and the intervention was implemented immediately following training and continued until the end of the school year. Follow up data were collected over periods of 8 weeks at four time points after initial implementation of the intervention over the course of two years. The four time points were: Year 1 in October/November of 2008, Year 1 in April/May of 2009, Year 2 in October/November of 2009, and Year 2 in April/May of 2010.

Data Collection

Each period of data collection assessed emotion regulation skills and conflict resolution skills, among many other interpersonal skills, and classroom and school level variables. Students in both the comparison and RULER conditions were asked to complete the MSCEIT branch-4 scale for emotion management and the Conflict Resolution Skill Scale.

Measures

Emotion regulation. Emotion regulation was assessed with the fourth branch of MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test). This branch of emotional intelligence measures one's ability to regulate feelings in oneself and others in order to promote personal understanding and growth (Salovey et al, 2003). Managing emotions encompasses being able to monitor, discriminate, and label one's feelings. Emotion regulation was assessed with an 18 item MSCEIT-branch 4 scale that asks students to determine how effective different actions would be in achieving the desired outcome in a situation in which individuals regulate their own emotions. The scale also requires students to determine how effective alternative actions would be in achieving an emotional outcome involving other people. Students responded to each question using a 5-point-Likert-type scale (1=not at all helpful; 5=very helpful). Higher scores indicate greater emotion management (lowest=50, highest=150) (Salovey & Grewal, 2005). Students who score between 50-70 are identified as needing improvement. Students who score between 70-90 are encouraged to continue developing their skills. Those who score between 90-110 are identified as competent. Students who have scores between 110-130 are considered skilled. Finally, students who have scores between 130-150 are considered experts in emotion regulation (Mayer, Salovey, & Caruso, 2001) The Chronbach's α of the Emotion Management scale is 0.96, which indicates that is a highly reliable measure.

Conflict resolution. Conflict resolution was assessed using the Conflict Resolution Skill Scale from the Development Studies Center (Student Questionnaire, Child Development Project for Elementary School Students (Grades 3-6), 2000). The scale consists of 8 items to which students respond with one of five possible responses (A-E), ranging from aggressive (score=1) to compromising (score=5).

Higher scores indicate greater conflict resolution skill. The scale measures students' ability to recommend solutions to interpersonal conflicts while considering both parties' positions. For example, the first item in the scale presents students with the following prompt: "Suppose you put your pencil down for a minute and a boy in your class comes along and takes it. You ask him to give it back, but he says "no." What would you do next?" The answer choices are: A. Take the pencil away from him; B. Tell him that you really need your pencil to finish your work; C. Ask the teacher to make him give it back; D. Help him try to find another pencil, or tell him he can use yours after you are finished with it; E. Tell him that you will hit him or take something of his if he doesn't give back your pencil (Development Studies Center, 2000). The Chronbach's α of the Conflict Resolution Scale is .83, which indicates high reliability.

Analysis

Preliminary procedures

In order to determine how missing data might influence the results and how excluded cases differed from included cases, the 373 cases with missing data were selected and a new dataset was created that contained only their scores for the variables of interest. Descriptive statistics were conducted to determine the ethnic makeup, gender ratio, number of students in the comparison condition compared to the RULER condition,

and the mean baseline scores for conflict resolution skill and emotion regulation in the excluded sample. Cross tabulations were also conducted to determine the ethnic makeup, gender ratio and baseline conflict resolution and emotion regulation scores by condition. Then, the number of students in the excluded sample who were missing either one or both variables of interest at single or multiple assessment time points was determined.

After analyzing the excluded sample, similar descriptive statistics were conducted on cases in the included sample in order to determine the ethnic makeup, gender ratio and variable scores generally and by condition. In order to assess normality (skewness and kurtosis) of conflict resolution and emotion regulation variables, tests of normality were done and their complementary histograms were analyzed. In preparation for multilevel mediation modeling, the Asian/Pacific Islander, Multiracial, and Other race categories were combined into one category called 'Other'. Then, the race categories were made into dummy variables with 'White/non-Hispanic' designated as the reference. In order to determine how many students there were per school, the data were aggregated by school ID and two datasets were created, one for students and the other for schools. The school level dataset included the condition variable, and the child level dataset included emotion regulation skill scores, conflict resolution skill scores, race/ethnicity, and gender.

Differences between included and excluded samples. Tables 1 and 2 show characteristics for both included and excluded students. Overall, students from ethnic minority groups were underrepresented in the excluded sample, there was a higher proportion of males in the excluded sample compared the included sample, and a slightly higher percentage of students in the excluded sample were assigned to the RULER condition compared to the included sample. Race/ethnicity was a potential confounder in both the included and excluded samples. Baseline scores for emotion regulation and conflict resolution did not differ by sample.

There were lower proportions of black/African-American and Asian/Pacific Islander students in the excluded sample compared to the included sample (24.9% vs 34.5% and 4.8 vs 11.8, respectively). Compared to the included sample, there was a greater proportion of White/non-Hispanic students in the excluded sample (37.3%vs 25.7%, respectively). There was a higher proportion of males in the excluded sample compared to the included sample (55.5% vs 48.7% respectively). In both the included and excluded samples, more than half of the students were assigned to the RULER condition (59.2% and 55.0% respectively), which indicates that 'missingness' was not associated with randomization. The mean baseline scores for emotion regulation skill and conflict resolution skill did not differ between the included and excluded samples (emotion regulation skill: 105.7±13.1 vs 105.0±13.0, respectively; conflict resolution skill: 3.0±0.9 vs 3.1±0.8, respectively). Table 2 shows that in both the included and excluded samples, race/ethnicity was significantly associated with condition ($p=0.003$ and $p=0.025$, respectively).

