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Attachment and Mentalization Efforts to Promote Creative Learning in Kindergarten through Fifth Grade Elementary School Students with broad extension to all grades and some organizations

by

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Introduction

The model described here – Creating a Peaceful School Learning Environment (CAPSLE) – uniquely applies mentalizing thinking combined with work on power and shame dynamics, to create an institutional climate where the student is better able to deal with bullying aggression and other critical psychodynamic climate factors.

The literature on mentalization-based interventions focuses largely on the treatment of individual psychopathology stemming from disrupted attachment experiences resulting, for example, in Borderline Personality Disorder (Bateman & Fonagy, 2004). This thinking has been only scantily applied in schools. The absence of mentalizing in thinking about the school context is particularly striking given the significance of mentalizing to issues of developmental psychopathology (Fonagy & Luyten, 2016). Childhood and adolescence is a period associated with dramatic changes in social cognition. A recent study (Dumontheil, Apperly, & Blakemore, 2010) of mentalizing in adolescence found that the capacity to adopt others' perspectives improves substantially between 12.5 and 16.5 years. The challenge of promoting mentalization skills is formidable as, like Piagetian formal operational thinking, most adults are not capable of consistently applying mentalization skills (Dumontheil et al., 2010). The

¹In PsychInfo, mentalization had over a thousand references with less than fifteen referring to the application of mentalization to schools, organizations or other groups.

intervention described here was originally implemented at elementary school, a phase of childhood in which children's attitudes towards aggression begin to crystallize, as they advance in impulse control and peer relationship skills (Aber, Brown, Chaudry, Jones, & Samples, 1996). The CAPSLE program is designed to support mentalizing in children – and critically, all staff in a school, by creating a social system that is able to retain its own capacity for balanced mentalizing and in so doing support the surrounding students to do the same.

This chapter will begin by setting out the basis of the Peaceful Schools Program in mentalizing and attachment theory, and then explain how the Program is organized and is underpinned by these theoretical considerations. We will then set out results of our evaluations of the Peaceful Schools Program, and finish by briefly describing how the program has evolved into a flexible approach that has been adapted in internationally and in different settings.

Mentalizing school communities with balanced power and shame dynamics: a modern synthesis

The theory of mentalizing is rooted in attachment. Indeed, mentalizing – the capacity to understand ourselves and others in terms of intentional mental states (i.e. needs, desires, feelings, beliefs, goals and reasons) – in most normal developmental scenarios, develops within attachment relationships: in that sense they are intimately connected at the level of developmental heuristic experience as well as theoretically. An infant begins to grasp mentalizing through exposure to being mentalized by other people,

through the experience of interacting with primary caregivers who attribute valid and separate mental states to the infant (Fonagy, Gergely, Jurist, & Target, 2002).

Secure attachment relationships, where attachment figures are interested in the child's mind and the child is safe to explore the mind of the attachment figure (Fonagy, Lorenzini, Campbell, & Luyten, 2014), enable the infant to explore other people's perspectives. The infant's experience of being represented as a thinking and feeling intentional being in the mind of their caregiver in turn strengthens their own capacities for mentalizing. This ability then provides them with the requisite skills to navigate future social exploration and obstacles (Fonagy et al., 2002).

To effectively do this, however, it is vital that the child learns to master the four separate, but related dimensions of mentalizing. These dimensions are: (a) automatic versus controlled mentalizing, (b) mentalizing the self versus others, (c) internal versus external mentalizing, and (d), cognitive versus affective mentalizing. Mentalizing takes place when these dimensions are balanced. Different types of psychological and behavioural difficulties often arise when one is 'stuck' at one end of these dimensions (Bateman & Fonagy, 2012).

