PEACE Through Dance/Movement: Evaluating a Violence Prevention Program

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This pilot research evaluated the use of a 12-week dance/movement therapy-based violence prevention program with 54 multicultural elementary school children, and found that it was effective in reducing aggressive behaviors. The program used a dance/movement therapy group process that focused on socialization and engagement of children in creative, problem solving experiences. Pro-social behaviors and methods of self-control were introduced using movement, children's stories and discussion. Statistical results showed that teachers noticed a significant decrease of these behaviors in their students instigating fights, failing to calm down, frustration intolerance, and throwing articles. The children reported significant decreases of these behaviors both seen and experienced:"someone doing something wrong," and "someone throwing something." Significant changes in the students' perceptions and feelings about experiencing or seeing aggression were noted in their "not feeling happy" when seeing such incidents, and their observations of handling themselves and responding in such situations showed a decrease of "feeling happy," and a decrease in "feeling scared." Classroom observations showed a significant decrease in the frequency of negative behaviors. However, there was not

significant increase in pro-social behaviors noted. Comparative data of aggressive incidents reported to the office for classrooms participating in the program (first, second, and third grades) before and after the program were compared to data from non-participating classrooms (fourth, fifth, and sixth grades). While data showed a decrease in the number of aggressive incidents reported to the principal for the entire school, the decrease in number of incidents for participating classrooms was greater than that for those that did not participate ($p < .001$). Limits for the study and suggestions for future research are presented.

KEY WORDS: dance/movement therapy; violence prevention; program evaluation; elementary school.

School violence has rocked the nation with horrific reports of peer abuse and related violence, bringing the issue of violence to the forefront of educational concerns. Littleton, Colorado, De Kalb, Missouri, and Moses Lake, Washington represent only three serious school violence sites (Fried & Fried, 1996). Invariably the questions asked after each incident focused on why students responded with extreme violence. Dance/movement therapist, SuEllen Fried and her daughter Paula, a clinical psychologist, offered a few possible answers to these types of questions about school violence. They suggest that children involved in school violence may have been victims of abuse themselves, or have exhibited ongoing problematic behaviors related to difficulties containing and expressing anger that were left untreated. In addition, they state that the common thread running through the complex problem of school violence is the limited ability of youth to deal with relationship conflicts.

Due to violent situations like Columbine in Littleton, Colorado, heightened attention to dramatic crimes has resulted in effective prevention programs for early intervention such as "Bully Proof your School," and 'Quit it' (Coyeman, 2000). Surveys demonstrate that violent behavior among US students has declined (Coyeman, 2000). Numerous researchers relate this progress to a growing awareness of the problem among parents, administrators, and teachers (Olweus, 1993; Goleman, 1995; Savoye, 2000). As a result, more prevention programs have been implemented and the number of school counselors and social workers has increased (Coyeman, 2000; Savoye, 2000).

However, decreasing aggressive incidents before they turn into disruptive and violent behavior remains a valid concern (Goleman, 1995; Goldstein, 1999a, 1999b). According to Goleman (1995), "the prototypical pathway to violence and criminality starts with children who are aggressive and hard to handle in first and second grade," (p. 3). Studies

show that poor management of aggression at lower levels has resulted in its intensification and a higher level of expression (Goldstein, 1999). Other researchers suggest along these lines, that effective violence prevention strategies are to catch aggression at a low level before its intensity escalates to out of control behaviors (Goldstein, 1999; Goldstein, Davis, Kermis & Cohn, 1981). Slaby and colleagues support the need for violence prevention programs in early childhood and in the classroom:"if children are to believe that violence can be prevented or controlled, they need to see the prevention principles realized in their classroom world" (Slaby, Roedell, Arezzo & Hendrix, 1995, p. 2). Classrooms and schools then provide a group experience by which rules, and expectations of appropriate behaviors set a group norm for those prevention principles that need to be actualized in order to develop a safe, nonviolent climate.

Increasing young children's social/emotional aptitude for control may be one way to circumvent violent behavior and create safe schools Goleman, 1995; Beardall, 1998). Early attempts at prevention may also be a key to decreasing violence in the schools (Olweus, 1993). According to Olweus (1979), if aggressive behavior in early childhood is not handled and contained, such behavior tends to continue throughout adulthood. Given that young children are in the process of learning about and developing their social interactions with others, early childhood educators have the chance to prevent violence through their modeling of effective interactions with children and others (Slaby et al., 1995).

Dance/movement Therapy and Violence Prevention

Socialization, as defined by Elkin (1960), is the process by which individuals learn to function in society as part of a social group by learning appropriate behaviors, values, and feelings that influence how a person behaves within a group. Historically, dance played an integral part in people's lives where social norms, values, and expectations were passed on through dance and storytelling (Primus, 1989). Dance served as a survival mechanism for community empowerment, which enabled individuals to dance out their fears, emotions, and conflicts in order to maintain social organization (Bernstein, 1970).