Preliminary diagnostics. The distributions of both variables (emotional regulation and conflict resolution) were examined at baseline to assess assumptions of normality. According to West, Finch, and Curran, skewness greater than 2 and kurtosis

greater than 7 are causes for concern (West, Finch, Curran, 1995). In this case, both variables had skewness statistics less than 2 and kurtosis statistics less than 7, thus meeting normality guidelines.

Analytic Plan. To test the hypothesis that emotion regulation skill mediates the relationship between RULER and the students' conflict resolution skills, a multilevel modeling framework was used to account for the nested design of the study in which students were nested within schools. All multilevel modeling was done using version 6.02 of Hierarchical Linear Modeling (HLM) (Raudembush & Bryck, 2002).

Table 1.

Intercorrelations Among Variables in a Two-Level Model With Students Nested Within Schools

Variable	1	2	3	4	5	6
Level 1: Students (N=754)						
1. Black/African-American	1.00					
2. Hispanic	-0.43***	1.00				
3. Other race	-0.03***	-0.23***	1.00			
4. Gender	-0.26	-0.05	-0.03	1.00		
5. Emotion regulation skill	-0.09***	-0.03	0.08*	0.20***	1.00	
6. Conflict resolution skill	-0.16***	0.01	-0.03	0.11**	0.30***	1.00
Level 2: Schools (N=45)						
1. Condition	1.00					

Student race was dummy coded with White as the reference.
*p<0.05, **p<0.01, ***p<0.001

Multilevel mediation modeling. HLM was used in the analysis because of the nested design of the study. There were two levels of interest, students (level 1) who were nested within schools (level 2). Multilevel mediation of emotion regulation on the association between condition and conflict resolution was tested using the following steps:

Step 1: First, condition (the independent variable) has to be correlated with conflict resolution (the dependent variable).

Step 2: Next, condition must be associated with emotion regulation (mediator).

Steps 3 & 4: Lastly, when condition is controlled, there must be an association between emotion regulation (the mediator) and conflict resolution (the dependent variable). Further, when emotion regulation is taken into account, the association between condition and conflict resolution should be of lesser magnitude or become non-significant (MacKinnon, 2008; Krull & Macinnon, 1999; Preacher & Haynes, 2008 as cited in Reyes et al, 2012).

Step 1

Level-1 Model: Conflict resolution$_{ij}$=β_{0j} + β_{1j} (gender)$_{ij}$+ β_{2j}(African-American)$_{ij}$ + β_{3j}(Hispanic)$_{ij}$ + β_{4j}(Other)$_{ij}$ + r_{ij}

Level-2 Model: β_{0j}= γ_{00} + c(condition)$_j$ + u_{0j}

Step 2

Level-1 Model: Emotion regulation$_{ij}$=β_{0j} + β_{1j}(gender)$_{ij}$+ β_{2j}(African-American)$_{ij}$ + β_{3j}(Hispanic)$_{ij}$ + β_{4j}(Other)$_{ij}$ + r_{ij}

Level-2 Model: β_{0j}= γ_{00} + a (condition)$_j$ + u_{0j}

Steps 3 & 4

Level-1 Model: Conflict resolution$_{ij}$=β_{0j} + β_{1j}(gender)$_{ij}$+ β_{2j}(emotion regulation)$_{ij}$ + β_{3j}(African-American)$_{ij}$ + β_{4j}(Hispanic)$_{ij}$ + β_{5j}(other)$_{ij}$ + r_{ij}

Level-2 Model: β_{0j}= γ_{00} + c’ (condition)$_j$ + u_{0j}

Final multilevel equation

Level-1 Model: Conflict resolution$_{ij}$=β_{0j} + β_{1j}(Gender)$_{ij}$+ β_{2j}(African-American)$_{ij}$ + β_{3j}(Hispanic)$_{ij}$ + β_{4j}(Other)$_{ij}$ + β_{5j}(Emotion regulation)$_{ij}$+r_{ij}

Level-2 Model: β_{0j}= γ_{00} + γ_{01}(condition)$_j$ +u_{0j}

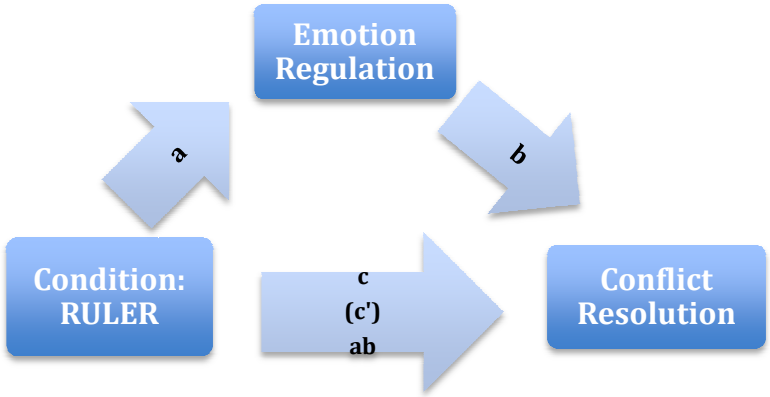
After adjusting for gender (β_{1j}), race (β_{12j}, β_{3j}, β_{4j}), the presence of emotion regulation as a mediator (β_{5j}), and the error term that corresponds to the estimated mean in level 1 of the final two-level model (r_{ij}), conflict resolution skill score for a student, i, in a school, j, is dependent upon the average conflict resolution skill score in the school (β_{0j}). In level 2, the adjusted conflict resolution skill score mean for students in each school (β_{0j}) is dependent upon the grand mean (γ_{00}), condition (γ_{01}), and the error term associated with the estimated mean (u_{0j}).