When mentalizing fails (mostly typically in high stress contexts), individuals often start to operate in pre-mentalizing modes – these have some parallels with the ways that young children behave before they have developed their full mentalizing capacities. The modes are: psychic equivalence, teleological, and pretend modes. In the *psychic equivalence mode*, thoughts and feelings become "too real." It becomes difficult for the individual to consider alternative perspectives, and what is *thought or felt* is experienced as completely real and true, creating a kind of concreteness of thought. The *teleological*

mode describes a state in which mental attitudes are only recognised if they are accompanied by a tangible signifier and lead to a definite outcome. The individual can recognize the existence and potential importance of states of mind, but this recognition is limited to very concrete, observable situations. For example, affection is only accepted as genuine if it is accompanied by a touch or caress (or, similarly, feelings of anger need to be accompanied by acts of violence or aggression). In *pretend mode*, thoughts and feelings are cut off from reality; in the extreme, this may lead to full dissociative experiences. The individual in pretend mode can discuss experiences in pseudo-psychological terms – with articulacy and apparent accuracy – without contextualizing these through reference to the lived physical or material reality. It is as if they are creating a pretend world (Bateman & Fonagy, 2016, 2012).

The theory of mentalizing has, we argue, valuable implications for understanding how institutions and organizations (or indeed any social group) can be supported in behaving in ways that are both more effective and more humane. In our terms, we would describe this way of operating as the system being able to maintain balanced mentalizing without slipping into pre-mentalizing modes, even when faced with challenges. The school environment, according to this thinking, is a system which creates its own climate, lending itself to the promotion of greater or lesser levels of mentalizing in both staff and students. The school, in generating an environment that models balanced mentalizing, thus minimizing power/shame dynamics, and is capable of containing heightened affect, is of critical importance in preventing bullying and violence. The impact of mentalization/power dynamic-based techniques in reducing group violence may work in a similar way to interventions that focus on the mentalizing difficulties that lead to affect

regulation problems in individuals who are chronically angry and impulsive (Bateman & Fonagy, 2016). A mentalizing individual is able to empathize with the self and others, modulate affect storms, set boundaries, have a strong sense of agency and be reflective. Social groups operate on the same principle. Dysfunctional social systems cause the collapse of mentalizing and result in the highly reactive, tense and defensive interactions that can lead to violence. Particular attention also needs to be given to the impact of shame and humiliation on children and adults in this context (Twemlow & Sacco, 2012) (Gilligan, 1997) (Gilligan, Guier, & Blumenfeld, 2001). When an individual is unable to mentalize, in particular when they are operating in pre-mentalizing modes, the experience of shame or humiliation is experienced as an overwhelming attack; it is a devastating experience and violence or aggression can appear to be the only resolution.

Mentalizing theory proposes that those children and young people who have an adequate capacity for mentalizing (and linked capacities of effortful control, assisted by teacher modeling, and attention) can develop their capacity to make sense of their own mind and the complexities of relationships during the elementary school period, leading to relatively stable and essentially positive feelings of identity (including sexual identity) and autonomy, and the capacity to enter into stable, differentiated interpersonal relationships (Blatt & Luyten, 2009; Fonagy & Luyten, 2011). This is not a linear process, however, and both research and clinical practice suggests that even in normal development, it is characterized by (a) much trial and error and (b) hypomentalizing—hypermentalizing cycles, features that may be typical indicators of psychosocial dilemmas that accompany the elementary and high school years (Erikson, 1963) (Fonagy & Luyten, 2016)

Whereas these developmental phases present considerable challenges for those with normal developmental histories, children and adolescents with a history of poor mentalizing are at even greater risk when faced with social challenges. The exaggerated experience of affect and limited capacities for affect regulation because of impairments in effortful and attention control and mentalizing seriously impair the capacity to make sense of developmental changes in one's own mind, and in relation to others' minds. At the extremes, this may lead to feelings of identify diffusion and extreme hypomentalizing—hypermentalizing cycles (Sharp et al., 2013; Sharp et al., 2011). Further, the adults in a school — whether teachers, management or support staff — all need support in maintaining their capacity to mentalize, particularly when they are confronted with highly anxiety-provoking, affect-driven or aggressive/hostile behavior from students. Mentalizing is a highly interactional process and even adults with robust mentalizing capacities will be highly challenged in stressful environments without support.