Dance/movement therapy was developed in the 1940s and is based on the premise that there is an interrelationship between the mind and the body (Levy, 1988). In dance/movement therapy practice, movement is used to foster social interactions and expression of feelings (Sandel & Johnson, 1987) as well as to gain a sense of self-control (Grabner, Goodill, Hill & Neida, 1999; Levy, 1988).

Few studies have evaluated the impact of prevention programs that model socialization within the group process using dance/movement methods on reducing aggression problems. Yet, some research has investigated prevention programs that use an integration of dance/movement, literature, and verbalization for bullying prevention in a middle school (Beardall, 1998).

Dance/movement therapist, Kornblum (2002) has developed a training manual and written about her successful violence prevention program, "Violence Prevention through Movement", for elementary school aged children in Madison, Wisconsin. Kornblum's program builds prosocial skills through movement to decrease violence. This program engages the bystanders, and works to develop a sense of empathy in children, and helps children think and act responsibly.

Several other violence prevention programs, already implemented, place an emphasis on helping children to develop critical thinking skills and conflict resolution skills. Primary methods of intervention include using verbal modalities, discussion and role-play. However, not enough research has been done to test the effectiveness of using multimodal approaches including movement and dance, children's literature, and discussion to foster the development of self-control in elementary school children. Further research is needed that investigates the effectiveness of employing prevention concepts that children can generalize and apply in unstructured environments such as the playground.

Purpose of the Study

The study evaluated the effectiveness of PEACE, a 12-week dance/movement therapy-based violence prevention program designed to provide skills of self-control for decreasing aggressive incidents and disruptive behaviors at an urban elementary school in the Southwest. The project endeavored to investigate whether the program affected how children conducted themselves socially and decreased aggressive incidents. Effectiveness of the program was evaluated in four ways:(1) a-within subject's design that used pre- and post- measures of children's perceptions of problem behaviors; (2) a within-subjects design that used pre- and post-measures of behavior from teachers' perceptions; (3) a within-subjects design using actual classroom observations before, during, and after program implementation; and (4) a between-subjects design that compared aggressive incidents reported to the office for program participants and non-participants. The protocol for this dance/movement therapy-based violence prevention program, used socialization and engagement of children in a creative, problem-solving

group process. This included the introduction of pro-social behaviors and methods of self-control using dance/movement, children's stories and discussion.

Methods

Subjects

Given the circumstances of serving a Title I school, and the school administrators' request that all of the first, second, and third grades receive the program, choices were limited regarding access to a control group for comparison purposes. Due to administrative requirements of the Institutional Review Board (IRB) for conducting the evaluation, the first 12 weeks of the school year could not be used as part of the study. Thus, students in grades one, two, and three who might have served as controls had already received the program at the time the evaluation project was started. The upper level grades were used instead for comparison of aggressive behaviors as a quasi-control. Once the school and five participating classrooms were identified, informed consent was gathered from parents, guardians, and all other procedural formats were arranged with the principal and school district administration. The five classrooms included: two first grade classes, one second grade class, and two third grade classes. A total of 54 children met 50 minutes weekly for 12 consecutive weeks. Those classes that did not receive the treatment program were classes in the fourth, fifth, and sixth grades.

The school population consisted of immigrants, refugees, and first generation Americans: 53% Spanish speaking children, 17% Native Pacific Island/Asian children, 4% Native American Indian children, 22% Caucasian/European children, (inclusive of Albanian), 2% African–American children. Eighty-nine percent of the children were living at or below the poverty level. School attendance rate was 92%. Five classes received sessions with the first author, a dance/movement therapist and social worker. Program sessions took place in the school gymnasium and in the cafeteria with the classroom teacher present and participating.

Program Overview and Description

PEACE through Dance/Movement, developed by the first author, was in its third year at the school at the time of the evaluation. PEACE used selected children's stories and movement activities that focused

on involving children in a group process to increase their spatial awareness, develop their impulse control, communication, and management of disruptive behaviors. PEACE aimed at increasing elementary school-aged children's ability to engage in pro-social behaviors and decrease peer aggression. Of particular interest for this evaluation research were program goals related to (a) socialization; (b) self-control; and (c) management of disruptive behavior. To this end, children's stories used in each session dealt with issues of diversity, exclusion, bullying, and relationship problems. Stories and dance/movement therapy techniques were selected and tailored for increasing the children's awareness of social problems and control management methods.