Table 2.
Mediation Analysis: Association Between Condition and Conflict Resolution Skill Through Emotion Regulation Skill

	Step 1 (ICC=1.10%) Conflict resolution skill		Step 2 (ICC=3.75%) Emotion regulation skill		Steps 3&4(ICC=6.74%) Conflict resolution skill	
Variable	γ	SE	γ	SE	γ	SE
Intercept	2.77***	0.11	103.60***	1.37	0.94**	0.30
Level 1 covariates						
Black/African-American	-0.44***	0.12	-3.16**	1.46	-0.39***	0.12
Hispanic	-0.17	0.11	-1.33	1.49	-0.16	0.12
Other race	-0.20	0.13	2.28	1.78	-0.26*	0.12
Gender	0.22***	0.09	5.46***	0.98	0.12	0.08
Level 1 mediator						
Emotion regulation					0.02***	0.00
Level 2						
Condition	0.11	0.10	-0.51	1.21	0.12	0.10
Fit statistics						
$R^2(\bullet_{00})$	0.06		0.80		0.80	
$R^2(\bullet^2)$	0.85		0.05		0.05	
• χ^2 (df)					7.98(1)	

Student race was dummy coded with White as the reference.
*p<0.05, **p<0.01, ***p<0.001

Figure 1. Model: How emotion regulation skill mediates the association between condition (RULER approach) and conflict resolution skill



Pathways

Path c from the independent variable (condition) to the outcome (conflict resolution) is a direct effect. Path c' represents the mediated effect, with emotion regulation skill acting as the mediator. Path ab is an indirect effect, which associates the RULER approach and conflict resolution through emotion regulation. (cf. Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010).

Effect size

Effect sizes, denoted as δ, were calculated using the formula: $\delta = \gamma/(\tau_{00} + \sigma^2)^{1/2}$. γ is the association between the predictor and the outcome. τ_{00} and σ^2 in this equation are taken from the unconditional model and represent the between- and within-groups variances, respectively. δ is comparable to Cohen's d (1988), which is interpreted as: d of 0.2: small, d of 0.5: moderate, and d of 0.8: large.

Results

Descriptive analyses

The average baseline conflict resolution skill and emotion regulation skill scores at the school level were 3.02(SD=0.332) and 105.28(SD=4.98) respectively. The minimum conflict resolution skill score at the school level was 2.32 and the maximum was 3.70. The minimum emotion regulation skill score at the school level was 95.45 and the maximum was 121.92. The average baseline emotion regulation skill score of the comparison group was 105.5(SD=13.2) and 105.9(SD=12.8) in the RULER group. The average baseline conflict resolution skill score of the comparison group was 3.0(SD=0.9) and 3.0(SD=0.9) in the RULER group. As shown indicated in Table 2, race/ethnicity was significantly associated with condition for both the included and excluded samples (p=0.003 and p=0.025, respectively). In other words, race/ethnicity was a potential confounder of the relationships between condition, emotion regulation skill, and the outcome of interest, conflict resolution skill. Gender, on the other hand, was not significantly associated with condition in both the included and excluded samples (p=0.892 and p=0.872, respectively).

Table 3. Description of the sample

	Students (N=1127)					
	Included (n=754)			Excluded(n=373)		
Variable	M±SD	n	%	M±SD	n	%
Race/ethnicity						
White/non-Hispanic		194	25.7		139	37.3
Black/African-American		260	34.5		93	24.9
Hispanic		190	25.2		105	28.2
Asian/Pacific Islander		89	11.8		18	4.8
Multiracial		8	1.1		9	2.4
Do not know		13	1.7		9	2.4
Gender						
Male		367	48.7		207	55.5
Female		387	51.3		166	44.5
Condition						
RULER		446	59.2		205	55.0
Comparison		308	40.8		168	45.0
Main variables						
Emotion regulation skill	105.7±13.1			105.0±13.0		
Conflict resolution skill	3.0±0.9			3.1±0.8		

Table 4. Description of sample by condition

	Students (N=1127)									
	Included(n=754)					Excluded(n=373)				
	Comparison		RULER			Comparison		RULER		
	n	%	n	%	p	n	%	n	%	p
Gender					0.892					0.872
Male	218	48.9	149	40.6		113	55.1	94	56.0	
Female	228	51.1	159	41.1		92	44.9	74	44.0	
Race/ethnicity					0.003					0.025
White/non-Hispanic	102	22.9	92	29.9		81	39.5	58	34.5	
Black/African-American	145	33.5	115	37.3		48	23.4	45	26.8	
Hispanic	120	26.9	70	22.7		49	23.9	56	33.3	
Asian/Pacific Islander	61	13.7	28	9.1		12	5.9	6	3.6	
Multiracial	5	1.1	3	1.0		6	2.9	3	1.8	
Do not know	13	2.9	0	0.0		9	4.4	0	0.0	

Table 3 represents the intercorrelations among variables included in the analysis. Among level-1 variables, Black/African-American was significantly associated with lower emotion regulation skill scores ($p<0.001$) and conflict resolution skill scores ($p<0.001$). Gender was significantly associated with higher emotional regulation skill scores ($p<0.001$) and conflict resolution skill scores ($p<0.01$). Other race was significantly associated with higher emotion regulation skill scores ($p<0.05$). Emotion regulation skill was significantly associated with higher conflict resolution skill ($p<0.001$). There was only one variable, condition, at level-2, which was completely correlated with itself, as expected.