Mentalizing is developed and sustained by the social system we live in: social systems that are compassionate have physical effects (for example, in the production of oxytocin) and psychological effects that enhance self-awareness and awareness of the mental states of others. On the other hand, social systems that do not respect agency or subjectivity recreate the evolutionary environment that encodes for self-sufficiency, creating an environment for bullying. We consider a successfully mentalizing social system to have certain features in common: they are relaxed and flexible, rather than becoming stuck in one rigid point of view; they can use humor, and be playful in a style that engages individuals, rather than in a way that is hurtful or distancing; they can

resolve difficulties and problems through 'give and take' that involves being able to take on others' perspectives; they advocate describing one's own experience rather than defining other people's for them; they convey a sense of ownership of behavior, showing agency and responsibility; and finally, demonstrate, openness and curiosity about others' perspectives.

Conversely, a non-mentalizing disorganized social system creates fear and can hyperactivate attachment. This undermines the capacity for higher order cognition and forces the system into pre-mentalizing modes. Such a non-mentalizing social system can be highly self-reinforcing because it tends to undermine the social mechanism that could alter their character: human collaboration based on negotiation and creativity. To refer back to the pre-mentalizing modes, a disorganized system operating in *pretend mode* shows little link between inner and outer world, the mental world is decoupled from external reality. Everyone in such a system can think and feel, but there is a sense of no real consequence, creating a somewhat meaningless social landscape. It can lead to a selfishness that arises from a sense of the unreality of everything other than one's own thoughts and feelings. Ultimately, this can permit aggression and harm because other people's minds are not felt to really exist. Such a system is often characterized by endless communication, consultation and searching for solutions, but little real change.

In a social system operating in *psychic equivalent* mode (and the different prementalizing modes can operate simultaneously), mental reality and outer reality become blurred: thoughts are too real, and hence must be controlled. There is only one possible solution, and alternative visions or perspectives cannot be tolerated. Given the power of thoughts, negative ideas become terrifyingly real threats, which need to be acted upon.

Finally, in the *teleological* mode, only behavior that has a visible outcome is regarded as meaningful – aggression and acts of physical harm become more legitimate, and there can be a hunger for physical acts to reveal states of mind: for example, acts of subservience, or highly punitive acts.

Our experience has been that few if any school children caught in the blight of a non-mentalizing system can sustain mentalize to any degree, whatever their age. Another conceptualization is that they (the bullying school social system), have all lost their individuality in favor of a constrictive social role, which fosters social stereotypes, and perseverative group behavior that fails to recognize and mentalize the individual-in-the-group (Twemlow & Sacco, 2008; Twemlow & Sacco, 2012). The unique individual presence of the other is negated by the requirements of a stereotyped social role that is part of the typical teaching pattern in children (the teacher is in charge), until puberty.

Mentalizing within a system, and the sense of self that emerges, is a complex process. As interpersonalist theories and other current relational theories hold, the person feels in the extreme situation completely defined by the social system, and their sense of reality is rooted in that reality being shared by others. We know that the world outside is real partly because others respond to us in ways that are consistent with our reactions, a form of social biofeedback started by the primordial mother who trains her infant with feedback like "this is your thought, not mine, this is my thought not yours". The extraordinary impact of social responses on the developing individual has also, for example, been illustrated by experiments with six-month-old infants using the still-face paradigm (Weinberg & Tronick, 1996).

From a mentalizing and interpersonalist perspective, the personal consensus between two people may be seen as creating an external (social) reality, when they have balanced their power and shame dynamics. On a larger scale, when power dynamics influence that social reality, either through individual psychopathology, especially of leaders, or the overuse of coercion and punishment in legal institutions or codes of conduct, then victim, victimizer and bystander mindsets are created in members of that system, who then function in the roles created by this non-mentalizing social system. That is, in violent environments there is a chronic failure of mentalizing in the pure sense. When mentalizing fails it also creates for the witness to the power struggle (the bystander) an avenue to the pleasure of sadism illustrated by the child who gains vicarious pleasure by watching the bullying process. This is possible because he distances himself from the internal world of the other – and at the same time – benefiting from using the other as a vehicle (part-object or part-person) for unwanted (usually frightened and disavowed) parts of the self projected into the victim. For the perpetrator of violence, being the focus of so much attention (from the victim and from the bystanders) he is able to experience himself as more coherent and complete (though, of course, through a deeply pathological process) (Twemlow, 2012). For violent children or adolescents, mentalizing is deeply limited such that the suffering and pain of the victim need never be fully represented as mental states in their consciousness. In typical development, the capacity to manage power dynamics is increased by the maturation process, throughout adolescence and early adulthood, although greater impulsivity may still affect the stability of mentalizing at this stage. In most social contexts, mentalizing needs environmental support and requires an intelligent social system to scaffold it and