Generally, three skill-building areas were introduced over the course of the 12-week program:(a) self-control; (b) emotional regulation; and (c) problem-solving. Specific movement structures facilitated the incorporation of these skills through the use of physical action to expand understanding, mastery and control of physical, cognitive, social/emotional aspects of behavior. Poems with hand gestures were used so that children could transfer specific prevention skills to other areas such as the hallways and classrooms. The poems were "Turn Down the Volume," for helping children focus, calm down and listen, and "Shifting Gears," for helping them slow down as needed for situations such as, returning to their classroom after recess. The therapist's focused on the group's creative problem-solving process, particular interests, energy level, the dynamic relational problems and issues around self-control, and emotional arousal problems. The elements of dance: symbol, time, energy, space, and shape combined with dance rhythms and music from the cultures of Africa, Spain, and Mexico, ballroom dance rhythms, children's stories, and discussion, created the foundation for the program and make it responsive to the themes and issues pertinent to each classroom group. Six elements structured the sequence for each session. These elements were: (a) group focus; (b) read a story; (c) personal space; (d) social space; (e) movement problem; and (f) closure and discussion.

Each class began with a group focus such as flamenco clapping actions to obtain the group's attention by changing the timing of the beat and actions. After the story was read, children physically explored personal space and then social space in response to images or characters selected from the story. The children's ideas were used to build a movement challenge that inspired them to explore different speeds, shapes, movement qualities and level changes. Themes from the story were role played and further developed within the creative dance/movement therapy process. Finally discussion of the prevention themes and how they were experienced in the class was used to close the session.

Dance/movement therapy methods used in each program session aimed to accomplish the three large program goals. Dance/movement

therapy methods included: (a) movement observation of the group dynamic; (b) development of creative exchanges for increasing children's awareness of self and others as they explore moving in their personal and social space; (c) development of movement structures for helping children gain their focus, and for helping them practice methods of self-control; (d) identification of the social/emotional and interactional problems observed in movement, affect, and interaction designed with a given movement problem; and (e) use of selected children's stories targeting identified prevention skills as starting points for dance improvisations. Each of these methods will be described briefly below.

Method A: Movement Observation of the Group Dynamic

The movement observation of the group dynamic was structured to note a range of intensity and characteristics such as: escalation; self and group organization; energy level; and noise level. Due to large number of children in some classes, (e.g., 28) movement observation was supplemented with supporting skills that needed to be developed quickly such as: (a) listening—to listen without talking; (b) neutral/calm body—calm one's body when asked or on your own; (c) neutral/move/ neutral—change speed, shape, energy level and return to neutral; and (d) Stop/go- first, move, and stop moving in personal space, then stop and go when using large motor actions in social space. Children were taught awareness of personal space, which was defined as the 'invisible space' that surrounded their bodies 'like a bubble' (Sommer, 1959), through exploring their kinespheres or the space all around their bodies that they could reach while moving in place and while moving through the space.

Method B: Development of Creative Exchanges for Exploration of Personal and Social Space to Increase Awareness of Self and Other

The therapist used spontaneous movement actions and images given by the children to build movement challenges. Images or characters were also selected from the story being read and were combined with a movement challenge that inspired them to explore different speeds, shapes, movement qualities, and level changes. For example, after having read "*The Owl and the Woodpecker*," by Brian Wildsmith personal space was explored as children were asked one by one to make a shape of a tree that the owl or woodpecker lived in, using their arms, back, and whole body to maintain their space. One child started to shake her fingers and said, "my branches are rustling in the wind." Another child said, "the wind is wild and strong." Children were then asked to move through the social space and change their pathway, speed, shape, and energy, and rearrange their tree shapes made in a new space. This allowed for creative exchanges to evolve in the movement dialogue

without strict structures of "right" or "wrong" movements or movement interactions. Dance/movement therapist, Schmais (1981), refers to a sense of control gained when the physical actions are given meaning and are under control "bounded by time—by a specific rhythm and pathway" (p. 105). The purpose of this movement interaction was to play with different aspects of individuation and differences through an exploration of dance elements and changes in time, space, shape, and movement qualities of strong/light, fluid/rigid, etc. This provided children with an expansion of their movement vocabulary and repertoire.

Method C: Development of Movement Structures
In order to further enhance children's movement vocabulary, creative exchanges, defining social space, and improvisations related to the story for the session were used. Generally, they followed the structure of the story. For example, after "*The Owl and the Woodpecker*" was read, the therapist might become the 'owl,' who was trying to keep the forest the same, and the children might become the trees, changing their places and shapes to trick the owl. The therapist would pretend to sleep, and count from 1 to 10 while giving the children a loco-motor action to perform as they moved to a new space. At the count of 10, the children would freeze their shapes, and the therapist would walk around each of them, commenting and noticing their shapes, and wondering aloud how their trees had changed shapes, level and places. A child captured the essence of this particular movement structure naming it, "The Changing Trees."