In the unconditional model for conflict resolution skill, the intraclass correlation (ICC) at the school level (level 2) was 9.98% and the ICC at the child level (level 1) was 90.02%. This indicates that 90.02% of the variation in conflict resolution skill score occurred at the level of the students, or was due to dissimilarities among students. Only a small proportion of the variation in conflict resolution skill score occurred at the school level. Similarly, in the unconditional model for emotion regulation skill, the majority of variation in emotion regulation skill score occurred at the child level. The ICC at the school level (level 2) was 3.76%, while the ICC at the child level (level 1) was 96.24%.

Multilevel Mediation Analyses

Steps 1 and 2. As shown in table 4, there was not a significant main effect of condition on conflict resolution skill after controlling for all covariates ($t=1.108$, $p=0.274$,$\delta=0.12$). This means that the conflict resolution skill scores for the RULER and comparison groups did not differ significantly. Although condition was not associated with the dependent variable, I proceeded to test the association between condition and emotion regulation, the mediator. There was not a significant main effect of condition on emotion regulation ($t=-0.424$, $p=0.673$,$\delta=-0.52$) either, meaning that the RULER and

comparison groups did not differ significantly in their emotion management skill. Table 4 shows that in step 1 the amount of variation in conflict resolution skill score at the child level that could be explained by the model was 1.10%. The amount of variation in conflict resolution skill score at the school level that could be explained by the model was 35.77%. In step 2, the model of the association between condition and emotion regulation, the amount of variation in emotion regulation skill score at the school level that could be explained by the model was 8.41%, while the amount of variance at the child level that could be explained by the model was 3.75%.

Steps 3 and 4.

The goal of step 3 in mediation analysis is to determine the effect of the mediator, (emotion regulation) on the dependent variable (conflict resolution skill) when controlling for the independent variable (condition). As shown in table 4, higher scores on emotional regulation skill were positively associated with conflict resolution skill scores ($t=7.004$, $p<0.001$,$\delta=0.02$). Conflict resolution skill scores increased by 0.02 points for every one unit increase in emotion regulation skill.

In step 4 of mediation analysis, the association between condition and conflict resolution skill would have to be of lesser magnitude or non-significant in order to show either partial or complete mediation. Because condition was significantly associated with neither conflict resolution skill nor emotion regulation skill, a test of partial or complete mediation was not necessary. However, it can be confirmed from table 4 that the association between condition and conflict resolution skill was not significant and did not decrease when emotion regulation taken into account. The final parameter estimate was negligibly higher than the first ($\gamma =0.12$ vs $\gamma=0.11$; $t=1.299$, $p=0.201$,$\delta=0.13$).

In the final model, the amount of variance in conflict resolution skill score at the school level that could be explained by the model was 48.96%, while the amount of variance at the child level that could be explained by the model was 6.74%.

Additional findings

When not considering condition, on average, Black/African-American students had significantly lower conflict resolution scores than White students ($t=-3.84$, $p<0.001$, $\delta=-0.45$). The mean conflict resolution score of Black/African-American students was 0.44 points lower than the mean score of White students. On average, girls had significantly higher conflict resolution scores than boys ($t=2.51$, $p=0.012$, $\delta=0.22$). The mean conflict resolution score for girls was 0.22 points higher than the mean score of boys. On average, Black/African-American students had lower emotion regulation scores than White students ($t=-2.98$, $p=0.003$, $\delta=-3.20$). The average conflict resolution score for Black/African-American students was 3.14 points lower than the mean score for White students. On average, girls had higher emotion regulation scores than boys ($t=5.40$, $p<0.001$, $\delta=5.58$). The average emotion regulation skill score for girls was 5.46 points higher than the average score for boys.

When controlling for condition and considering the association between emotion regulation skill and conflict resolution skill, Black/African-American and Other race

students had significantly lower conflict resolution scores than Whites. While Black/African-American students still had significantly lower conflict resolution scores than White students when emotion regulation was considered, the T ratio became less negative and closer to 1, which suggests that their conflict resolution scores were more similar to the scores of White students (t=-3.84 vs t=-3.424). Interestingly, when considering conflict resolution scores without the effects of emotion regulation and condition, students who identified as Other had lower conflict resolution scores than White students, but the difference was not significant (t=-1.52, p=0.129, δ= -0.21). However, when emotion regulation was considered and condition was controlled, students who identified as Other had significantly lower scores that White students and the T ratio became more negative, or farther from1 (t=-2.05, p=0.40, δ=-0.27). This suggests that conflict resolution scores of students who identified as Other became significantly more different from the conflict resolution scores of White students when variance due to emotion regulation skill was accounted for in the model.

Interactions

Effects of Gender*Condition on Conflict Resolution Skill

Level-1 Model

$Y= \beta_{0j} + \beta_{1j}(\text{gender}) + \beta_{2j}(\text{emotion regulation skill})_j + \beta_{3j}(\text{African-American})_j + \beta_{4j}(\text{Hispanic})_j + \beta_{5j}(\text{Other})_j + r_{ij}$