ensure that reflection on the mental states of self and other is relatively comprehensive, and is able to cover painful as well as neutral mental states.

The overarching goal of the CAPSLE approach is to create in the school (and in the community) a family where secure attachments predominate. The more the school can operate as a large coordinated group and avoid the stuck-in-victim role when bullies dominate, the more possible a creative secure outcome becomes. From our perspective, the security of attachment is reflected in the way in which people cooperate, and become friends. In a local community, this might mean things like dealing with graffiti around schools. In schools operating under this model, there may be regular clean-ups of the local area by school children, voluntary helping of old people with the raking of leaves etc., children who are ill at school for prolonged periods of time are kept in touch with class actions by direct telephone or by visits by students when appropriate. Children love to help others and greatly benefit from the experience; being allowed to help is an acknowledgement of agency (Twemlow, Fonagy, Sacco, Vernberg, & Malcom, 2011; Twemlow & Sacco, 2013).

When a school starts to change its climate, and it takes about a year for this to happen, what you see are episodes, such as the one observed where a boy was waiting to be picked up by his father, who was a leader of a prominent gang. Beside this boy was a kindergarten child crying because he couldn't tie his shoelaces; the older boy bent down to tie this child's shoelaces. This was the beginning of a change for him. He became a natural leader within the school environment because there was no social status any more for bullying power. Social status arose out of being reflective, having your feelings under control, and helping others as much as possible, i.e., mentalizing. In summary, when

mentalizing and power dynamics are well balanced within a group, the group feels good and wants to feel even better by helping others when a need is present.

The Peaceful Schools approach

CAPSLE (as the initial randomized control trial or RCT was named) is based on three major assumptions:

- That to reduce violence in schools we need to systematically increase awareness of the mental states that underpin behavior;
- 2) That the whole school community contributes to unthinking, bullying-related dysfunction through an absence of mentalizing;
- 3) That peaceful collaboration with others requires prioritizing their subjective states, thus putting limits on the urge to violently control the behavior of less powerful members of the group.

Accordingly, CAPSLE is a whole-school approach, which seeks to create a system-wide awareness of the omnipresence of power struggles and how such struggles undermine and unbalance our mentalizing capacities. By building emotional and cognitive skills in handling interpersonal power struggles, empathy and self-agency are improved, and the likelihood of violence reduced. This is an approach that focuses on the school's whole group functioning, rather than the behavior of individual problem children. It involves a move away from targeted, anti-bullying, mental health and learning disability programs etc., toward focusing on the wider school climate (Cohen & Brooks, 2014).

CAPSLE is a teacher-implemented, manualized program made of four components, summarized below in Table 1

INSERT TABLE 1 ABOUT HERE

Table 1 shows that the first component of the CAPSLE model is a positive climate campaign using learning methods and materials to create an awareness that allows for the identification and resolution of coercive power dynamics. The second component of the CAPSLE model is a classroom management plan that assists teachers to discipline by focusing on the understanding and correction of problems rather than on punishment and criticism. The third component is a physical education program – the Gentle Warrior Program – derived from a combination of role-playing, relaxation techniques, and defensive martial arts. This teaches children skills to self-regulate and control one's emotions, mind and behavior, while also providing skills in how to handle victimization and bystanding behavior, thereby helping children to protect themselves and others with nonaggressive physical and cognitive strategies. Finally, the fourth component is one or two (or both) possible mentorship programs – using adults or older peers. This mentorship support provides additional containment and modeling to assist children in mastering the skills and language to deal with power struggles. The choice of whether to opt for adult or peer support (or both) is a practical one for the school, depending on the availability of appropriate outside adults or older children within the school.