Method D: Identification of Emotional/Social and Interaction Problems
The therapist used her movement observation skills to identify problems in classrooms such as regulation. Problems with self-regulation were manifest in extreme difficulties with issues of exclusion, resisting peer pressure, and moving through the space without escalating into disruptive behaviors such as hitting, or bullying others. One technique used to work with regulation problems was the use of a movement structure called "The Bell Curve." The therapist introduced and demonstrated the meaning of The Bell Curve (named by dance/movement therapist, Lisa Roll, 1984, personal communication) by drawing a line in the air, shaped like a bell to visually portray acceleration to deceleration. The therapist then demonstrated the concept of acceleration/deceleration by moving her body through the space while changing the timing and intensity level from a slow walk that slowly increased in speed to a fast walk, then decreasing the timing to a slow walk until stopping. Opportunities were then created for the children to work with this concept and experience the control it offered. Other social/

emotional and interaction problems were similarly identified and addressed through the introduction of movement explorations.

Method E: Use of Selected Children's Stories to Target Prevention skills

Children's stories played a central role in the program by highlighting issues at the root of social/emotional and interaction problems, and offering a base from which dance/movement improvisations could be generated. An example of one of the stories used is, "*Angel Child Dragon Child*" by Michelle Maria Surat. In this story, a girl named Ut, a recent Vietnamese immigrant, is teased by other children about cultural differences (a situation common in the classrooms participating in the program where many children were immigrants). In one part of the story, Ut responds to fall colors, which she had never experienced, by saying that the trees are "angry." This story content was explored using imagery and movement motivators such as multi-colored chiffon fabric along with the use of a movement structure, "The Bell Curve." The Bell Curve introduced several skills targeted for emotional regulation by practicing acceleration–deceleration. First, students were challenged to crumple a colored fabric in their hands while standing in neutral calm positions making tree shapes (standing in one place with feet rooted in the ground). Second, students were instructed, "when the music begins, keep your feet in the same space, and move your arms and back in as many ways as you can using the fabric to reach high, middle, and low levels. Stop and find the calm quiet place in your whole body when the music stops." This activity evolved into an exploration of moving at various speeds in which the students first remained in their personal space and practiced changes in tempo from slow to fast to slow, and fast to stop. The next challenge of 'The Bell Curve' used the imagery of building a storm and being able to accelerate and decelerate when moving through the social space. The students ended using the imagery of a gentle calm wind while changing their levels and shapes in their personal space. The group was able to meet for the first time their challenge to move in relation to others without escalating out of control. It was during the discussion at the end of class that children integrated the skill of emotional regulation having first experienced at a body level internal control of their external actions.

Skill Building Areas

Self-control

As described previously, there were three skill-building areas that created the overall goals for the program. Self-control was a skill concep-

tualized by helping children gain control of their emotions, their physical actions in relation to others, and their problem solving abilities involving peer relationships and social difficulties. An example of a dance/movement therapy directive used with the children in the program to help accomplish self-control is, "Let's see if we can move our tree branches from slow, to fast, to slow (your arms, back, whole self) and build a storm. Keep your tree rooted to the ground (your feet remain rooted)." This immediately engaged the children in practicing a method of self-control.

Emotional regulation

Emotional regulation was another skill conceptualized as self-regulation, or internal control of emotional arousal. To illustrate this concept, the example used previously for self-control serves well. Keeping their feet rooted while "building a storm" was intended to increase arousal as movement became faster and less controlled. Letting the storm subside (back to slow movement) was a challenge to bring arousal level back to a lower level. The children experienced in their bodies a safe role-play ("angry trees"), practiced acceleration and deceleration, and were allowed a sensory motor experience that invited trying on a new perspective and, hence, entering a discovery process where understanding about emotional regulation became a main element. During the discussion and integration of the prevention concept part of a session, experiences were processed by questions such as, "How could what we did today help in preventing fighting?" As one child responded, "We were learning to control our anger. It's hard to move fast like that and stop just like when you're angry." Another child said, "I need space when I get angry."

Problem-solving

Problem-solving was tailored, mainly through movement challenges designed to address difficulties around handling conflicts, peer relations, and differences. One intervention that addressed problem-solving was a movement structure adapted from dance/movement therapist, Bunney (1999) and given a name for use with children called, "Shape Talk." Children were asked to explore the same and different shapes, using a movement dialogue developed with a partner in which roles of 'yes' and 'no' were played through movement using opposite shapes, levels, etc. to have a conversation with one another. This movement structure was intended to expand upon their understanding of communication issues around listening and resolving differences.

The combination of session structure, goals, and dance/movement therapy methods make the PEACE treatment program unique in the

respect that it can be tailored to address the particular problems and issues of individual groups or classrooms of children. In addition, there is the possibility of many combinations of the program elements. For example taking an image from the selected story, such as the "angry trees" and using it with a movement improvisation like "The Bell Curve" could provide not only a starting point for children to experience integrated body/mind action, but also to experience practicing control. The inclusion of images, and problems presented in the stories leads to further discussions and generalization of the concepts to children's actual experiences at school. Finally, the use of the poems, "Turn Down the Volume," and "Shifting Gears," accompanied by specific gestures serves as reminders to the children between program sessions. The poems and gestures could then be used as needed by teachers for helping children focus, calm/slow down, and listen.