Level-2 Model

$\beta_{0j}= \gamma_{00}+ \gamma_{01}(\text{condition})_j + u_{0j}$

$\beta_{1j}= \gamma_{10} + \gamma_{11}(\text{condition})_j$

$\beta_{2j}= \gamma_{20}$

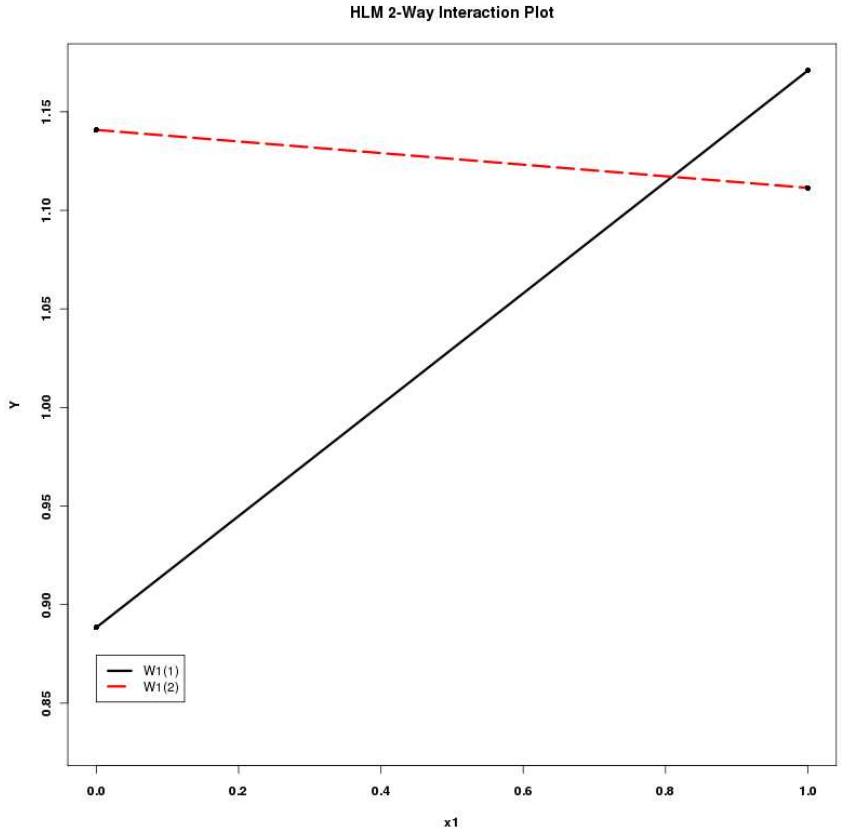
$\beta_{3j}= \gamma_{30}$

$\beta_{4j}= \gamma_{40}$

$\beta_{5j}= \gamma_{50}$

To determine if the effects of condition on conflict resolution skill varied by gender, a cross level interaction was performed by adding a term for the interaction of condition and gender to the final two-level model. The interaction term was significantly associated with conflict resolution skill. Within the RULER condition, girls' average conflict resolution score was significantly lower than the average score for boys. On average, girls within the RULER condition obtained scores that were 0.31 points lower than the average score for boys (t=-2.03, p=0.04, δ=-0.32).

Figure 2.
Interaction: Gender*Condition



In Figure 2., 0.0 on the x-axis represents the comparison condition and 1.0 represents the RULER. The y-axis represents conflict resolution scores. The red dashed line corresponds to girls and the black solid line corresponds to boys.

<u>Effects of Race*Condition on Conflict Resolution Skill</u>
Level-1 Model
$Y = \beta_{0j} + \beta_{1j}(\text{gender}) + \beta_{2j}(\text{emotion regulation skill})_j + \beta_{3j}(\text{African-American})_j + \beta_{4j}(\text{Hispanic})_j + \beta_{5j}(\text{Other})_j + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{condition})_j + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{condition})_j$
$\beta_{2j} = \gamma_{20}$
$\beta_{3j} = \gamma_{30} + \gamma_{31}(\text{condition})_j$
$\beta_{4j} = \gamma_{40} + \gamma_{41}(\text{condition})_j$
$\beta_{5j} = \gamma_{50} + \gamma_{51}(\text{condition})_j$

Next, interaction terms for race by condition were added to the model to determine if the effects of the intervention on conflict resolution differed by race. Interestingly, after adding the interaction terms for race by condition to the model, the association between African-American race and conflict resolution skill was no longer significant. Within the RULER condition, although the average conflict resolution skill score for African-American students was lower than the average score for white students, the difference was not statistically significant (t=-0.40, p=0.69, δ=-0.03). A similar effect was seen for the association between Other race and conflict resolution skill (t=1.16, p=0.25, δ=0.29).

Effects of Gender*Condition on Emotion Regulation Skill

Level-1 Model

$$Y= \beta_{0j} + \beta_{1j}(\text{gender}) + \beta_{2j}(\text{African-American})_j + \beta_{3j}(\text{Hispanic})_j + \beta_{4j}(\text{Other})_j + r_{ij}$$

Level-2 Model

$$\beta_{0j}= \gamma_{00}+ \gamma_{01}(\text{condition})_j + u_{0j}$$
$$\beta_{1j}= \gamma_{10} + \gamma_{11}(\text{condition})_j$$
$$\beta_{2j}= \gamma_{20}$$
$$\beta_{3j}= \gamma_{30}$$
$$\beta_{4j}= \gamma_{40}$$

To determine if the effects of condition on emotion regulation skill differed by gender, a cross level interaction was performed by adding a term for the interaction of gender by condition to a two-level model in which emotion regulation skill was the outcome. The interaction was not significant, meaning that the impacts of RULER on average emotion regulation skills for girls did not differ significantly from the average score for boys within the RULER condition (t=-0.85, p=0.40, δ=-1.7).