What we learned from the pilot study

This work evolved through collaboration over a 6-year process (between 1993 and 1999) conducted in Topeka Kanas with three schools. One was a K-5 elementary school in a poor part of the community with the poorest academic achievement, high levels of violence and highest out-of-school suspension rate in the Topeka School district. It had gained considerable notoriety as a result of the attempted rape of a 2nd grade girl by some 2nd and 3rd grade boys. The principal of the school had approached the first author for ideas that might help the school after he had heard about the work that we had done with a violent secondary school system in a city in Jamaica (Twemlow & Sacco, 1996).

The pilot first revealed what has been a consistent finding in our work: that sustained effective change itself depends on the enthusiasm and degree of buy-in shown by teachers, students, parents and the surrounding community. The initial experimental school showed a marked increase in Parent Teacher Organization (PTO) attendance, teachers who were happy to administer and score instruments to test effectiveness, including teachers who did this in their own time, because they fully understood how this process would work and it made sense to them. This experience demonstrated the critical importance of community engagement and involvement in an intervention. Indeed, the test school was very proud of its results. A number of the teachers received promotions for the extra work they put into doing research work and helping with testing out the concept, and were co-authors of papers.

The original problem school had changed dramatically. This was noted on an observational level: for example, on one occasion when the first author attended the experimental school, he thought it must have been closed because it was so quiet.

Secondly, black children began to outperform white children academically, which in the

1990s was quite unusual, and subject to a variety of studies by school districts. Thirdly, teachers became happier in their professional work: many of them commented that in spite of the fact that race and prejudice had not been the focus of intervention, they had noticed that there had been far fewer conflicts about skin color amongst the children, as if they had developed another way of managing their differences. These outcomes suggested the broad impact of power dynamics and mentalization on the wellbeing of children in a large group school setting. The reduction in the number of disciplinary referrals and the improved achievement in test scores continued even when children left the peaceful school, if they had had 2 years' experience with CAPSLE. This pilot study warranted the expansion of the research into a fuller RCT (Twemlow et al., 2001).

A Multi-School Cluster Randomized Controlled Trial

On the basis of the original pilot study and the theoretical work that evolved with it, an RCT began in 1999. It was conducted over a three-year period. Nine schools participated, and were assigned randomly to one of three conditions: (1) CAPSLE; (2) School Psychiatric Consultation (SPC), which involved the child psychiatrist visiting the school once a week, observing classrooms, meeting with mental health teams and helping teachers in referring children for appropriate mental health treatment where necessary; (3) no intervention but promised free access at the end of the study to whichever intervention was found most effective. The CAPSLE approach as implemented in this RCT contained all four components previously described in Table 1 and was actively implemented across two years. In year 1, school staff received a 1-day group training; students received 9 sessions of self-defense training; in year 2, school staff received a

half-day refresher group training; students received a 3 session refresher self-defense course. Throughout active implementation, the CAPSLE team held monthly consultations with school staff. Table 2 shows how the CAPSLE program is implemented.

Insert Table 2 about here

The study was based on the hypothesis that the bully and the bully's victim are both symptomatic of a wider problem within the school system as a whole. This is made particularly pathological by the way in which teachers and police officers are left with the total responsibility for shaping the learning environment in American school learning systems. We started to conceptualize the bully and victim as expressions of the group rage of the community (abdicating bystanders) at those who were designated as leaders. Accordingly, the approach focuses on the power of bystanders to change the climate. A school tended to have significant problems with bullying when designated leaders did not focus on the role of the bully/bystander in the evolution of school dynamics, and instead the institution becomes pathologically stuck in victim role: the victim here in such situations is the school, and the bully is in informal charge. The bully would control the school, eventually to the extent that the school would in effect find it impossible to manage itself. Since these dynamics are often not obvious, actors in the drama may play their respective roles unknowingly thus perpetuating the trauma across cycles of students (and teachers). More detail on the unconscious (or not recognized) elements are described elsewhere in our work (Twemlow & Sacco, 2012).