Data collection for the treatment program evaluation

Data were collected from several sources: the children, the teachers, an independent observer of the classrooms, and reports of aggressive incidents made to the principal.

The children's perceptions of behavior problems and their feelings about handling themselves in such situations were measured 1 week before and after the completion of the program using the Student Response Form (Figure 1). Changes in the responses of the children before and after the program were tested for significance using a dependent *t*-test. The Student Response Form was modified from Goldstein (1999a) (Nonreader's Hassle Log). This instrument was selected because it used a picture response format that did not require reading ability. Picture responses showed places where problems occurred (e.g., on the playground, in the cafeteria, hall) what the problems were (e.g., teasing, fighting, and arguing), feelings about the problems (e.g., happy, ok, sad, and mad), and how children responded on a feeling level about their response to the incident witnessed (e.g., happy, ok, sad, and mad). Modifications were made to meet requirements of the school district and to make it more accessible to a diverse population.

Classroom teachers read the questions on the student form to the children and they selected the picture appropriate for response. The Student Response Form used is depicted in Figure 1.

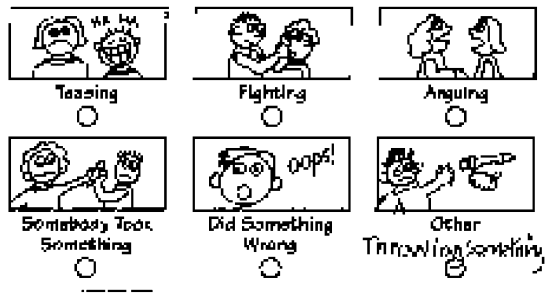
Teachers rated individual children's negative behaviors 1 week before the initiation of the program and 1 week after its conclusion using the Behavior Incident Report form A, (Goldstein & Glick, 1987, by permission). Changes in the teachers' observation of the children before and after the program were tested for significance using a dependent *t*-test.

Student Form

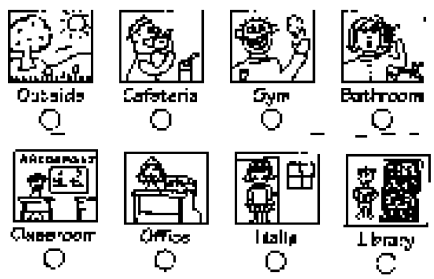
NAME: _____

INSTRUCTIONS: (Teacher reads instructions) We are all here together and we can learn better when not fighting or hurting someone. Think about things that have happened to you and your friends in our school, in our class, since school started. Has anybody at school done something to hurt or be mean to you, or somebody else? Check the boxes below that tell what has happened as your Teacher reads the instructions.

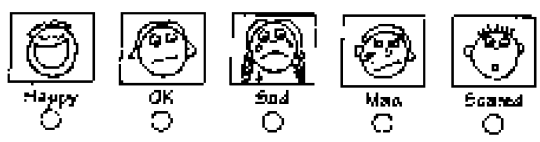
1. If you have seen or had someone here at school hurt or be mean to you, check the boxes which tells what happened.



2. Where have you seen this happen to you or someone else?



3. How did these things make you feel that happened to you or you saw happening to someone else?



4. How did you handle yourself?

Figure 1
Student Response Form

Classroom observations were made by a social work intern. Ten-minute observations were made for each of the five classrooms three times, using the Behavior Incident Report form B (Goldstein & Glick, 1987, by permission). This form was shortened from the original checklist and two items were added for noting the teacher's use of the chanting poems with gestures taught for generalization of skills. The social work intern rated the number of pro-social and negative behaviors observed using a dependent *t*-test measure. The first observation occurred 1 week prior to the first program session. The next observation was done at 6 weeks into the program and the final observation was done 1 week after the program ended.

Finally, the principal's regular log of aggressive incidents consisted of reports to the office by teachers, playground officials, a police officer, and a social worker and was employed as a measure for the program. The office reports of aggressive incidents were collected throughout the year. Counts of incidents reported for the participating classrooms in the quarter prior to the program implementation and the quarter during which the program was in operation were used. Reports for control classrooms that did not receive the program were used for comparison using a χ^2 test.

Results

Quantitative Results

Data analysis focused on the information from the various data sources: the students' perceptions of problem behavior and how they handled themselves in such situations, the teachers' observations of behavior, classroom observations, and office reports of aggressive incidents from the playground. The data derived from the Student Response Form on perceptions of problem behavior were standardized, and then analyzed through a one-tailed dependent measures *t*-test. The responses to the questions that had statistically significant changes (see Table 1) were: Question 1, behaviors both seen or experienced did or doing something wrong, seeing or throwing something; Question 2, in the bathroom, in the gym, in the office, and in the halls; Question 3, reports of not feeling "happy" when seeing aggressive incidents; Question 4, a decrease of feeling "happy" in such situations, and a decrease of feeling "scared" in handling themselves in such situations.