Effects of Race*Condition on Emotion Regulation Skill

Level-1 Model

$$Y= \beta_{0j} + \beta_{1j}(\text{gender}) + \beta_{2j}(\text{African-American})_j + \beta_{3j}(\text{Hispanic})_j + \beta_{4j}(\text{Other})_j + r_{ij}$$

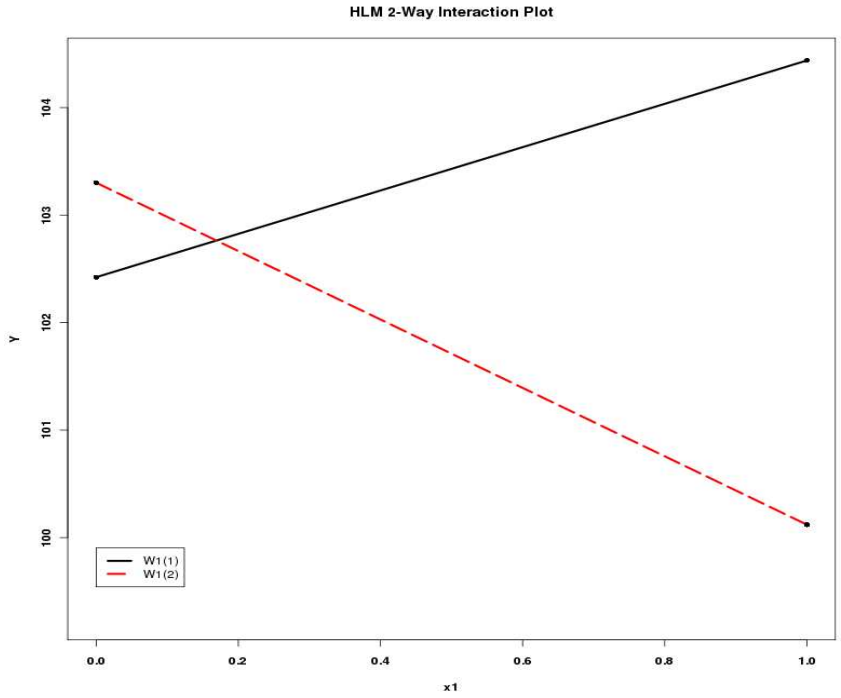
Level-2 Model

$$\beta_{0j}= \gamma_{00}+ \gamma_{01}(\text{condition})_j + u_{0j}$$
$$\beta_{1j}= \gamma_{10}$$
$$\beta_{2j}= \gamma_{20}+ \gamma_{21}(\text{condition})_j$$
$$\beta_{3j}= \gamma_{30}+ \gamma_{31}(\text{condition})_j$$
$$\beta_{4j}= \gamma_{40}+ \gamma_{41}(\text{condition})_j$$

Only the interaction term for Hispanic race/ethnicity by condition was statistically significant. The average emotion regulation score for Hispanic students within the RULER condition was 5.20 points lower than the average score for White students (t=-2.15, p=0.03, δ=-5.31). African-American students and students who identified as other

no longer had significantly lower average emotion regulation skill scores than White students, which suggests that once variation in condition effects as a function of race was accounted for, there was no statistically detectable difference in scores between white students and black students and students who identified as Other and white students.

Figure 3.
Interaction: Race/Ethnicity (Hispanic)*Condition



In Figure 3., 0.0 on the x-axis represents the comparison condition and 1.0 represents RULER. The red dashed line represents Hispanic students and the black solid line represents white students.

Discussion

Inconsistent with my hypotheses, no significant direct or indirect associations between condition and conflict resolution skill were found. Emotion regulation skill did not mediate the relationship between the condition and conflict resolution skill after controlling for race and gender. Schools randomly assigned to the RULER condition implemented the RULER anchor tools and Feeling Words Curriculum in English Language Arts (ELA) classrooms and trained teachers to help students examine the emotional aspects of personal experiences, academic materials and current events. Schools in the non-RULER comparison condition did not implement the Feeling Words Curriculum into normal class instruction. Previous research has shown that the RULER approach impacts emotional, instructional, and organizational quality of middle school classrooms after a two year implementation period, and that schools assigned to the RULER condition are rated more favorably in the domain of emotional (as well as instructional and organizational) quality than schools not assigned to RULER (Hagelskamp & Brackett). However, in the present analysis, the RULER condition did not have a significant effect on either emotion regulation skill or conflict resolution skill.

It did show, as expected, that emotion regulation skill was significantly associated with conflict resolution skill (Table 3 and Table 4). The null findings for the main effect may be due to the time points at which the mediator and outcome scores were examined. The RULER intervention was implemented in schools over the course of two years, but the present analysis focused on student scores collected after only one year.

While the primary mediation hypothesis was not supported, the analysis revealed other interesting and important significant associations. Black/African-American students had significantly lower average emotion regulation and conflict resolution skills scores than White/non-Hispanics. On average, girls had significantly higher emotion regulation skill and conflict resolution skill scores than boys. These findings are consistent with research that suggests that girls are less involved in violence and fighting than boys, and that boys tend to employ more aggressive methods of conflict resolution while girls are more likely to employ avoidant methods. The results also support research that shows that black teens are more often witnesses of violence and victims of violent threats than white teens, and that African-Americans have been less successful than members of other races in avoiding and resolving conflicts (Scott et al, 2013; Hausman et al, 1994).

Research has also shown that adolescents know that violence can be avoided, but they lack knowledge of behavioral options and methods of conflict resolution (Hausman et al, 1994). This research and the results of the present analysis underscore the need for interventions that teach adolescents how to regulate and understand their emotions and translate that understanding into improved expression and conflict resolution skill. While girls had significantly higher emotional regulation and conflict resolution skills scores than boys and White/non-Hispanic students had significantly higher emotion regulation and conflict resolution skills scores than blacks/African-Americans, they were still considered only competent in emotion regulation skills according to MSCEIT scoring guidelines. This further indicates that there is room for improvement for all races/ethnicities and both genders. A competent score acknowledges that one is capable of resolving conflict and processing emotions, however, it also suggests that one is not completely comfortable with certain strong emotions and makes attempts to disengage from or avoid them (Mayer et al, 2001).