The results of the study are summarized below in Table 3.

INSERT TABLE 3 ABOUT HERE

Table 3 indicates that multiple positive outcomes followed from the CAPSLE intervention. Contrasts with the Treatment as Usual (TAU) school and the School Psychiatric Consultation group are indicated in Table 3.

Independently, we have evaluated the effectiveness of the Gentle Warrior Program, a traditional martial arts-based intervention, addressing one of the core components of our model (see Table 1), aimed at reducing aggression in children. The Gentle Warrior Program involves nine 45-minute sessions in each of the first two years of the intervention, taught by a martial arts instructor. In the third year of the intervention, the maintenance phase, there were three further 45-minute sessions. Each session began with breathing and relaxation exercises designed to increase the children's awareness and control over their physiological arousal. Children were led through stretching exercises in preparation for the lesson. After stretching, children were taught defensive techniques, role-played common bully-victim-bystander situations, and engaged in a question and answer discussion of philosophy with the martial arts instructor. Throughout the instruction, the basic philosophical foundations of nonaggression, self-awareness, respect for self and others, and self-control were reinforced through question and answer discussion. At the conclusion of the session, the lesson was reviewed, another brief period of relaxation was practiced, and stories depicting traditional martial arts values were shared. It was implemented in three elementary schools (CAPSLE schools). The sample consisted of 254 children in grades 3, 4, and 5. Results indicated that boys who participated in more Gentle Warrior sessions reported a lower frequency of aggression and greater frequency of helpful bystanding (i.e., helpful behavior toward victims of bullying) over time. The effect of participation on aggression was partially mediated by

empathy. The effect of participation on helpful bystanding was fully mediated by changes in student empathy. No significant results were found for girls (Twemlow, Biggs, Nelson, Vernberg, & Fonagy, 2008). The findings for girls are interesting and warrant further consideration. Aggression among girls, significantly lower less of aggression was reported at outset. Previous research has suggested that relational aggression has tended to predominate among girls, over physical aggression, and such forms of aggression are targeted less by this aspect of the program. A further consideration is that the Gentle Warrior Program might benefit girls in different ways, not measured empirically in the study: for example, in increased assertiveness and self-esteem (Twemlow et al., 2008).

The impact of a school-wide intervention seems to occur at multiple levels, such as improving school morale and improving the classroom learning environment by decreasing tensions and negative emotions that accompany bully-victim problems. This is indicated by prior research in this school district that showed a clear improvement in academic performance for children who spent two or more years in schools offering this program (Fonagy, Twemlow, Vernberg, Sacco, & Little, 2005). This improvement also continued into Middle School for children who had been at least 2 years in the CAPSLE program.

Evolution into new settings

Since 2000, the CAPSLE model has been used in all school grades and in many adult organizations as well, with a number of modifications based on replications and clinical experience. The model has evolved not as a protocol to be carefully followed as

originally formulated in the RCT for CAPSLE; it has developed into a very adaptable model. It has worked highly successfully in Australia, where the model focused on child control of the work with psychoanalytically trained assistants, and North Carolina where the actual interventions were designed by each school staff adhering to the framework design but with their own ideas about how to make it all happen. In Hungary the work was adapted to a school for severely visually impaired children and children with major transplant recovery problems, and the book describing the approach was (Twemlow & Sacco, 2008) eventually translated to Hungarian (Twemlow & Sacco, 2008). It evolved around the Samovar strength concept that enhanced children's feeling of selfdetermination² a long period helped us use major cultural adaptations of the fundamental framework but still preserving the mentalizing/shame/power dynamics framework (Twemlow et al., 2011; Twemlow & Sacco, 1996). The 2011 paper describes an extraordinary intervention in a school in Negril which showed amazing reductions in aggression and improvement in altruistic behavior especially by boys. We have projects in various stages of development in Brasilia and in Botswana, where a group of retired school principals are getting together, and with the US Military, which is looking for flexible approaches for supporting military families. Houston, Texas has a 12-school program in its 5th year focusing on communities of schools and how parents and teachers can help each other improve communication. This system has a monthly meeting of principals who share good ideas. When this process began, two schools across the road from each other had principals who had never met! Now it is a truly integrated community of schools.