These observations reported by students suggest that they saw less disruptive behaviors and implies that there was increased control with less external disruptive behaviors either experienced or seen. In addition, stu-

Table 1
Significant Changes in Student Form Responses

Test Question	*Response Choices*	*Mean Pre*	*Mean Post*	*p-value*
1. If you have seen or had someone here at school hurt or be mean to you, check the boxes, which tell what happened?	a. Teasing	.5185	.4630	.236
	b. Fighting	.4630	.4259	.337
	c. Arguing	.4259	.2963	.064
	d. Somebody took something	.4815	.3704	.122
	e. Did something wrong	.4444	.2037	.001*
	f. Throwing something	.4259	.2222	.001*
2. Where have you seen this happen to you or someone else?	a. Outside	.6852	.5741	.102
	b. Cafeteria	.3519	.3519	.100
	c. Gym	.2593	.0741	.005*
	d. Bathroom	.3704	.2407	.035*
	e. Classroom	.4259	.3704	.265
	f. Office	.2037	.0741	.017*
	g. Halls	.4444	.2407	.003*
	h. Library	.2037	.1481	.186
3. How did these things make you feel that happened to you or you saw happening to someone else?	a. Happy	.1296	.0185	.017*
	b. OK	.1481	.1111	.298
	c. Sad	.4815	.5185	.321
	d. Mad	.3889	.3704	.405
	e. Scared	.1481	.1111	.266
4. How did you handle yourself?	a. Happy	.1852	.0370	.050*
	b. OK	.4444	.5926	.059
	c. Sad	.1481	.2222	.052
	d. Mad	.2963	.2778	.370
	e. Scared	.2037	.0926	.042*

Note:*statistically significant results using $\alpha = .05$.

dents reported that they were less scared when handling themselves in problem situations, and that they were not happy in such situations.

Data for the teachers' ratings of students were divided into positive and negative behaviors, which were standardized according to a student to teacher ratio. These standardized scores were then compared via dependent measures *t*-tests. Several negative behaviors decreased significantly. Results from these analyses appear below (Table 2). Statistically significant changes were noted by the teacher's observations of their students' behaviors in these areas: Question 1, instigating

Table 2
Significant Changes in Teacher's Observation of Behavior Incident Form A

Question	*Mean Pre*	*Mean Post*	*p-value*
1. Instigated fights	.3889	.3333	.041*
2. Threatened, intimidated	.2222	.2037	.354
3. Failed to calm down	.2407	.1481	.029*
4. Upset when couldn't do something immediately	.2222	.1296	.029*
5. Became antagonistic when registering a complaint	.2407	.2037	.21
6. Argued when told not to	.2222	.1667	.131
7. Was short tempered and quick to show anger	.2593	.1481	.017*
8. Was aggravated or abusive when frustrated	.2778	.1852	.048*
9. Involved in physical fights	.2593	.1852	.079
10. Threw articles, i.e. book, chair	.1111	.0556	.041*
11. Damaged school personal/property i.e., graffiti	.1667	.0926	.079
12. Slammed doors, punched walls, kicked objects	.0926	.1111	.285
13. Pushed, shoved	.2963	.2222	.105

Note:* statistically significant results using $\alpha = .05$.

fights; Question 3, failing to calm down; Question 4, upset when couldn't do something immediately; Question 7, short tempered and quick to show anger; Question 8, aggravating or abusive when frustrated, and Question 10, throwing articles.

Observations reported by teachers suggest that they saw less disruptive and acting out behaviors in their students as well as increased abilities of their students to gain internal control by calming down when upset, frustrated or angry.

Results from the pre, middle, and post program classroom observations showed a significant decrease in negative behaviors listed (see Table 3). However, there were no significant increases of pro-social positive behaviors found. Prior to examining independent observers evaluations of classroom behavior on a question-by-question basis, overall negative and positive evaluations of student behavior were compared independently. In order to do this, negative classroom behaviors were summed across teacher, and across condition. Pre and Post means

Table 3
Significant Changes in Classroom Observations of Pro-Social and Negative Behaviors Incident

Observed Behaviors	*Mean pre*	*Mean post*	*p-value*
Positive	1.08	1.22	.254
Negative	1.00	.47	<.001*

Note:*statistically significant result α = .05.

Form B Questions

Negative behaviors
1. Instigated argument/fight.
3. Threatened, intimidated.
4. Failed to calm down when requested.
6. Became antagonistic when registering a complaint.
8. Argued when told not to.
11. Was short tempered and quick to show anger.
12. Involved in physical fights.
14. Threw articles e.g., pencil, book.
16. Slammed doors, punched walls kicked objects.