Given the results of the present analysis and previous research that has revealed differences in resolution and emotion management skills of boys and girls and among different races, tailored approaches to interventions such as RULER might be considered in the future. Examination of intervention fidelity would also be warranted, to determine if differences in implementation affected outcome scores and explains score variation.

The interaction between gender and condition had significant effects on conflict resolution skills. On average, girls within the RULER condition had lower conflict resolution skills scores than boys within the condition. This is an interesting finding because overall, girls had significantly higher conflict resolution skills scores than boys. It is possible that because girls within the RULER condition had higher average baseline

scores than boys within the condition, the intervention had a stronger effect on boys and increased their scores more significantly.

When considering the interaction of race and condition, African-American students and students who identified as Other no longer had significantly lower conflict resolution skills scores than White students, which might indicate that the RULER condition had significant positive effects on the conflict resolution skills of African-American students and students who identified as Other.

No significant effects were observed in the model used to determine if effects of condition on emotion regulation skills differed by gender. However, there were significant observations for the model that examined the effects of condition on emotion regulation skills by race. African-American students and students who identified as Other no longer had significantly lower average emotion regulation skills scores than white students. Hispanic students, on the other hand, had significantly lower average scores than White students, differing by 5.20 points. This suggests that within the RULER condition, African-American students and students who identified as Other were positively impacted by the intervention such that their scores were more similar to those of their White peers. However, Hispanic students within the RULER condition did not experience the same positive effects and experienced less improvement than their counterparts.

Limitations, Strengths & Future Directions

It is important to note limitations of the analysis. One of the most important limitations to discuss is time points that were chosen for the analysis. Although the intervention was implemented over a two-year period, the analysis only focused time points of the first year of intervention. There may not have been sufficient time for significant changes in these skills to be observed at the time points examined in this analysis. In the future, it would be important to look at students' progression and changes in scores over the full two-year implementation period in order to have a better understanding of the effects of the RULER intervention on emotion regulation and conflict resolution skills.

Another limitation might be that the implementation of the intervention was the responsibility of teachers at the schools recruited for the study. There could have been differential implementation of the curriculum even though the teachers were trained in the RULER program. This could also be related to the large number of cases (students) that were missing scores for emotion regulation skill and conflict resolution skill. Further, the present analysis was limited in its ability to determine why 373 students were missing data and how their scores might have differed from those students who had data for all three time points of interest.

As seen in the tables of scores from baseline time 2 (spring), scores for emotion regulation and conflict resolution dropped from baseline to time 1 for all racial groups (except white/non-Hispanic), both genders, and both conditions. This could be due to the extended length of time between baseline collection of scores in April/May and the

implementation of the intervention in October. In this time away from school and class instruction, students may have had personal experiences that altered their abilities to properly regulate emotions and resolve conflicts or may have lacked proper social guidance and discipline that they were likely to experience while in school.

While multilevel mediation analysis was used in the present analysis, only two-level models were constructed that accounted for the nesting of students within schools. Although there were no variables examined at the classroom level in this analysis, a three-level model to account for students being nested within classrooms that were nested within schools would have provided more information about the proportion of variability at each level (child, classroom or school). This could have provided a bit of insight into teachers' delivery of the intervention.

Despite the few aforementioned limitations, the present analysis and the original study had many strengths. First, both had very large sample sizes (N= 754 and N=3,824, respectively). Second, randomization allowed for fair distribution of males and females to the two conditions such that gender was not significantly associated condition. The use of HLM to account for the nested design of the study, although only at two levels, was a great strength of the present analysis. It allowed for a more accurate representation of the proportion of variation in scores at the school level and child level.

In the future, it would be important to examine emotion regulation as a mediator of the relationship between RULER and conflict resolution only for boys within the sample. While overall, girls had higher emotion regulation and conflict resolution scores, the results of the condition by gender interaction revealed that boys within the RULER condition benefitted more than girls from the intervention. Further, it would be interesting to examine primary socialization and social support as moderators of the association between condition and conflict resolution. Finally, it would also be useful to determine if emotion regulation mediates the relationship between condition and stress.

Conclusion

Primary socialization and social support are critical factors in the development of normative behaviors and social competence (Thompson & Kyle, 2005). However, when they are lacking and children face challenges on their own, adequate emotion regulation and conflict resolution skills can help them overcome those challenges more effectively. The results of the present analysis suggest that early emotional literacy interventions such as RULER can increase children's conflict resolution skills and help them become better problem solvers. These findings could also have important implications for adolescents and adults because decreasing propensity for aggression at an early age decreases adolescent and adulthood aggression. The ability of emotional literacy interventions to reduce aggressive behaviors, teach children how to manage their emotions and navigate interpersonal interactions could have a meaningful and positive impact on the rate at which violent episodes have been occurring throughout the country.

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Appendix

I. Excluded sample description

Six students were missing baseline scores for conflict resolution skill, 62 were missing scores for the first time point assessment of conflict resolution skill, and 79 were missing scores for the second time point assessment. None of the students was missing scores for all three assessments. Eighty-seven students were missing baseline assessment scores for emotion regulation skill and 99 were missing time1 assessment scores. Eight students were missing both baseline and time1 emotion regulation assessment scores. Two students were missing baseline assessment scores for both conflict resolution skill and emotion regulation. Similarly, two students were missing time1 assessment scores for both conflict resolution skill and emotion regulation skill.