Conclusion

CAPSLE is a mentalizing and attachment-based approach to developing a school climate which encourages students – and staff – to hold the mind of others in mind. Seeking to extend attachment and mentalizing approaches to thinking about systems might appear to be a shift in emphasis from the dyadic focus on primary caregivers on developmental psychopathology. However, we argue that such an approach is highly congruent with John Bowlby's evolutionary conceptualization of attachment as a means of developmentally adapting according to the psychological and social environment in order to best navigate it. Attachment and mentalizing are both artifacts and drivers of the human capacity for social complexity. As such they are highly suggestible to the cues given by the social environment – this is what makes possible the flexibility and adaptability that is such a marked human capability. Humans evolved to parent in a far more collaborative and cooperative way than is currently practiced (Hrdy, 2011); as such it is fitting that we give thought to transactional implications of the psychological cues – pre-eminently and ideally, mentalizing from a secure base – provided by the social system around the child.

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Table 1: The components of CAPSULE

Component	Goals	Techniques involved
A positive climate campaign	Goals are to make awareness of power struggles, reflection, and modulation of feelings a regular part of the children's day so that it eventually becomes part of their language and shift the tone of the school. Create awareness of the three roles: victim, bully and bystander. Motivate children to obtain social rewards and social status that come from helpfulness and consideration of others rather than from the power gained and retained with aggression.	Use of a variety of "campaigns" strategies including: posters, magnets, bookmarks, buttons, class projects and discussions, the school peace flag, lectures, school assemblies, and integration of the program philosophy into the curriculum.
	Empower children to peacefully resolve issues with each other with minimal adult participation.	
Classroom management plan	Emphasize the effects of each class members' behavior on others, to promote balanced mentalizing within the classroom. Enhance understanding of the importance of insight into the meaning of behaviors, thereby reducing scapegoating.	Use of Reflection Time to facilitate class participation in setting class goals and in reflecting on progress toward those goals, encouraging students to use skills learned in Gentle Warriors training (e.g., Relaxation Response), conceptualizing a behavior problem in a single child as a problem for the whole class.
Gentle Warriors Program of physical education	A structured set of activities that teach self-regulation and self-control, provide children with alternative actions to fighting, and teach children to be agents of positive social change in their school. The program fulfils the school requirement for physical education, is easily implemented, requires no martial arts experience, and is well accepted by physical education teachers.	Physical exercises include stretching, relaxing, self defense, and role-playing activities such as the enacting of bully-victim-bystander roles Activities also include the reading of stories that emphasize ethical conduct including self-respect, respect for others, self-control, kindness, and generosity.

Peer and adult mentorship	Adult and peer mentoring efforts focussed on playground, lunchtime and the school corridor. To assist children in avoiding one of the three roles bully, victim and bystander wherever they are in the school.	Peer Mentors spend time weekly with their assigned child at school and are closely supervised. In The Bruno Program, older adults are encouraged to help children manage unstructured school time such as recess and lunch hours, with mentors using creative ways to help children resolve problems such as setting rules for basketball games, and playground disputes such as sharing
		playground disputes such as sharing play equipment, etc.

Table 2: Implementation of CAPSLE program

Active intervention	Maintenance intervention		
Year 1	Year 2	Year 3	
A CAPSLE team drawn from the implementation using a training & Twemlow, 1999)			
 1 day introductory group training for teachers CAPSLE intervention team consult with school staff monthly 9 sessions student self-defence (formal training which is then continued in PE classes) Biweekly supervision of CAPSLE intervention team with second author 	 ½ day school wide refresher training for all staff at start of year CAPSLE intervention team consult with school staff monthly 3 sessions self-defence refresher (formal training which is then continued in PE classes) Biweekly supervision of CAPSLE intervention team with second author 	 In service refresher training for staff 3 sessions student self-defence (formal training which is then continued in PE classes) 	

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Table 3: Results of the cluster randomised control trial for CAPSLE