Positive behaviors
2. Provided advice, helped others when upset.
5. Expressed self appropriately when frustrated or upset.
7. Expressed feelings appropriately when failed at task.
9. Controlled his/her temper.
10. When failed was able to try again.
13. Calmed down in a reasonable amount of time when angry.
15. Able to wait when couldn't have his/her way right away.
17. Expressed an opinion different than the group's.
18. Used focusing/listening skills, ''Turn Down the Volume''.
19. Was able to use self-settling skills, ''Shifting Gears''.

were then compared for negative behaviors and positive behaviors via dependent measures *t*-tests. While no change was noted in student's positive behaviors over time, several negative behaviors decreased significantly. Although positive behaviors were unchanged across measurements, negative behaviors were shown to decrease (N = 45, df = 44, $p < .001$).

Evidence of the decrease in aggressive incidents reported to the office for classrooms before and after the program was compared to data from those classrooms not involved in the program. Specifically, the number of incidents reported to the office for treated and untreated students was compared via a χ^2 test. There was a statistically significant decrease for those groups receiving the treatment than for those that did not (χ^2=1, N = 53 = 26.55, $p < .001$). Figure 2 displays the data graphically for this comparison. While data showed a decrease in the number of aggressive

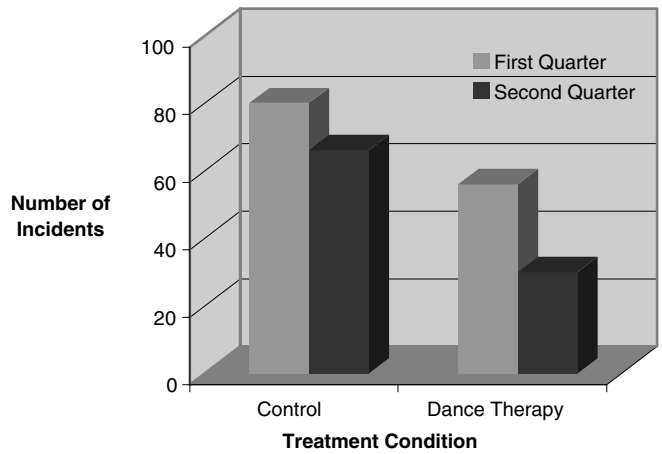


Figure 2
Rates of Incidents of Aggression Reported to the Principal's Office

incidents reported to the principal for the entire school, the decrease in the number of incidents of treatment groups was significantly greater than the decrease reported in the untreated groups.

Overall, it was found that there were significant decreases in aggression and disruptive behaviors as measured by each instrument used. There was not an increase noted in positive or pro-social behaviors.

Anecdotal results

A summary of some of the noted anecdotes collected during the children's discussion after each movement process depicts changes and social skills gained in their understanding of handling themselves in a less aggressive manner. When asked at the end of the 12 weeks, "What did you learn through movement that may have helped you or others prevent fights?" The varied responses followed; "I learned to keep my own space and not bump into others. Sometimes fights happen over space, needing more space," "I sometimes get angry and need to take space, away from others," "I learned how to control anger when we moved fast like tumbleweeds tossed into different shapes in a storm, and we slowed down to a gentle calm breeze. That's what might help stopping a fight. You learn how to slow down and stop." The following anecdote depicts children's increased knowledge and development of empathy, and positive social behavior. When asked, "What did you

notice that your group did differently today that really worked? One student answered," I think that we really listened to one another and were able to be helpful and try out each others ideas." These last anecdotes highlight the children's appreciation of an interdisciplinary approach, which included stories, dance rhythms, and music from different cultures as a way of bringing an appreciation and understanding of differences. "I really liked how we would listen to a story from a different country, and then do movement ideas to music from that country." "I liked it when you read the story about the Vietnamese girl and then played Vietnamese music. It's the same music that we listen to at home and it makes me feel happy."

Discussion

The results of this pilot study evaluating the effectiveness of a dance/movement therapy violence prevention program revealed statistically significant decreases in aggression and problem behaviors. The program incorporated dance/movement therapy methods and emphasized social, emotional, and communication skills for self-control and decreased aggressive incidents. In addition, teachers learned two generalizing poems for transferring skills of listening and calming down accompanied with hand gestures for use on the playground, in the hallways, and in the classroom. Each variable tested showed measurable changes and decreases in aggressive tendencies: teachers noticed a decrease in classroom problem behaviors; students both experienced and saw a decrease of aggression; aggressive incidents reported to the principal's office for classrooms that attended the program compared to classrooms that did not attend significantly decreased. In addition, random classroom observations also showed a decrease of problem behaviors. This may be a result of the students' increased awareness of self-control and problem-solving skills gained in their participation in the dance/movement treatment program and observed by the random classroom observations.