II. Tables of average emotion regulation and conflict resolution scores from baseline to Time 2

Table 1. Average Emotion Regulation & Conflict Resolution Skills Scores From Baseline to Time 2 By Condition

Condition/Variable	Baseline M ± SD	Time 1 (fall) M ± SD	Time 2 (spring) M ± SD
Comparison			
Emotion Regulation Skill	105.5 ± 13.2	105.3 ± 13.9	106.4 ± 14.4
Conflict Resolution Skill	3.0 ± 0.9	2.7 ± 1.0	2.7 ± 1.0
RULER			
Emotion Regulation Skill	105.9 ± 12.8	104.7 ± 13.3	107.5 ± 13.0
Conflict Resolution Skill	3.0 ± 0.9	2.8 ± 0.9	2.8 ± 1.0

Table 2. Average Emotion Regulation & Conflict Resolution Skills Scores From Baseline to Time 2 by Race/Ethnicity

Race/Variable	Baseline M ± SD	Time 1 (fall) M ± SD	Time 2 (spring) M ± SD
White/non-Hispanic			
Emotion Regulation Skill	108.5 ± 11.3	106.4 ± 13.1	109.0 ± 13.8
Conflict Resolution Skill	3.2 ± 0.8	3.0 ± 0.9	3.0 ± 0.9
Black/African-American			
Emotion Regulation Skill	102.4 ± 13.4	103.3 ±13.1	105.8 ± 13.2
Conflict Resolution Skill	2.8 ± 0.9	2.5 ±1.0	2.5 ± 1.0
Hispanic			
Emotion Regulation Skill	106.6 ± 12.9	104.4 ± 14.9	105.3 ±14.9
Conflict Resolution Skill	3.0 ± 0.9	2.7 ± 1.0	2.7 ± 1.0
Other			
Emotion Regulation Skill	106.0 ± 11.3	107.7 ± 13.1	108.7 ± 13.4
Conflict Resolution Skill	3.3 ± 0.9	2.7 ± 1.0	2.6 ± 1.0

Table 3. Average Emotion Regulation Skill Conflict Resolution Skills Scores From Baseline to Time 2 By Gender

Gender/Variable	Baseline M ± SD	Time 1 (fall) M ± SD	Time 2 (spring) M ± SD
Female			
Emotion Regulation skill	107.8 ± 12.5	107.7 ± 12.0	110.0 ± 11.2
Conflict Resolution Skill	3.0 ± 0.8	2.8 ± 1.0	2.8 ± 1.0
Male			
Emotion Regulation Skill	103.4 ± 13.2	102.3 ± 14.7	103.5 ±15.6
Conflict Resolution Skill	2.9 ± 0.9	2.6 ± 1.0	2.6 ± 1.0

Table 4. Average Emotion Regulation & Conflict Resolution Skills Scores From Baseline to Time 2 By Race within Condition

Condition/Race/Variable	Baseline M ± SD	Time 1 (fall) M ± SD	Time 2 (spring) M ± SD
Comparison			
White/non-Hispanic			
Emotion regulation skill	107.9 ± 12.2	105.4 ±13.8	107.7 ± 15.5
Conflict regulation skill	3.1 ± 0.8	2.9 ± 0.9	2.9 ± 0.9
Black/African-American			
Emotion Regulation skill	102.1 ± 14.2	103.8 ± 13.67	105.7± 13.6
Conflict resolution skill	2.8 ±0.9	2.5 ±1.0	2.5 ± 1.0
Hispanic			
Emotion regulation skill	107.9 ± 12.2	105.6 ±14.3	105.7 ±14.9
Conflict resolution skill	3.0 ± 0.9	2.7 ±1.0	2.7 ±1.0
Other			
Emotion regulation skill	105.0 ± 11.7	107.2 ± 14.2	107.0 ± 14.3
Conflict resolution skill	3.3 ± 0.8	2.6 ± 1.1	2.5 ± 1.0
RULER			
White/non-Hispanic			
Emotion regulation skill	110.1 ± 12.2	107.7 ± 12.3	110.4 ± 11.5
Conflict resolution skill	3.3 ± 0.7	3.1 ± 0.8	3.1 ± 0.9
Black/African-American			
Emotion regulation skill	102.9 ± 12.5	102.7 ±12.5	105.8 ±12.7
Conflict resolution skill	2.8 ± 1.0	2.4 ±1.0	2.5 ± 1.0
Hispanic			
Emotion regulation skill	104.3 ± 13.9	102.3 ± 15.7	104.6 ± 14.9
Conflict resolution skill	3.0 ±0.9	2.7 ± 0.9	2.7 ± 1.0
Other			
Emotion regulation skill	108.1 ± 10.3	108.7 ± 10.6	112.1 ± 10.7
Conflict resolution skill	3.1 ± 0.9	2.9 ±0.8	2.9 ± 0.9

Table 5. Average Emotion Regulation & Conflict Resolution Skills Scores From Baseline to Time 2 By Gender within Condition

Condition/Gender/Variable	Baseline M ± SD	Time 1 (fall) M ± SD	Time 2 (spring) M ± SD
Comparison			
Female			
Emotion regulation skill	108.0 ±12.1	108.3 ± 11.9	110.1± 11.1
Conflict resolution skill	3.1±0.9	2.8 ± 1.0	2.8 ± 0.9
Male			
Emotion regulation skill	103.0 ± 13.8	102.2 ±15.1	102.6± 16.4
Conflict resolution skill	2.9 ± 0.9	2.5 ± 1.0	2.5 ± 1.0
RULER			
Female			
Emotion regulation skill	107.6 ± 13.1	106.8 ± 12.1	110.0 ± 11.3
Conflict resolution skill	3.0 ± 0.9	2.8 ± 0.9	2.8 ± 1.0
Male			
Emotion regulation skill	104.1 ± 12.3	102.4 ± 14.1	105.0 ± 14.2
Conflict resolution skill	3.0 ± 0.9	2.7 ± 0.9	2.8 ± 1.0