Intervention -	Active intervention years			Follow-up year				
	Baseline	Time 2	Time 3	Time 4	Time 5	Time 6		
Aggression								
Peer report								
TAU	97.8 (.48)	99.6 (.61)	101.0 (.59)	102.7 (.72)	99.5 (.54)	103.2 (.63)		
CAPSLE	98.2 (.43)	99.9 (.52)	99.8 (.46)	101.7 (.47)	97.7 (.41)	101.2 (.41)		
SPC	97.5 (.44)	99.6 (.52)	100.2 (.55)	101.6 (.65)	98.4 (.48)	100.7 (.55)		
Self-report								
TAU	98.2 (.56)	99.3 (.57)	99.0 (.55)	99.7 (.59)	99.3 (.49)	100.9 (.66)		
CAPSLE	100.4 (.49)	99.7 (.50)	100.0 (.47)	100.2 (.49)	98.9 (.42)	100.3 (.46)		
SPC	100.6 (.53)	100.2 (.52)	100.3 (.59)	101.1 (.61)	99.5 (.50)	101.0 (.63)		
Victimization								
Peer report								
TAU	97.6 (.56)	99.1 (.73)	100.2 (.67)	102.8 (.74)	100.0 (.68)	102.8 (.75)		
CAPSLE	98.7 (.41)	99.9 (.44)	100.1 (.39)	100.7 (.39)	98.0 (.44)	99.8 (.42)		
SPC	97.8 (.55)	100.5 (.54)	100.3 (.56)	101.9 (.63)	99.3 (.46)	101.1 (.45)		
Self-report								
TAU	99.70 (.61)	101.0 (.71)	98.7 (.53)	99.9 (.61)	99.8 (.56)	100.2 (.59)		
CAPSLE	100.64 (.46)	99.4 (.46)	99.1 (.46)	99.2 (.44)	99.0 (.45)	99.4 (.43)		
SPC	100.63 (.54)	101.0 (.58)	100.2 (.58)	100.6 (.61)	101.1 (.55)	100.7 (.60)		
Aggressive by								
TAU	97.6 (.50)	99.4 (.66)	100.3 (.58)	102.7 (.71)	100.2 (.56)	102.2 (.65)		
CAPSLE	98.1 (.44)	100.1 (.55)	100.4 (.46)	101.2 (.45)	98.1 (.41)	100.2 (.50)		
SPC	97.1 (.41)	100.0 (.49)	100.5 (.52)	102.2 (.63)	98.6 (.47)	101.5 (.57)		
Helpful bysta								
TAU	96.6 (.54)	100.2 (.64)	104.0 (.69)	104.0 (.60)	98.5 (.58)	102.3 (.64)		
CAPSLE	99.4 (.48)	100.7 (.51)	100.5 (.43)	100.3 (.48)	100.2 (.48)	101.4 (.50)		
SPC	96.7 (.53)	99.6 (.54)	98.8 (.51)	98.9 (.50)	98.2 (.45)	98.9 (.50)		
Mentalizing								
Empathy		101.2 (62)	100 4 (70)	00.0 (50)	101.1 (60)	00.0 (70)		
TAU	102.2 (.61)	101.3 (.63)	100.4 (.59)	98.8 (.59)	101.1 (.60)	98.8 (.59)		
CAPSLE	100.4 (.47)	99.1 (.50)	100.0 (.47)	99.1 (.47)	100.3 (.47)	99.2 (.48)		
SPC	101.5 (.53)	100.3 (.55)	99.0 (.55)	98.3 (.55)	101.3 (.51)	99.2 (.53)		
	Aggression is							
legitim		00 1 (50)	00.7 (53)	00.0 (50)	00.0 (55)	100 4 (50)		
TAU	96.5 (.47)	98.1 (.56)	98.7 (.52)	99.0 (.50)	98.9 (.55)	100.4 (.59)		
CAPSLE	99.1 (.50)	100.6 (.56)	100.7 (.47)	100.9 (.49)	98.4 (.42)	99.5 (.43)		
SPC	100.5 (.54)	99.9 (.53)	101.8 (.59)	102.1 (.60)	100.9 (.54)	102.0 (.64		

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