Classroom teachers were observed using the generalization poems with hand gestures during every one of the random visits done with each of the five classes rated by the observer. The principal reported observing children using the language used in the program to de-escalate a situation when problems occurred on the playground. She reported, "I heard some of the girls saying around issues of fighting, "I wonder what L (dance/movement therapist) would say. We should slow down, take some space, and think about finding a way to work it out." The principal commented further there were several other occasions

she had observed children discussing how to resolve their differences, with the first author referred to as a reference for settling the problem in a non-aggressive manner. This suggested that children had acquired generalization skills for self-control of slowing down, and were practicing their skills on the playground. However, data analysis showed that children did not see measurable changes by self-report or experience less aggression on the playground (see Table 1). Changes that were noted by the children of seeing and experiencing a decrease in aggressive behaviors were in the gymnasium, office, hallway, and bathroom. Goldstein (1997) correlated hallways and bathrooms as areas with the highest frequency of aggressive behaviors Goldstein & Conoley, 1997). All of these areas except the bathroom have some supervision and an adult's watchful eyes, which may help the children sustain and be reminded of the school norms and expectations of their behavior. The bathroom time usually is brief which may indicate that children are able to maintain control for short durations. Children did not report seeing and experiencing less aggression in these places: on the playground, in the cafeteria, and in the classroom. The cafeteria and playground is relatively unstructured time for children. Data suggests, therefore, that children may need to structure their play time and free time in a way that they may sustain successful interactions. Children may have more difficulty reporting their classroom observations given that they are more dependent on an adult helping them think about their perceptions, thoughts and feelings when they are developing their interaction habits (Slaby et al., 1995). Slaby et al. (1995) may explain why the children's observations differed from both the teachers' reports and the random classroom observer's report of having seen measurable changes of less negative behaviors in the classroom. Adults are able to be more aware of behaviors that may have the potential to interfere with learning in their classrooms.

Applications of Aspects of the PEACE Prevention Program

The evaluation of the PEACE program found that there were main elements introduced in the dance/movement process, which helped children gain methods of self-control through movement, and targeted catching those underlying forms of aggression before they escalated into disruptive behaviors (Leff, Power, Manz, Costigan & Nabors, 2001). One goal of the design of the dance/movement therapy treatment program was to offer children practice for building positive peer interactions. To this end, the program structured students play through movement experiences to acquire skills for less aggressive interactions which they could transfer and apply in other settings.

The first author found that giving children the opportunity to structure their play into successful give and take exchanges through dance/movement experiences provided in the treatment program, helped them apply problem-solving skills without fighting. Techniques that worked well in the program were those that increased children's ability to be in control of their social/emotional and physical state. Some of these skills provided children with the opportunity to practice mastery of their physical, cognitive, and social/emotional aspects as they explored changes in timing, going and stopping, and moving and adapting their use of personal and social space.

Other techniques that worked well in the program were the inclusion of children's stories that presented social problems related to aggression and disruptive behaviors. Techniques that did not work were those that tended to be too verbal and long, particularly when working with children for whom English was a second language (ESL). Verbalizations were used with direct statements and combined at the same time with a movement demonstration of the concept being taught, such as, "go when the music begins and move only your elbow, stop when the music stops." Children's creativity and problem-solving abilities were inspired through the use of movement and music.

Conclusions and Limitations

The limitations of this pilot study were the use of a small number of participants and a lack of a suitable control group matched with the same age group to compare those students with and without treatment of a dance/movement therapy group. A suitable match and control group for this study would have used first, second, and third graders who received the evaluation tools at the same time that the remaining first, second, and third graders received the treatment program and evaluation tools. However, due to the length of time required to receive IRB permission for the study, and the school administrator's desire for all first, second, and third grade classes to receive the program during the school year, this was not possible.

Another limitation was the lack of training for the teachers in how to use the student form for response with their students and how to interpret and differentiate each of the categories of behavior problems listed in the Teacher Behavior Checklist form. This resulted in inter-rater reliability problems around consistent use of language used when giving and doing the forms.

The modifications made by the author on the student form, specifically between Question 3 and Question 4 which both used pictures of

emotions, caused another limitation that may have been confusing for the students on knowing how to interpret and differentiate the difference between the two questions (See Table 1).

Recommendations for Further Study

Based on the fact that this pilot evaluation did show significant statistical decreases of aggression in each hypothesis tested, the program evaluated was successful (Cruz, 2004). To further study, the intervention using quasi-experimental research methods, a second implementation and use of the program could be tested against a control group of those not receiving the program to rule out other causes for changes. Research studies of this intervention should use more participants and have matched treatment and no-treatment participants in order to have a control group for complete statistical comparisons. Ideally, both the treatment and no-treatment group would occur in the beginning of the year to rule out any other variables such that aggressive tendencies are noted to increase in the springtime (Goldstein & Conoley, 1997).

Additionally, a longitudinal study could be implemented that uses the dance/movement treatment program to reduce aggressive tendencies and to see if decreased aggressive tendencies remain at a low level throughout subsequent years by measuring each year in the fourth, fifth and sixth grades.

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